# ALCOHOL POLICY IN MUSLIM MAJORITY COUNTRIES

**By**

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# Dedication

*To my source of strength and determination,*

*To the teachers of persistence and dedication,*

***

*I saw the world through their eyes*

*The two who brought me up with sacrifice*

***

*They ignited the hunger of learning in me like a fire*

*So knowledge became my main desire*

***

*A healing addiction of learning and talents*

*A success only achieved through my loving parents!*

# Statement of originality

Statement of Authentication

*This thesis is submitted to the University of Sydney in fulfilment of the requirements for the Degree of Doctor of Philosophy.*

*The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.*

*Signature:* *Date:* *16/04/2020*

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**Chapter 4: Extent of alcohol prohibition in civil policy in Muslim majority countries: effect of globalisation**

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## Abstract

**Background:** Due to the Islamic prohibition of alcohol consumption in Muslim Majority Countries (MMCs), alcohol policy research has been limited. However, consumption in MMCs has recently increased. Also, globalization and governmental transition can all affect alcohol policy development. This research examines the extent of civil alcohol prohibition in MMCs. Using Iran as a case study, it describes how alcohol prohibition can be translated into policy, including alcohol treatment policy, in a MMC.

**Methods:** The research was conducted in three languages: Arabic, Persian and English. Policy analysis drew on case study and qualitative research methods and narrative synthesis for literature review. For Iran, publicly available literature and policy documents were collected, and information verified through consultation. Newspapers were reviewed over three time periods. Walt & Gilson's framework was used to identify alcohol policy content, context, actors and process, including in treatment policy.

**Results:** Four broad approaches to civil alcohol policy in MMCs were identified. From the 50 MMCs, only five have total prohibition, 10 have prohibition with concessions, others have restriction or regulation policies. Despite its approach of prohibition with concessions for non-Muslims, Iran has used nine out of ten recommended WHO alcohol policy strategy domains in a context-specific way. Pricing and taxation is not used. Iran has started a multisectoral approach to treatment of unhealthy alcohol consumption.

**Conclusion:** MMCs face challenges in creating alcohol policies. Many have implemented civil alcohol policies that are not limited to Islamic prohibition. However, WHO alcohol policy assessment tools do not detect many MMC alcohol policies, because tools were designed for non-Muslim and developed countries. Policy formation in MMCs could benefit from external expert support and relevant research.

## Authorship attribution statement

This thesis contains manuscripts on which I am the first author. Three are already published and latter one has been submitted for publication and is under peer review.

The titles of these papers are:

1- Al-Ansari B., Thow A. M., Day C. A., and Conigrave K. M. (2016). Extent of alcohol prohibition in civil policy in Muslim majority countries: the impact of globalization. Addiction 111(10): 1703-1713.

2- Al-Ansari B., Thow A. M., Day C. A., and Conigrave K. M. (2016). Civil alcohol policy in Muslim majority countries: need for global tools, expert support and local partnerships. Addiction 111(10): 1718-1719.

3- Al-Ansari, B., Thow A. M., Mirzaie M., Day C. A. and Conigrave K. M. (2019). Alcohol policy in Iran: Policy content analysis. International Journal of Drug Policy 73: 185-198.

4- Al-Ansari B., Noorozi A., Thow A. M., Day C. A., Mirzaie M. and Conigrave K. M. (in press - accepted 3/4/20). Alcohol treatment systems in Muslim Majority Countries: case study of alcohol treatment policy in Iran. International Journal of Drug Policy.

For these publications, my contribution was as follows:

I conceived the overall goal of the research – to study the issue of alcohol in Muslim majority countries. With the help of my supervisors, I selected and refined the study design for the first three studies. The design of the final two studies was also refined in consultation with local Iranian health experts, including my collaborators, Dr Mirzaie and Dr Noorozi.

I performed all the literature searches in three languages, English, Arabic and Persian. In addition, I translated and interpreted all non-English materials.

I conducted the consultations with Iranian policy makers and health staff. In addition, I conducted all policy analyses, with the support of my supervisors.

For the four manuscripts, I drafted each, and then refined these with the help of feedback from my supervisors. Similarly, I wrote the thesis and then refined it, making use of feedback from my supervisors.

## Manuscripts emerging from this thesis

Al-Ansari B., Thow A. M. Day C. A., and Conigrave K. M. (2016). Extent of alcohol prohibition in civil policy in Muslim majority countries: the impact of globalization. *Addiction* 111(10): 1703-1713.

Al-Ansari B., Thow A. M., Day C. A., and Conigrave K. M. (2016). Civil alcohol policy in Muslim majority countries: need for global tools, expert support and local partnerships. *Addiction* 111(10): 1718-1719.

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Al-Ansari B., Noorozi A., Thow A. M., Day C. A., Mirzaie M. and Conigrave K. M. (in press, accepted 3/4/20). Alcohol treatment systems in Muslim Majority Countries: case study of alcohol treatment policy in Iran. *International Journal of Drug Policy*.

**Published commentaries by other authors on this research (see Appendices 2-4)**

Sawitri Assanangkornchai, Muhammadfahmee Talek, J. Guy Edwards, Influence of Islam and the globalized alcohol industry on drinking in Muslim countries, *Addiction*, 2016, 111, 7

David Kalema, Wouter Vanderplasschen, Sofie Vindevogel, Ilse Derluyn, The role of religion in alcohol consumption and demand reduction in Muslim majority countries (MMC), *Addiction*, 2016, 111, 7

Raed Bahelah, What should national alcohol control policies in Muslim majority countries focus on?, *Addiction*, 2016, 111, 7

## Presentations emerging from this thesis

The presenting author is underlined.

Al-Ansari, B.; Thow, A.; Day, C. and Conigrave, K. (2014). Alcohol Policy in Muslim Majority Countries, Addiction Medicine Seminar Series. Presented orally at Royal Prince Alfred Hospital on 10th of December, 2014.

Al-Ansari, B.; Thow, A.; Day, C. and Conigrave, K. (2016). Alcohol Policy in Muslim Majority Countries, the effect of globalisation, presented orally at the Emerging Health Policy Research Conference (EHPRC), University of Sydney, on 13th of July, 2016.

Al-Ansari, B.; Thow, A.; Day, C. and Conigrave, K. (2016). Extent of Alcohol Prohibition in Civil Policy in Muslim Majority Countries: The Impact of Globalization, presented as poster in the Australasian Professional Society on Alcohol and other Drugs conference (APSAD), Sydney, Australia on October, 2016.

Al-Ansari, B.; Thow, A.; Day, C. and Conigrave, K. (2016). Extent of Alcohol Prohibition in Civil Policy in Muslim Majority Countries: The Impact of Globalization, presented orally at plenary presentations poster highlighting session in the Australasian Professional Society on Alcohol and other Drugs conference (APSAD), Sydney, Australia on 1st of November, 2016.

Al-Ansari, B.; Thow, A.; Day, C.; Mirzaei, M. and Conigrave, K. (2017). Extent of alcohol prohibition in civil policy in Muslim majority countries: the impact of globalization, a case study of Iran, Presented at the 15th World Congress of Public Health, Melbourne on 5th of April, 2017.

Al-Ansari, B.; Thow, A.; Day, C.; Mirzaei, M. and Conigrave, K. (2017). Civil alcohol policy in Muslim majority countries: Prohibition amidst globalisation in Iran, Presented at the Global Alcohol Policy Conference, Melbourne on 5th of October, 2017.

Al-Ansari, B.; Thow, A.; Day, C. and Conigrave, K. (2017). Civil alcohol policies in Muslim majority countries and likely impact on alcohol treatment, Presented orally at the International Society of Addiction Medicine Conference, Abu Dhabi on 29th of October 2017.

Al-Ansari, B.; Thow, A.; Day, C.; Mirzaei, M. and Conigrave, K. (2018) *Alcohol policy in Iran: content analysis*, Presented orally at a plenary session in the Kettil Bruun Society (KBS) Meeting, Chiang Mai on 31st of May 2018.

Al-Ansari, B.; Thow, A.; Day, C. Mirzaei, M. and Conigrave, K. (2018) Extent of alcohol prohibition in civil policy in Muslim majority countries: the impact of globalization, Presented orally at the 12th Annual International Addiction Science Congress (ASC2018), Tehran on 5th of September 2018.

Al-Ansari, B.; Thow, A.; Day, C.; Mirzaei, M. and Conigrave, K. (2018) Provision of alcohol treatment in MMCs: the policy content and context, Presented orally in a symposium "Alcohol Treatment in Muslim Majority Countries" at the 12th Annual International Addiction Science Congress (ASC2018), Tehran on 6th of September 2018.

Al-Ansari B., Noorozi A., Thow A. M., Day C. A., Mirzaie M. and Conigrave K. M. (2019) Alcohol treatment systems in Muslim Majority Countries: case study of alcohol treatment policy in Iran. Accepted to be presented orally at the 13th Annual International Addiction Science Congress (ASC2019), Tehran on 21-23 August. 2019

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## Abbreviations and acronyms

| Abbreviation | Meaning |
|---|---|
| **APSAD** | Australasian Professional Society on Alcohol and other Drugs |
| **AUD** | Alcohol use disorder (i.e. harmful use or dependence) |
| **BI** | Brief intervention |
| **CHC** | Community Health Centre |
| **DRSE** | Drinking refusal self-efficacy |
| **EMR** | Eastern Mediterranean Region |
| **GNI** | Gross National Income |
| **HDI** | Human Development Index |
| **ICD** | International Classification of Diseases |
| **INCAS** | Iranian National Centre for Addiction Studies |
| **ISAM** | International Society of Addiction Medicine |
| **KBS** | Kettil Bruun Society for Social and Epidemiological Research on Alcohol |
| **MMC** | Muslim majority country |
| **NGO** | Non-governmental organisation |
| **PHC** | Primary health care |
| **SAIMS** | Substance Abuse Instrument for Mapping Services |
| **SBIRT** | Alcohol screening, brief intervention, and referral to treatment |
| **SBIRT** | Screening, Brief Intervention, and Referral to Treatment |
| **UAE** | United Arab Emirates |
| **UNODC** | The United Nations Office on Drugs and Crime |
| **USA** | United States of America |
| **WHO** | World Health Organization |
| **WHOEMRO** | WHO Regional Office for the Eastern Mediterranean |

# Chapter 1

# Overview of this thesis

# Chapter 1: Overview

This thesis covers the topic of alcohol policy in Muslim majority countries. After this chapter which is designed to be a guide for the reader to the thesis structure across the different sections, there are six other chapters. Along these chapters, the reader can explore the topic of this thesis from the background to the more specific research undertaken.

Chapter 1 covers an overview of the topic and the rationale of the thesis. This is followed by Chapter 2 that builds a comprehensive background to alcohol consumption globally and then zooms into alcohol consumption in Muslim majority countries (MMCs). The concepts of civil alcohol policies around consumption, availability and treatment are also introduced. It also highlights the significance of this research and the overall objectives and aims.

Chapter 3 presents an overview of the methodological approaches. It does this by introducing the terminologies used in this research and some specific definitions. In addition, this chapter highlights all the possible challenges that exist in addressing this topic. It also sets out the approaches that were taken to overcome these challenges when the methods were developed. For example, due to the sensitivity of the topic of alcohol in MMCs, we had to tailor our approaches in identifying the required documents and analysing the data.

This is followed by Chapter 4 which contains two published articles. The first manuscript is an invited article in the journal, Addiction, which performs alcohol policy review across all MMCs and a policy context analysis using a narrative synthesis approach. This publication first covers the extent of implementation of civil alcohol prohibition by MMCs. This is followed by presenting some of the challenges MMCs face regarding alcohol policy development.

The second manuscript is a published response to the three commentaries (Appendices 2-4) received by the journal on the first publication from researchers from different parts of the globe.

Next, Chapter 5 comprises a manuscript published in the International Journal of Drug Policy. This paper presents a comprehensive analysis of Iran's alcohol policy. This chapter identifies the content, context and actors involved in alcohol policy development in Iran.

Alcohol treatment policy in MMCs is then explored in Chapter 6 using Iran as a case study. This chapter includes a manuscript accepted for publication in the peer reviewed journal International Journal of Drug Policy.

Chapter 7 discusses the findings of the Chapters 2 to 6 in light of the past literature. It also details future research and policy directions and sets out conclusions.

Because this thesis is 'with publication', each results chapter has its own reference list. Therefore, for the sake of consistency, each of the other (non-publication) chapters also has its stand-alone reference list. In addition, as each journal requires different style of referencing, the reference style used in the publication chapters varies. The main reference style chosen for other parts on this thesis is the "numbered" style. This style was preferred to facilitate reading as the thesis both contains Arabic and Persian names.

# Chapter 2

# Background

# Chapter 2: Background

## Consequences of alcohol consumption

Alcohol is a psychoactive beverage that has been used for centuries. Alcohol consumption can lead to a wide range of problems, some health-related, and others social or economic [1, 2]. Globally alcohol is a risk factor for more than 200 diseases and injuries [3]. Some are direct consequences such as alcohol dependence or alcoholic cirrhosis and others are indirect, such as cancer and injury [3]. Furthermore, apart from non-communicable diseases, alcohol use is associated with increased prevalence of communicable diseases such as HIV and sexually transmitted infections [4, 5].

Volume, pattern and type of alcohol consumption contribute to both chronic and acute health outcomes [6]. The chronic impacts include long-term effect such as liver cirrhosis, and increased risk of several cancers, whereas acute include violence and traffic injuries/ fatalities.

Unsafe alcohol consumption globally causes 5.2% of deaths and around 4.2% of the burden of disease and injury [3]. It is the seventh risk factor for years lost from disability and death (Disability-Adjusted Life Years; DALYs) [3]. In addition, it is the first risk factor for DALYs in the age group 15-49 years [7]. Globally, the effect of alcohol use has different effects on DALYs according to sex and regions. In regions such as Eastern Europe and Sub-Saharan Africa, alcohol is the leading risk factor for DALYs (13.9%) [8], while in regions such as the Eastern Mediterranean region (EMR) it accounts for only 0.8% of DALYs. Accordingly, the prevalence of alcohol consumption and its consequences differs between regions, countries and even cities within one country. Alcohol contributes to a higher percentage of DALYs among men than among women (6.2 % of DALYs and 1.7 % of DALYs respectively) [7].

**Factors which influence alcohol consumption**

Factors that are related directly to an individual's likelihood to drink alcohol include age, gender and socioeconomic status. For example, young adults show more episodic drinking to intoxication in comparison with older age groups [6, 9] and greater acute negative consequences [10-13]. The chronic effects may not occur until age 30 or older.

Overall, countries with higher income have higher prevalence of alcohol consumption in comparison to lower income countries [14]. Many studies have suggested that mortality and morbidity due to alcohol consumption are higher among low socioeconomic people compared to those of high socioeconomic status [15], even with a same drinking pattern [16]. In addition, the association of alcohol harms and gender has been studied intensively [17-20]. Overall, women consume less alcohol than men and women are more lifetime abstainers [17]. Women develop less alcohol-related issues than men unless they drink excessively [17]. Even though research on alcohol abuse is limited in MMCs [21], there is a similar pattern of consumption differences between male and female is observed in MMCs [22]. For example, in Iran lifetime alcohol use was significantly associated with male gender [23].

On the other hand, social vulnerability factors are those related to the society that the individual is part of. These include the level of development of the country, cultural identity, ethnicity and the overall drinking context [24-26]. These also influence alcohol availability, and increased availability is associated with increased harms. Policies on alcohol availability influence the production and distribution of alcohol on a national and global level [27-29].

*The influence of history, culture and religion*

Globally, religion and culture have directly influenced alcohol consumption [30-33]. Throughout history, alcohol has been consumed for many purposes, including for medical

purpose through, history [34]. In addition, before the 20th century, alcohol was used as an healthy alternative to unclean water in both European and American regions [33].

In many societies around the world alcohol consumption is considered a norm. A glass of alcohol is served to demonstrate celebration, expression of love and affection, and to ease social communications [35, 36]. For example, in the Chinese Spring Festival, consumption of a certain type of alcohol is believed to bring good-luck and health [37]. In some societies a night out with drinking to intoxication is considered "cool" for youth and a form of bonding [38]. Many young people also use alcohols as a sign of being grown up and coming to the age of maturity [39, 40]. The attitude a society has toward alcohol is one of the significant factors influencing alcohol consumption by youth and elderly [33, 41].

Religion is an important factor affecting a society's attitude toward alcohol [42]. Some religions such as Islam [43] prohibit alcohol consumption. Other religions such as Christianity (most, but not all branches) and Judaism include [30, 42, 44-46] alcohol within their ritual practices. And some, such as Buddhism, discourage the consumption of any intoxicating substance, including alcohol [47-49].

**Islam and alcohol**

After the onset of Islam and during the life of the Prophet Mohammed, alcohol was prohibited in three stages according to the verses of the Quran (the holy book, the words of God). In the first stage the harms the harms associated with alcohol were highlighted. As the verse in the Quran [50] describes: "They ask you (Prophet) about intoxication [khamr; alcohol] and gambling: say, 'there is great sin in both, and some benefit for people; the sin is greater than the benefit'" (Albaqara 2:219) [51]. The second stage was to ask Muslims to introduce some restrictions on the times of the day where a Muslim should not be under the influence of alcohol

during prayers (sunrise, midday and sunset). This was stated in the Quran as “You who believe, do not come near prayer if you are intoxicated - not until you know what you are saying.” (Alnisa 4:43) [51]. The final stage was a strong statement and implementation of total prohibition on alcohol consumption, production, trade and distribution [52-54]. These steps, if translated into policy terms, can be explained by growing awareness of the harms associated with alcohol consumption, followed first by restrictions on times alcohol can be consumed during the day, and then by total prohibition [52].

Overall, the Islamic jurisprudence (fiqh) is built on two fundamental principles, the Quranic verses and the practice and statements of the Prophet Mohammed (Sunnah). Accordingly, alcohol-related fiqh such as the production and purpose of use are discussed by many scholars along the Islamic history [55-58].

Alcohol has been described in various ways in the Quran depending on the context of the section. While there are verses pointing out harms of alcohol consumption and restrictions on alcohol use, there are also verses in the Quran that describe alcohol as one of main drinks in the heavens. However alcohol’s characteristics as described in relation to the heavens differs and appears to lack associated harms. For example, surah Mohammed verse number 15 describes the paradise that God has promised the righteous in the afterlife. “In these gardens there are rivers of wine that are a delight to the drinkers”. In contrast the Quran describes wine in this life as “Satan’s tool to induce animosity and hatred between humans”.

In addition to the Quran’s verses, the teaching of the Prophet and his successors /progeny, the prohibition of alcohol is not limited to consumption, but extends to production, trade and serving, and even sharing the table with a drinker. However, the interpretation of these details might differ between different Islamic schools of thought (sects). As with many other Islamic

laws, punishment for consuming alcohol has its own "fatwā"[1] and explanation by different scholars. In addition to the Islamic teachings about harms associated with alcohol consumption, since the beginning of the Islamic ban (7th century), alcohol abstinence has been seen as a respectable state for worship [53].

Within around a century after the Prophet Mohammed's life, Islam had expanded to the majority of the Eastern Mediterranean, African, South Asian and European regions and so had the associated alcohol prohibition. In Russia in the 9th century, alcohol prohibition by Islam was one of the reasons why Prince Vladimir of Kiev did not allow Islamic teachings to be part of the governing system [36].

This expansion of Islam was in parallel to the development of science, philosophy and medicine by Islamic scientists. Despite the Islamic prohibition on alcohol, Jabir Ibn Hayyan (in the seventh to eighth century), who is known as "the father of chemistry" invented an innovative distillation technology to produce spirit. This was around the time when alcohol was named from the Arabic word "āl kḥwl" meaning the distilled elements [36]. In addition, a Muslim surgeon Alzahrawi was one of the first scientists to study the effect of alcohol on the human body, including its effect on liver function [36].

In addition, around that time, for example, in Abbasid Califs (7th-12th century CE) alcohol was consumed by influential people [59]. In the capital city of the Abbasid Califs, the poet Abu Nowas (7th-8th century CE) who is known for his wine-based poetry "Khamriyyat" and love-based poetry "Ghazal", gave a sense of the characteristics of the nights of Baghdad and the role

[1] A fatwā in Islamic law is authoritative legal opinion that is given by a qualified Islamic scholar/ Islamic jurist on issues pertaining to the Sharia/Islamic law

of alcohol in these gatherings [60, 61]. Despite the Islamic prohibition, multiculturalism and a "modernised" vision of alcohol consumption at that time was influencing the royal class [62].

**Iran and alcohol**

Iran is an MMC in the Middle Eastern region which provides an example of the diverse history in relation to alcohol and the modern responses to this issue. Prior to the Islamic prohibition, wine and intoxication used to be embedded in the culture, poetry and literature of Iran. For centuries, Shiraz used to produce the well-known wine [63] and in the pre-Islamic era, "Shirazi wine" was distributed around the Middle East. If we look at Iranian literature, we see that wine had a real influence on the activities of everyday life including celebrations [63]. After the expansion of Islam to Iran, many Islamic practices started to infuse into the Persian culture. However, wine was so embedded in the literature that even after the Islamic era, famous poets such as Khayam (10-11$^{th}$century) and Hafez (13$^{th}$century) who were Muslims, and who reflected their attachment to the religion in their poetry, used wine in their poetry as a sign of love and of a state of being closer to the Lord [64]. An example of Khayam's poetry as translated literally by Rhymed is [65, 66]:

"*Tonight I shall embrace a gallon cup*
*With at least two cups of wine I'll sup*
*I'll divorce my mind and religion stop*
*With daughter of vine, all night I'll stay up*."

This is an example of the contradiction between the presence of prohibition, stigma associated with alcohol drinking, and the role of wine in the Persian literature [63]. These contradictory attitudes toward alcohol consumption remained an issue and consumption started to be in private, as described by some literature [63]. In parallel, the social taboo was growing, and drinking was defined as a sin [64, 67]. Since the reign of King Isma'il of Safavid (1501-1524),

Iran's official religion became Shi'ite Islam. Then after the 1979 Islamic Revolution in Iran, this religious orientation was reinforced [63].

**Alcohol use in MMCs today**

Today MMCs have a very low prevalence of alcohol consumption. For example, the EMR, most of whose countries are MMCs, has the lowest prevalence of alcohol consumption per capita (11%) of all WHO regions [68]. However compared to twenty years ago the prevalence in this region has increased [69]. Moreover, the EMR has relatively high alcohol consumption per drinker [68, 70]. For example, consumption among drinkers (15+ years) was 10.9L in 2000 and 21.2L in 2016, which shows the sharpest increase of all WHO regions [71].

*Unrecorded alcohol use*

'Unrecorded alcohol' covers more than 30% of the consumed alcohol globally [72]. This type of alcohol consumption goes unrecorded for several reasons in different countries, and so it is challenging to estimate its extent [73]. For example it may be due to domestic production of alcohol in India, cross-border shopping in the European region, or surrogate alcohol production in Russia [72-74]. Surrogate alcohol is type of alcohol that is not planned to be used by human [74]. Similarly, unrecorded alcohol consumption in most MMCs differs from the actual estimates of sales/or self-reported consumption data [70] by as much as 58% [75]. Similarly around 57% of the alcohol consumed in the EMR is unrecorded [76]. Apart from other factors such as illegal import or home production, there is a high stigma around drinking as alcohol consumption is forbidden in Islam. Therefore, alcohol is a very sensitive subject in many MMCs and many Muslims are unwilling to acknowledge their drinking behaviour. Many may respond according to what their religion expects from them, resulting in social desirability bias and misleading data with underreporting of consumption [77]. From experts' observation, many MMCs overlook the fact that alcohol-related harms are increasing in their countries, even

though they might be aware of the "undercover" consumption. The term undercover is used in this thesis to describe any illegal consumption of alcohol across the country.

*Alcohol production*

Alcohol can be produced using many different agricultural resources such as palm trees or grapes, and can be distributed legally or illegally across the world [71, 78]. In many MMCs such as Saudi Arabia, Iran and Indonesia alcohol is mainly distributed "illegally". This is because not only is alcohol consumption prohibited in Islam, but production, trade and even serving of alcohol to others is prohibited [55, 58, 79, 80]. Often in such countries, for example in Saudi Arabia, the only alcohol that is legally produced is the ethanol that is used as an anti-septic and commercial solvent [81]. However, in other MMCs such as Turkey, alcohol is produced and traded legally in the country [71, 75, 82]. On the other hand, in some countries the minority non-Muslim population are permitted to have legal production and consumption of alcohol [53]. All these different situations of civil laws around alcohol production in MMCs have not been clearly documented in the literature.

*Home-made alcohol*

Homemade alcohol is a strong and inexpensive additive spirit which if not distilled appropriately can cause methanol poisoning [78, 83]. In some MMCs home-made alcohol is legal, if made by non-Muslim drinkers. Because of the alcohol ban in many MMCs, methanol poisoning can be a significant public health issue. For example, there is recurring evidence of morbidity and mortality caused by methanol poisoning in Turkey [84], Tunisia [85], Iran [86, 87] and Indonesia, including cases involving death of travellers in Indonesia [88-90]. Overall, in countries where foreign tourists frequently visit, cases of methanol poisoning may not be only due to alcohol prohibition but also to an attempt to maximise income by local people by producing cheap, home-made alcohol which can sometimes be contaminated with methanol in some cases.

*Refusal of alcohol consumption by individuals in MMCs*

In countries where alcohol consumption is banned by the majority religion, Islam, there is typically increased drinking refusal self-efficacy (DRSE) compared to non-MMCs. This DRSE is strongly inversely associated with alcohol consumption [91, 92]. So the higher the DRSE the lower the alcohol consumption [93]. This is the case when looking at alcohol-related behaviours in Arab and Asian Muslim samples [91]. Therefore, DRSE can help protect young people from alcohol-related harms. However, that refusal self-efficacy can be reduced or strengthened by many factors. For example, where social pressure to refuse alcohol consumption is the norm in the community DRSE is likely to be higher. It is unclear the extent to which DRSE has been affected by globalisation and commercial advertising of alcohol, for example, via product placement. Very little attention has been given to what the newly adopted policies are and what influence they have on MMCs [94].

**Forces driving increased consumption in MMCs**

*Commercial influences and globalisation*

Alcohol can be produced and distributed in various forms and with various ways globally [95]. It can be home brewed, nationally produced as local brands, produced locally for a "global" brand, and globally known brands can be made, distributed and sold on an international level [96]. Each of these forms of production has its own complications and challenges to public health and policy makers [96, 97]. Several economic sectors such as the agricultural and tourism industries are directly involved with alcohol [98]. Alcohol engages many agencies, at every stage from production through to consumption, and these agencies that provide opportunities for employment. This is apart from the income gained by those engaged in marketing and promotion of alcohol. Income from alcohol production, trade and sale can circulate the economy of the country and bring import and export opportunities, and raise taxes that are paid by producers, retailers and consumers [98].

However because alcohol consumption leads to harms at an individual, family and societal level, the costs may outweigh the financial benefits that come from its production and trade. Therefore, policies and regulations must be able to withstand the strong forces pushing for more production or sale of alcohol [95, 99]. Commercial forces may explore additional consumer markets away from the established ones. With the effect of globalisation, this is not limited to some countries or some regions, but all the globe can be a home for potential additional consumers.

The effect of globalisation is a phenomenon that has been examined in many health issues. For example, the term "McDonaldization" was introduced in 1993 to describe the introduction of a fast-food culture [100]. This term was later used to more broadly describe the harms associated with high sugar consumption [101]. Globalisation also can affect social attitudes toward alcohol, alcohol consumption practices and the availability of alcohol [102]. For example, in countries with alcohol prohibition and social taboo associated with alcohol consumption, globalisation can lead to gradual normalisation of drinking, and so can increase the demand for illegal alcohol. This availability of illegal alcohol can be either through increased home-made alcohol or through increased smuggling across the borders.

*Global and media influences on alcohol consumption*

When looking at MMCs, such as most EMR countries, other factors may add to the contribution of globalisation to the risk of increased alcohol consumption [103]. Media has for a long time been tightly controlled by governments in the EMR, where even news cannot be fully independent of the control of governments [104]. A sudden media independence and reduced censorship in relation to media and social media have been the force to enable the "Arab Spring", the revolutions against embedded dictatorship in the EMR [105]. These have led to

many consequences such as political instability, insecurity and further reductions in media control [106, 107]. These are factors that are likely to be affecting alcohol's status in MMCs. This is particularly relevant when we look at the effect of media and social media on alcohol consumption among youth globally [108].

Apart from increased possibilities of exposure to alcohol advertising and seeing potential of increased consumption, this political change through the "Arab Spring" has allowed more liberal discussion [109], that can include the topic of alcohol. Our observation shows that this has been reflected in the increased amount of scientific literature on alcohol in the last decade and soon after the "Arab Spring" [21, 91, 103, 110, 111]. There were few scientific publications on alcohol in MMCs, particularly in Arabic speaking and Middle Eastern countries prior to 2011, the year in which Arab Spring started [21, 112]. There is now a growing body of literature on alcohol as a social factor and on alcohol-associated harm. These publications are coming from countries such as Jordan, Lebanon, Egypt, UAE and Iran [21, 91, 103, 110, 111].

Overall, this period of political transition has led to political instability, frequent governmental changes, lack of governments and sudden increased exposure to the global community. Unlike Western countries, democracy has been a new concept for most Middle Eastern countries [113]. A rapid change, amidst a chaos produced by the political instability and conflict, are detrimental and may have adverse consequences. This transitional period also comes with many uncertainties. This has caused these countries to be vulnerable to other changes. The nations or countries affected by the Arab Spring have been increasingly exposed to a wide range of influences, either through global media, social media and of course the alcohol industry, and to weakened border monitoring [102, 114]. All these factors might lead to change in social attitudes toward alcohol consumption.

Even though the Islamic religion plays a big role in MMCs, it cannot be counted on as the only measure to protect against increased alcohol consumption. The youth in MMCs, for example in Iran, emphasise their religious identity, however do not necessarily practice all the teachings of Islam such as not consuming alcohol [62].

**Alcohol policy responses**

As described above, to prevent and reduce the consequences of alcohol consumption there is a need for appropriate alcohol policies [115]. Alcohol policies can influence many factors, including the production of alcohol, availability of alcohol, guidelines on safer levels of consumption and treatment [95].

*Global alcohol policy*

Looking at this from a global perspective, we can see that through history there have been many attempts and recommendations to reduce harms of alcohol through policy initiatives [95] [116]. Some have been successful while others have not [117, 118]. There is an ongoing debate about what policy is the best, especially when we are talking about economic versus public health benefits [119]. WHO introduced the Global Strategy to Reduce the Harmful Use of Alcohol in 2010 [120]. This contains 10 key recommended policy areas, covering factors such as alcohol availability, regulation, sale and taxation. In every domain, there are interventions that have been recommended for all countries to adopt [120]. These are suggested as best practice interventions for each country to implement, based on its willingness and circumstances [120]. Most of these policies are to some extent evidence based. They have been developed based on lessons learnt from different alcohol policies through history, such as the prohibition introduced in the US in the 1920s and early 1930s [121, 122]. However, these policies have not been designed with developing countries in mind, including MMCs. These policies have been designed, implemented and tested in high income settings and non-Muslim countries, such as

European countries and the USA [68]. As described earlier, in most developed countries, the westernised lifestyle includes alcohol consumption as a norm and as part of social activities. This has led the majority of these countries to have a high prevalence of alcohol use and of alcohol-associated harm [70]. At the same time, the infrastructure of research and development is advanced in such settings. There are ongoing regulations on measurable factors such as production, sale, advertisement and taxation [123-127]. Overall, having such a context has made these countries the right places for evidence-based policies to be examined and formed. And these have led the developed wold to lead the global conversation on this topic.

*Alcohol policy in the developing world*

The effect of these policies has not been measured in developing countries, whereas the literature shows that the alcohol industry is finding a new market for their production and sale [128, 129].

These restrictions that have regulated the distribution of alcohol in developed countries, have led the global alcohol industry to target more vulnerable countries, such as the developing countries as potential markets [117, 130]. In this setting the problem becomes more complex. Developing countries, which include all the MMCs, typically, do not have the required policies in place to limit, regulate or prevent the harms associated with alcohol [70]. This will lead them to face the potential rises in pressure for increased alcohol consumption and increased alcohol availability with limited policy resistance.

Let us take Africa as an example. If we compare the prevalence of alcohol-related harms and alcohol consumption in African countries over time, we see a big shift in recent years, with consumption increasing in a dramatic manner [70, 131]. A major challenge is that there is no real awareness of what is happening in the domain of alcohol policy in the developing world. It is not clear what works best and what does not [132]. There is often a lack of alcohol policy

development. For example, out of 46 African countries, 21 do not implement the minimum legal purchase age policy for either on-premise or off-premise purchase [133].

*Alcohol policy in MMCs and the policy makers' challenge*

Having in mind that MMCs typically lack alcohol policy development tools, MMCs are likely to have a particular challenge in trying to form good and comprehensive policies to prevent increases in harm from alcohol. All MMCs are developing countries, but in addition, alcohol is a sensitive issue and there is an Islamic prohibition. MMCs also have limited infrastructure for research and development, limited knowledge on alcohol policies [70, 94], limited awareness of alcohol's harms and limited experience in understanding and opposing the alcohol industry.

In MMCs, despite the global perception that they have effective and complete civil alcohol prohibition as described earlier, we see that alcohol problems do exist. Most of the internationally famous brands of alcoholic beverage are available in several MMCs [134, 135]. So, what is the situation around consumption and policy? This is particularly important given that the alcohol industry may seek to influence the formation of policies. This would allow the alcohol industry to place its own financial benefit over the public health benefit [97, 136].

So the question arises, to what extent does civil alcohol prohibition exist in MMCs? Because alcohol is a sensitive topic many MMCs do not publicise internationally their alcohol policies when implemented or changed. It is not a favoured topic of conversation. For example, in a recent consultation, a professional mentioned a situation that he experienced some years ago. He said that when the topic of alcohol was raised in an EMR meeting, a real tension arose around the table, where every representative (researchers and policy makers alike) denied that his country had any significant alcohol issues. Instead each pointed to others saying that they should have concern about their own country. The impression given was "My country is a

Muslim country and it is a matter of heritage and pride to have prohibition in place and to have no alcohol issues" (personal correspondence, 2014).

However, with regard to alcohol policies in MMCs, even if not explicitly or publicly stated, there needs to be a mediation between civil alcohol policies and Islamic prohibition. Although a small number of studies have been conducted in regard to alcohol use in MMCs [53, 137], very little attention has been given to the newly adopted policies and their influences [94]. Different MMCs have taken different approaches to this challenge. For example, Turkey with a 98% Muslim population have introduced a range of policies that increased the availability of alcohol in the country. However, we see that alcohol prevalence as well as alcohol associated harms have increased [70, 138, 139].

On the other hand, the United Arab Emirates (UAE), which is an MMC located in the Middle East and surrounded by other MMCs, has restrictions on alcohol availability. However, alcohol is being imported into the UAE and re-exported to neighbouring MMCs [140]. We can see such legal channels for alcohol trade exist [140]. However, it is not clear in the academic literature, what policies around alcohol each of the MMCs in the region have adopted.

So, a shift in alcohol availability has occurred in many countries over history [141], as change in availability can influence alcohol consumption [142-144]. In the case of MMCs, the potential rise of alcohol consumption is of concern, because their civil alcohol policy development is limited and so is treatment availability. Accordingly, there is an urgent need for research to look at MMCs and their adopted alcohol policies.

This is particularly important because using the WHO global alcohol policy measures it is not possible to describe the existing prohibition in some MMCs. For example, for countries with prohibition when alcohol policies are described, 'total ban' is written by WHO for all sections

related to those countries [70]. It seems that there is no global tool suited to describing the unique alcohol policy environment in MMCs which have some degree of civil alcohol prohibition. Even when MMCs implement some of the globally recommended policy areas, the definition and application of these policies might be different in their context. Consequently, if we do not have a real tool to identify or assess the policies that exist in these countries, it is difficult to understand the policies that are implemented. The assumption of total ban obscures the existing situation.

*Alcohol treatment policy*

There is a global emphasis on policies to prevent, treat and reduce harms from alcohol [115]. In the alcohol policy recommendations by WHO, the health services' response is the second area of policy action [120]. Such a response aims to provide prevention and treatment at an individual level. Usually early intervention and treatment are integrated into many sectors of the health system [145].

To integrate treatment into a country's overall policy response to alcohol, there are number of planning requirements in the public health arena. For example, there is a need to determine the definition of 'cases' requiring treatment and the determination of the proportion of cases that will at any time seek treatment [146, 147]. This is a challenge for MMCs as there is no measure of alcohol attributable fraction for health conditions that is specific to most of MMCs. So, it is not as clear the extent to which alcohol contributes to different diseases and disability outcomes as it is for the European region.

When we look at alcohol treatment from a global perspective, we see there are broad recommendations. WHO's Substance Abuse Instrument for Mapping Services (WHO-SAIMS) [148] and the International Standards for the Treatment of Drug Use Disorders (WHO/UNODC) [145] are the two global recommended frameworks for best practice. Based on these frameworks, an overall description of alcohol treatment systems and required

treatment policy is defined. For example, treatment modalities and interventions, access to services, education of the population, and human resources are all described.

These frameworks can also be considered good tools to examine the availability of treatment in MMCs, especially as there is a lack of literature on treatment systems in those settings. For some MMCs, such as Turkey, the international scientific community has a clearer picture of treatment availability. This is because Turkey is part of the European region and uses globally recommended alcohol policies [149]. However, for other MMCs, the extent of alcohol treatment availability is typically unclear. Even though, there are some evidence that many people with alcohol use disorders are seeking treatment in these countries [150].

*Unanswered questions*

Worldwide, alcohol consumption is a key risk factor for morbidity and mortality. The prevalence of alcohol consumption is increasing even in countries where Muslims make up the majority of their population [71]. This is despite the Islamic prohibition of alcohol consumption and the high stigma around it.

Many policies have been developed globally to reduce the harmful effect of alcohol. However, on a global level less attention is given to MMCs. The topic of alcohol policy in MMCs has been largely neglected by the global literature and the perception of prohibition has excluded MMCs from the global alcohol policy dialogue [53, 151].

Therefore, the question is, what is the extent of civil prohibition of alcohol in MMCs? Few studies have highlighted the lack of clear policies to regulate alcohol use or policies on treatment of persons with alcohol use disorders [53, 64, 152]. It is essential to understand the civil alcohol policies in MMCs and stimulate the discussion on what policies are more suitable to their unique contexts. On a global level, we need to know what measures are implemented

in MMCs, and so how to improve alcohol policy development including for treatment. This will be an important step toward recognising what policy approaches work for most MMCs.

**Aims**

This research aims to reveal the extent of alcohol prohibition in the civil alcohol policies in MMCs. As well as documenting the various approaches adopted by MMCs; it also aims to highlight some of the challenges faced by governments and policymakers in alcohol policy development, including in treatment policy. This research sets out to draw a better picture of the range of policies behind or associated with civil prohibition and to clarify what is civil and what is religious prohibition.

It is hoped that this research will both assist MMCs in policy development and also guide the global community in how they might best support this process.

**Objectives**

In this thesis, therefore we first review the extent of alcohol prohibition in MMCs. Then we move on to case studies to describe the alcohol policies that are existing within one country with a civil alcohol prohibition, Iran. We compare the existing alcohol policies in that country with the WHO global recommendations on alcohol policies.

The use of the Islamic Republic of Iran as a case study can help to explore in more detail how the nature of alcohol prohibition as a policy approach in a MMC. It analyses alcohol policy by defining its context, process, actors and content.

Next, this project aims to examine the policies around provision of alcohol treatment in Iran. This examines the health services' response, the second area of the WHO global recommended alcohol policies, in a MMC with prohibition.

**Significance of this project**

This research is the first of its kind, as it contains the first and only review on the extent of civil alcohol prohibition in the world's MMCs. In addition, the second and third studies are the first content analysis of alcohol policy and alcohol treatment policy in a country with prohibition, respectively.

This research helps bring the topic of civil alcohol policies in MMCs to the table of the international health community's conversation. And so, it can help inform civil alcohol policy development in MMCs, a topic that has been neglected due to an assumption of civil alcohol prohibition policy for all MMCs. It also provides guidance on tools that can be used to assess the presence and type of alcohol treatment policies in MMCs. Given the need for better evidence to guide MMCs in developing their alcohol policies, this research makes a unique contribution in a neglected area.

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# Chapter 3

# Overview of methodology

# Chapter 3: Overview of methodology

## Introduction

This thesis contains three studies that aim to examine the existing alcohol policies in MMCs, and in Iran in particular. These studies are:

- An examination of the extent of alcohol prohibition in civil policy in MMCs, and the impact of globalisation.
- An analysis of alcohol policy in Iran, as a case study of a MMC; and
- A study of the alcohol treatment system and policy in Iran, as a case study of an MMC

Each study has been developed with a unique and strategic methodological approach. The design of the methods had to be very sensitive for such a stigmatised subject. In many MMCs, alcohol is prohibited and considered a culturally dishonoured substance. In some cases alcohol use is subject to criminal laws. Even discussing alcohol treatment availability and accessibility in MMCs has its challenges. For example, most MMCs deal with alcohol use as part of any illicit drug use rather than seeing it as a stand-alone issue in regard to policy research, development and implementation.

## Key concepts and study parameters

In this thesis the following concepts and terminologies are used to examine the topic of alcohol in MMCs.

*Terminology for alcohol use and related policy*

In this thesis terminology consistent with the International Classification of Diseases (ICD) [1] is used to describe alcohol. The exception is when reporting the work of other authors who have used different terminology. Unhealthy consumption is also used as an umbrella term to cover all of hazardous, harmful or dependent use of alcohol. Alcohol use disorders is used to refer to both harmful use and dependence.

*Sources of alcohol*

Alcohol is produced either domestically or is imported to countries. Each has its own challenges and risks. For example, home-made alcohol can increase the risk of methanol poisoning and this type of alcohol production is more common in MMCs compared with other countries that have legal commercial alcohol availability. This is because alcohol production, consumption and trade are prohibited for the Muslim population in most MMCs. Most MMCs have as their only legal channel of commercial alcohol production, ethanol for disinfectant or solvent purposes. Accordingly, either home-made alcohol or commercially-produced alcohol which has been illegally traded across borders is the commonest source of alcohol in MMCs with prohibition.

*Alcohol policy*

Overall, alcohol policies refer to all the tools and plans required to insure a safe environment around alcohol, locally, nationally and globally [2]. Due to the Islamic prohibition on alcohol consumption, these policies are often not clearly defined in MMCs. Alcohol policies are that apart from health policies, and typically help in measuring, preventing, screening and treatment for unhealthy alcohol use or related harms. Regulation of alcohol availability, trade and price, while internationally a common alcohol policy approach, might not be in the same form in MMCs. Similarly, policies on sale of alcohol, taxes and to whom it can be served are approaches which may not exist in countries with an alcohol ban.

Zooming out from this detail to policy-making in general, most MMCs are developing countries and as such, health policy has often not been clearly defined or researched. This can be due to factors such as limited infrastructure for research and for policy development.

The population's Muslim percentage influences the policies and the perceptions around alcohol. Accordingly, this thesis identifies any country with more that 50% of its population Muslim as a MMC.

*Muslim majority countries*

The research examines the existing government alcohol policies in MMCs, including presence of alcohol prohibition. This thesis uses the term 'civil' alcohol policy or law to refer to those policies or laws that are adopted by government (while acknowledging that in some countries governments have implemented religious law in full).

Civil alcohol policies in MMCs have not been explained clearly in the academic literature [3]. Broadly, governments in MMCs have adopted various approaches which form a spectrum with varying degrees of implementation of Islamic prohibition [3]. For example, some MMCs such as Saudi Arabia have strongly implemented Islamic prohibition and have no separate civil alcohol policies. In contrast, other MMCs such as Turkey have separated Islamic prohibition from its government alcohol policies completely [3].

*Description of countries by region and economy*

This thesis followed the WHO classification of countries into six regional groups. These WHO Member State regions are South-East Asia, Europe, America, Eastern Mediterranean, Africa and Western Pacific regions.

According to the World Bank, countries are classified by the Gross National Income (GNI). Based on this, there are four groups, low-income, lower-middle-income, upper-middle-income and high-income countries.

According to the Human Development Index (HDI) of the United Nations Development Program [4], countries are ranked according to their health development, education and gross national income [5]. In addition, in the past years WHO and many other global research institutes have classified countries as developed and developing countries. Therefore, in this thesis we also used this division to discuss findings.

In this thesis we use the term "Western countries" to refer to any developed and high-income countries. These typically have alcohol consumption as legal, while other drugs such as heroin are often illegal. These "Western countries" typically have relatively advanced alcohol control policies, and treatment guidelines and services.

**Considerations in research design**

In designing the research, several issues were considered. These included the need for a wide range of information sources; in-country study partnerships; a framework for policy analysis; and consultations. These will be briefly explained below.

*Identification of global and national literature on alcohol policy in MMCs*

After a preliminary search of the literature, we realised the dearth of available scientific literature on alcohol policies in MMCs. Globally, the dominant conception around alcohol policy in MMCs is one of total prohibition. Accordingly, there has been minimal study of the range of alcohol policy approaches that may be implemented under an umbrella of prohibition. For example, in the WHO country profile for UAE "no-information" [6] is written in the alcohol policy section. This is despite the known availability of alcohol in that country and laws governing alcohol [7]. In addition, in the WHO global databases many of the policy sub-sections are similarly listed as "total ban" [8]. However, observation, consultation and some literature suggest that prohibition has been implemented differently in different MMCs.

Furthermore, the available English language academic literature on alcohol in the EMR has a high volume of academic studies focussed on alcohol-related harms in returning US troops, rather than on alcohol use in the population of the MMCs [9-12].

*Use of wide range of information sources*

This thesis explores an under-studied subject, alcohol policies in MMCs. Therefore, it was essential to include as many possible sources of information feasible.

To achieve a conclusive description of the extent of civil alcohol prohibition in MMCs (Chapter 4), we developed a search hierarchy for a range of document sources. At the top of the hierarchy was the scientific literature including PubMed; WHO, and country governmental websites. At the bottom of the hierarchy were tourist websites and those of non-government organisations. If we found ample evidence in the upper hierarchies, we did not need to go onto 'softer' sources of information. We use the term "soft" to describe non-academic and non-government sources, for example a published travel guide.

Similarly, for the case study used in this thesis, Iran, we searched several sources of information over different periods of time. To better understand the context of alcohol policy, we searched newspapers over three periods of time. These were: before the Islamic revolution (1979), before the development of stand-alone alcohol policies in 2011 (2008-2010), and the most recent years (2014-2016). We chose the most circulated newspapers and attempted to include a range of levels of conservativeness and political perspectives.

To understand policy content and players in Iran, we identified relevant policy documents by searching the websites of official organisations, such as the Ministry of Health and Medical Education and by searching the internet from inside Iran (in Persian) and outside Iran (in Persian and English). The within-country search was important because many websites are not accessible from outside the country. Extra policy-related materials were also obtained directly from Iranian academics or institutes.

*Languages used in the research*

Most Eastern Mediterranean countries have more than 50% of their population Muslims and most of these countries have Arabic, or Persian, as their official language. Furthermore, in some of these MMCs higher education is taught in the local language and so research is often published in journals using that language. So for example, Persian academic publications are common in Iran, and Arabic publications in most Arabic-speaking countries, such as Saudi

Arabia or Yemen. Accordingly, all literature searches were conducted in three languages, English, Arabic and Persian. Having the search in these languages allowed greater confidence in its completeness.

The inclusion of these three languages also allowed us to examine government reports, and newspapers and media. Spoken fluency of the author in these three languages also helped greatly in conducting consultations.

*Sensitivity of the topic*

Due to the sensitivity of alcohol as a topic in most MMCs, careful consideration was needed in selecting methodologies for this research. This study also required a culturally appropriate attitude and understanding. For example, the language used in explaining or enquiring into the existing policies and policy challenges had to be carefully chosen. Special attention and respect needed to be given to the Islamic prohibition.

*In-country partnerships*

Trust and connection building were essential to be able to collaborate on this sensitive topic. Presenting the early stages of the research (Chapter 4) at several international conferences helped to generate conversations and collaborations. For example, presenting in the 19$^{th}$ Conference of the International Society of Addiction Medicine (ISAM) in Abu Dhabi, 2017, with a MMC hosting this event, gave extra impetus to this work.

For the alcohol policy content analysis in Iran (Chapter 5), we had to be flexible with our approaches and be able to adapt to plan changes. Many appointments with officials were provided at short notice, so with a tight timeframe. This study was performed in three different cities in Iran: Yazd; the capital city Tehran; and Mashhad. Each is approximately one hour and thirty minutes apart by plane. However, when arranging the short-notice appointments, we had to consider the likelihood of long flight delays and unpredictable heavy traffic to reach destinations.

With the help of collaborators from Yazd, the Ministry of Health and from some respected figures in the country, we were able to access the publicly available resources (such as newspapers) and access expert professionals to consult.

*Consultations*

After finalising the methods and preparing the matrix to use for analysing policy content, the author travelled to Iran. This was first to study the publicly available documents on alcohol policy in Iran and to perform the newspaper search. Then we clarified any areas of uncertainty with the help of expert consultation. Formal interviews were not conducted due to the sensitivity around the topic of alcohol and the tensions between alcohol consumption as a health issue and alcohol consumption as a criminal act. Rather the focus of consultations was to check the accuracy of our understanding of publicly available material.

For the study on treatment policy (Chapter 6) our collaboration with a senior staff member of the INCAS, Dr Noorozi, assisted in seeking consultations with clinical health services or policy experts. Furthermore, our participation in the 12th International Addiction Science Congress in Tehran, 2018, allowed us to meet and consult with at least six other professionals in the field. This face-to-face interaction was particularly important as it was difficult to conduct consultations from outside the country.

**Frameworks for analysis of Iran's alcohol policies**

In this thesis we performed two different policy content analyses (Chapter 5 and 6). In both analyses we used the Walt & Gilson health policy analysis triangle [13]. Many frameworks have been developed to undertake health policy analysis. For example, in 1996 Reich and Cooper developed software to assist in policy content analysis [14]. This focuses on mapping the power of various policy players, the environment in which they are connected and the influence they have on policy development. Varvasovszky and Brugha in 2000 [15] designed a framework to help in stakeholder analysis. Sabatier's work (1999 to 2007) [16] on the other

hand has focussed on developing theories around processes involved in developing alcohol-related policies [17]. Each of these frameworks focuses on one to two dimensions of health policy analysis. The Walt & Gilson triangle for policy analysis has the advantage of assisting with analysis of each the content, context, the process and actors together. Accordingly, the Walt & Gilson health policy analysis triangle is a widely used framework for analysing health policy in various countries [18]. It has been used for different health issues, ranging from tuberculosis to mental health [19]. This framework is particularly in an action-oriented context such as the case of the alcohol policy in Iran.

This well-established framework has been developed specifically to analyse policies in developing countries. This allows an enhanced understanding of the alcohol health policy reform in Iran as a developing MMC. Looking at the context of alcohol in that country, the process of policy development and the actors involved can build a picture that not only describes the existence but also can help in future improvement in implementation and policy development.

For us to perform the analyses of alcohol policy in Iran to extract the content, we needed to develop a matrix for analysis based on globally acceptable best practice tools. For studying the overall alcohol policies (Chapter 5), we used a matrix that we developed based on the 10 areas of alcohol policy recommended by the WHO Global Strategy to Reduce the Harmful Use of Alcohol, 2010 [20].

For the analysis of Iran's treatment policies (Chapter 6), we developed a matrix based on the combination of the tools developed to attain or assess best practice in addiction treatment and addiction services globally. This allowed use of a tool that suited the early stages of alcohol treatment policy development [21-23]. This matrix was derived from three international and recognised tools; the WHO's Substance Abuse Instrument for Mapping Services (WHO-

SAIMS) [21], and the WHO/UNODC's International Standards for the Treatment of Drug Use Disorders [22] and Substance Use Disorder Treatment Facility Survey [23].

We needed to develop this new matrix for several reasons. The available instruments and survey tools assess a range of information in order to map and measure the facilities at which treatment for alcohol is provided. The existing tools were more relevant to countries with well-established alcohol treatment services. In contrast, Iran is an upper middle-income developing MMC, where the overall health system has insufficient capacity. There is limited availability of resources and limited infrastructure for health services and research. The alcohol treatment policies are newly developed in Iran. Moreover, this study focusses on policy content analysis whereas these tools have a focus on detailing the size of the health workforces in each alcohol treatment facility.

**Overview of research design**

This research has three related studies; describing policy approaches in MMCs (Chapter 4), a study of general alcohol policy in Iran (Chapter 5) and a study of alcohol treatment policy in Iran (Chapter 6).

As a foundation for understanding alcohol policies in MMCs (Chapter 4), we used a policy analysis, drawing on case study research methods, qualitative research methods and narrative synthesis literature review. This identified the extent of alcohol prohibition in the civil alcohol policies in MMCs, and some of the challenges faced by policy makers in developing alcohol policies.

Defining the extent and nature of the existing civil prohibition was essential to build a foundation not only for this project but for the global conversation around alcohol policy in MMCs. As described, for this research (Chapter 4), the methods were designed to enable the

detection of a wide range of written resources and to provide as complete on assessment on the extent of civil alcohol prohibition in MMCs as possible.

*Choice of Iran as a case study*

We chose Iran as a case study to examine the details of alcohol policy format in a MMC for several reasons. First, Iran has a civil alcohol policy of prohibition with concessions, where only (minority) non-Muslims can legally consume alcohol, but not in public. This complexity of alcohol policy approach provides unique challenges to the policy makers. Secondly, Iran has a WHO Representative Office whose staff could help provide us with relevant contacts in the Ministry of Health and Medical Education. Third, Iran has a long experience in addiction research. Fourth, we could also collaborate with an Iranian colleague who has had a previous affiliation with the University of Sydney. Finally, Iran's official language is Persian, which the author can speak and read fluently. For the study of alcohol treatment policy analysis in Iran, (Chapter 6) we also were able to collaborate with the Alcohol Treatment Clinic of the Iranian National Centre for Addiction Studies (INCAS), at the Tehran Medical Education University. This was also the institution that provided the ethical approval for that research.

While every MMC is different, Iran provided a valuable insight into the unique challenges that may be faced in countries where alcohol has a dual legal status.

**Practical constraints**

This project was unfunded, therefore we had to rely on literature sources available internationally, apart from limited periods of fieldwork. This influenced the choice of methods used. In addition, consultations were only possible inside the country as the sensitivity of the topic precluded email, phone or web-based consultation. This has imposed limitations on the number of consultations that could be conducted.

Initially we had envisaged a comparison study between two MMCs with different policy approaches toward alcohol. This did not prove feasible. It is not clear whether sensitivities in

relation to alcohol or political conflict between some countries in the EMR may have interfered with our attempts to establish the necessary collaborations.

In addition, because many of the data sources were not in English, it was not possible to have each of them independently screened or checked by an independent academic in their original language. However our in-country collaborators, including one of the supervisory team, were able to check the overall accuracy of our findings.

**Conclusion**

Alcohol is stigmatised in most MMCs, and so the concept of alcohol policy is considered a moral issue and not purely a public health issue. Civil alcohol policy development is a new approach that many MMCs are undertaking to tackle alcohol's harms. Due to the sensitivity of the topic, research into alcohol policy in MMCs can be challenging and needs caution, discretion and specially tailored approaches.

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# Chapter 4

# Extent of alcohol prohibition in civil policy in Muslim majority countries: the impact of globalisation.

# Chapter 4: Extent of alcohol prohibition in civil policy in Muslim majority countries: the effect of globalisation

## Introduction to chapter

As explained earlier, due to Islamic prohibition of alcohol consumption, it is generally assumed that full prohibition exists in all MMCs. Little information has been provided on a global level about the range of civil policy of approaches that may exist. Due to sensitivity around the topic of alcohol in MMCs, the complex environment of civil alcohol policies is also not well defined. To initiate a global conversation on alcohol policy in MMCs, it is essential to understand the extent of civil alcohol prohibition in these countries.

This chapter will present the extent of alcohol prohibition in the 50 identified MMCs. We performed a policy review and a context analysis using a narrative synthesis approach. First, we had to explore all the literature types and resources available. Following that, we developed a hierarchy of evidence based on the strength of our identified sources (e.g. refereed literature, government document, book). For us to build as accurate description as possible, we performed the search in three different languages: English, Arabic and Persian. Highlighting the range of alcohol policy in MMCs is an innovative contribution to the global scientific literature.

This chapter is centred on a report published as an invited paper in the journal, Addiction. The published supplementary material, which provides additional detail on the results is presented in Appendix 1. Several international authors wrote invited commentaries on this article. These three commentaries are reproduced in Appendices 2-4. Our published response to these commentaries is reproduced at the end of this chapter.

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# Extent of alcohol prohibition in civil policy in Muslim majority countries: the impact of globalization

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## ABSTRACT

**Background and Aims** Many policies have been introduced to reduce alcohol harm in different countries. However, Muslim majority countries (MMCs), where the major religion (Islam) prohibits alcohol consumption, have less well-developed civil alcohol policies. Overall, MMCs have low prevalence of alcohol consumption, although recently most MMCs have been undergoing transition, which has sometimes increased pressure for alcohol availability and impacted on social practices, alcohol policies and broader public health. Globalization, the influence of the global alcohol industry, recent governmental transition or political instability and the presence of immigrants from non-Muslim countries can all affect civil alcohol policy. In this context, consumption overall has increased compared with two decades ago. This paper presents an overview of current civil alcohol policy, with regard to the presence or absence of alcohol prohibition, and provides an insight into the legal availability of alcohol in MMCs and the challenges facing policymakers. **Methods** English, Arabic and Persian language sources were examined, using PubMed, government websites for each country and the World Health Organization (WHO). Some of the challenges MMCs may face in developing alcohol policies are explored, including the need to interact with the global economy and the potential influence of the alcohol industry. **Conclusion** Muslim majority countries have adopted a range of civil alcohol policies in recent decades. There is a pressing need for better data and to support Muslim majority countries in alcohol policy development. Lessons from Muslim majority countries can help to inform other parts of the world.

**Keywords** Alcohol, alcohol industry, Islam, Muslim, policy, prevention, prohibition, treatment.

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## INTRODUCTION

Unsafe alcohol consumption causes the death of 3.3 million people yearly [1], and numerous policies and civil laws have been introduced to reduce alcohol harm globally. However, Muslim majority countries (MMCs) are all developing countries [2] and, as such, have less well-developed civil alcohol policies. Furthermore, religious and cultural factors have influenced policy development.

Cultures and individuals vary in their attitudes to alcohol consumption from obsessive interest to complete abstinence [3]. The latter view is particularly noticeable in MMCs where the major religion (Islam) prohibits alcohol production, consumption, transport, trade and service [4–11]. However, despite the general perception of alcohol prohibition, many MMCs have modified their approaches to civil alcohol policy in response to globalization in recent decades. The current, barely acknowledged, civil alcohol policies differ based on geographical, cultural, historical and economic factors.

### Why this is an important issue?

At present, approximately 50 countries have a Muslim majority population [12] (Fig. 1) and MMCs cover a significant portion of the globe (Fig. 1). There are MMCs across many of the world's regions, and in the eastern Mediterranean region MMCs make up the majority of countries [14]. Overall, MMCs have a very low recorded prevalence of alcohol consumption. For example, the eastern Mediterranean region has the lowest prevalence of alcohol consumption per capita (11%) of all World Health Organization (WHO) regions globally [15]. Recently, however, most MMCs have been undergoing transition, potentially influencing alcohol

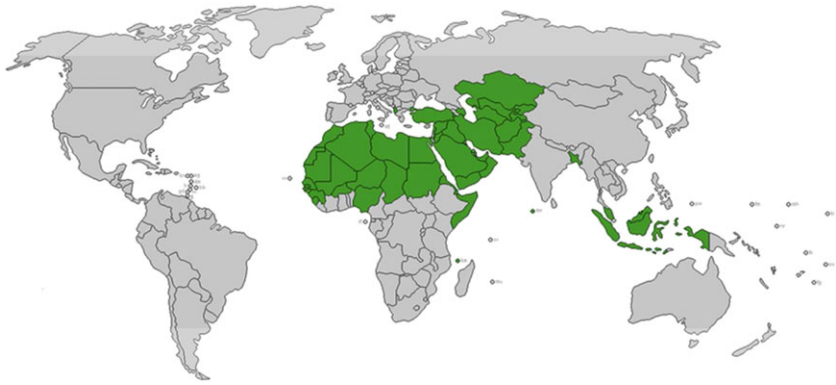

**Figure 1** Muslim majority countries in a global world [13]

availability, social practice, alcohol policies and broader public health. Globalization, the influence of the global alcohol industry, recent governmental transition or political instability and increased political tension are some examples of the complexities facing these countries. As a result, even though the prevalence of alcohol consumption remains low in MMCs, consumption overall has increased compared to two decades ago [15]. Moreover, it is reported that people who do consume alcohol in MMCs may drink large quantities [16,17]. For instance, the prevalence of heavy episodic drinking in Guinea and Indonesia is 19.2 and 31.9%, respectively [1].

To date, little research attention has been given to alcohol polices in MMCs [17]. Accordingly, it is important to examine the existing situation to inform development of policies that are successful and applicable for the reduction of alcohol-related harms in MMCs. This is of particular significance as alcohol companies seek larger global markets, making these countries potential targets [18]. This paper examines the extent of alcohol prohibition by civil policies in MMCs. In addition, it highlights some of the ways these countries seek to balance their typically preferred policy of alcohol prohibition while interacting with the global financial market and attempting to attract international tourists and investors. Some challenges facing MMCs in alcohol policy development are also discussed.

## SOURCES OF INFORMATION

While this paper is not intended to be a systematic review, a strategic approach was used to gauge the extent of available literature (up to June 2014) and to inform discussion. For the purposes of this paper, MMCs have been defined as any country in which Muslims make up more than 50% of the population. In considering available evidence, English, Arabic and Persian language sources were examined, including government websites for each country, WHO and PubMed. If information was unavailable or inconclusive from these sources, alcohol industry, tourism and some non-governmental organizational websites were searched, using Google and Google Scholar. Where a source was relatively 'soft', such as a published travel guide, at least one other source was sought to check that information. The key words used for searches were: policy, Muslim, Islam, alcohol, Sharia, law, substance, society, social, population, prevalence, alcohol industry, 'Big Alcohol'. Searches were conducted in additional depth for countries that were chosen to illustrate key policies and issues. These countries were selected based on the strength of sources available or because of the particular situation of the country. For example, the recent unrest in Iraq provides particular challenges in policy development and implementation (Table 1).

For only seven MMCs could we locate their civil alcohol policies on government websites (Table 2). However, all but three MMCs had some alcohol policy information recorded by WHO. Only 12 countries have alcohol policies mentioned in the scientific literature available through PubMed. For five countries we could not identify the civil alcohol policy.

## ORIGINS OF ALCOHOL PROHIBITION IN ISLAM

To understand the diversity of civil alcohol policies in MMCs, a brief understanding of the origin of alcohol prohibition in Islam is necessary. Generally, Islamic jurisprudence (*fiqh)* is based on two main sources, the Quran (the holy book, words of God) and what is referred to as the *Sunnah* (practice and statements of prophet Mohammed). By reviewing these sources in temporal order it is evident that the prohibition of alcohol occurred in a number of stages in what was originally an alcohol-consuming Arab culture [27] (Table 1) within the first 1–2 decades of the creation of the Muslim society [5]. The Quran sets out reasons for discouraging the use of alcohol. For example, alcohol is described as a cause of hostilities and hatred and a factor which hinders remembrance of God and prayer. The Quran also acknowledges some benefit from alcohol; however, it concludes that the

**Table 1** Sample extracts from the Holy Quran in relation to alcohol (with translation).

| |
|---|
| يَا أَيُّهَا الَّذِينَ آمَنُوا إِنَّمَا الْخَمْرُ وَالْمَيْسِرُ وَالْأَنصَابُ وَالْأَزْلَامُ رِجْسٌ مِّنْ عَمَلِ الشَّيْطَانِ فَاجْتَنِبُوهُ لَعَلَّكُمْ تُفْلِحُون [28] |
| Verse 5:90 |
| O you who believe! Intoxicants and gambling, (dedication of) stones, and (divination by) arrows, are an abomination, – of Satan's handwork: eschew such (abomination), that you may prosper [29]. |
| إِنَّمَا يُرِيدُ الشَّيْطَانُ أَن يُوقِعَ بَيْنَكُمُ الْعَدَاوَةَ وَالْبَغْضَاءَ فِي الْخَمْرِ وَالْمَيْسِرِ وَيَصُدَّكُمْ عَن ذِكْرِ اللَّهِ وَعَنِ الصَّلَاةِ ۖ فَهَلْ أَنتُم مُّنتَهُونَ [28] |
| Verse 5:91 |
| Satan's plan is (but) to excite enmity and hatred between you, with intoxicants and gambling, and hinder you from the remembrance of Allah, and from prayer: will you not then abstain [29]? |
| يَسْأَلُونَكَ عَنِ الْخَمْرِ وَالْمَيْسِرِ قُلْ فِيهِمَا إِثْمٌ كَبِيرٌ وَمَنَافِعُ لِلنَّاسِ وَإِثْمُهُمَآ أَكْبَرُ مِن نَّفْعِهِمَا [28] |
| Verse 2:219 |
| They ask you concerning wine and gambling. Say: 'In them is great sin, and some profit, for men; but the sin is greater than the profit'. They ask you how much they are to spend; Say: 'What is beyond your needs'. Thus does Allah Make clear to you His Signs: In order that you may consider [29]. |

sin outweighs the benefit (Table 1). The gradual Islamic steps towards prohibition succeeded in largely eliminating alcohol from Arabic culture and ultimately from other cultures where Islam became the dominant religious belief.

## HOW DO MMCS APPROACH CIVIL ALCOHOL POLICY IN RESPONSE TO GLOBALIZATION?

When countries with a majority Muslim population started to adapt Islam into laws for regulating their nations, each country used different approaches. With regard to alcohol, some countries such as Turkey separated Islamic from secular law [26], while Iran and Saudi Arabia implemented Islamic law strongly. Others, such as United Arab Emirates (UAE) and Oman, adopted a combination of policies and enforcement strategies regarding alcohol that drew upon both Islamic and pragmatic principles.

### The range of civil policy approaches in relation to alcohol use

Civil alcohol policy in most MMCs can be divided into three broad categories: prohibition, restriction and regulation (Table 1; Fig. 2). These are described below.

*Prohibition policies*

In some countries such as Saudi Arabia [1], civil alcohol policy prohibits the consumption of alcohol by any person. Conversely, for many MMCs, this prohibition does not apply to non-Muslims. The WHO description of alcohol policies gives the impression that there is a total alcohol ban in Saudi Arabia, Iran, Libya, Brunei and Pakistan [1]. However, closer examination of individual country policies reveals that this not the case (Fig. 2). For example, Persian language policy documents in Iran [19] show that there are separate alcohol policies for non-Muslim groups. These allow minority groups to consume alcohol but not to do so publicly. Alcohol may even be obtained by non-Muslims from licensed shops owned by that minority [19]. In this report this situation is described as prohibition with concessions.

*Restriction policies*

For this paper, this group of policies is defined as the presence of different laws on alcohol for different districts, populations or places. Usually a licence is required for purchasing and consuming alcohol. These policies of alcohol restriction have been designed differently from country to country, and are dependent upon a range of factors such as historical changes, influential population groups, perceived commercial/economic benefits of alcohol sales each, geographical position and social concepts. For example, Malaysia, Indonesia, UAE and Oman each have different policies of alcohol restriction.

In Malaysia, for instance, prior to the Dutch and the Portuguese arrival in the 16th and early 17th centuries, alcohol was rarely produced or consumed [30]. There had been strong implementation of Islamic prohibition in the Malay sultanates of peninsular Malaysia [30]. Only in the districts of Sabah and Sarawak was alcohol consumed traditionally, particularly rice wine (*tauk*), during the harvest celebration [31]. However, following British colonization in Malaysia, alcohol was used to encourage workers coming from India and China [32]. Malaysia increasingly became a multi-racial society comprised of Malays, Indians



 

**Table 2** An overview of civil policy approaches to alcohol availability in 50 MMCs with abbreviated list of sources.[a]

| | *Policy type*[b] | | | | | *Sources of this information*[a] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *Initial* | | *Additional*[c] | | | |
| *Country* | *Total Prohibition* | *Prohibition with concessions* | *Restriction* | *Regulation* | *Comment sample citations*[a] | *Government* | *WHO* | *PubMed* | *Industry* | *Travel guide* | *Other* |
| Afghanistan | ✓ | | | | | | ✓ | | | | |
| Albania | | | | ✓ | | | ✓ | ✓ | | | |
| Algeria | | | ✓ | | | | ✓ | | | | ✓ |
| Azerbaijan | | | ✓ | | WHO 2014: unclear if restriction or regulation; WHO 2010; WHO, 2004; public drinking banned | | ✓ | | | | |
| Bahrain | | | ✓ | | WHO, 2014: policy section has 'NA' for all the policies described; WHO 2004 | ✓ | ✓ | | | | ✓ |
| Bangladesh | | | ✓ | | WHO, 2014: policies on alcohol taxes and sale; WHO 2004 total ban | | ✓ | | | ✓ | ✓ |
| Brunei | | ✓ | | | WHO, 2014 [1] | | ✓ | | | | ✓ |
| Burkina Faso | | | | ✓ | WHO 2014: no alcohol policies but on taxes | | ✓ | | | | |
| Chad | | | | ✓ | | | ✓ | | | | ✓ |
| Comoros | | ✓ | | | WHO 2014; prohibition with concessions; WHO, 2004: prohibition applies in the country | | ✓ | | | | ✓ |
| Djibouti | NI | NI | NI | NI | WHO, 2014: no information | | ✓ | | | | |
| Egypt | | | ✓ | | WHO, 2014; due to changes of government, alcohol policy has been changing frequently | | ✓ | | ✓ | | ✓ |
| Gambia | | | ✓ | | | | ✓ | | | | |
| Guinea[d] | | | | ✓ | WHO, 2014 [1]: policies only on alcohol advertisement and sponsorships; minimum legal drinking age of 18 | | ✓ | | | | |
| Indonesia[d] | | | ✓ | | WHO, 2004: restriction policy; public drinking banned; [1] | | ✓ | ✓ | ✓ | ✓ | |
| Iran[d] | | ✓ | | | WHO, 2014 [1]; total prohibition; non-Muslims can drink, but not in public [19] | ✓ | ✓ | | ✓ | | |
| Iraq[d] | | | | ✓ | Unstable country; [20] | | ✓ | | | ✓ | |
| Jordan | | | ✓ | | WHO, 2004. | | ✓ | | | | ✓ |
| Kazakhstan | | | | ✓ | | | ✓ | ✓ | | | ✓ |
| Kosovo | | | | ✓ | Kosovo is under political and economic transition | | ✓ | ✓ | | | ✓ |
| Kuwait[d] | | ✓ | | | WHO, 2014: no information | | ✓ | ✓ | | | |
| Kyrgyzstan | | | | ✓ | WHO, 2009; WHO, 2004 | | ✓ | | | | |
| Lebanon | NA | NA | NA | NA | WHO, 2011. | | ✓ | | | | |
| Libya[d] | ✓ | | | | [1]; new revolution [21] | | ✓ | ✓ | | | |
| Malaysia[d] | | | ✓ | | [22]; [23] | | ✓ | ✓ | ✓ | | ✓ |
| Maldives | | ✓ | | | WHO, 2011 [24] and WHO, 2004: ban on alcohol consumption in the country, except for non-Muslims with licence it is allowed; WHO, 2014: total ban | | ✓ | | | | |
| Mali | NAP | NAP | NAP | NAP | WHO, 2014: no alcohol policy | | ✓ | | | | ✓ |
| Mauritania | | ✓ | | | WHO, 2014: total ban; however, there is a sign of license for some restaurants to sell alcohol for foreigners | | ✓ | | ✓ | ✓ | |
| Mayotte | NI | NI | NI | NI | Alcohol can be imported in any amount from the European | | | | | ✓ | ✓ |

(***Continues***)

**Table 2** (Continued)

| | *Policy type*[b] | | | | | *Sources of this information*[a] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *Initial* | | *Additional*[c] | | | |
| *Country* | *Total Prohibition* | *Prohibition with concessions* | *Restriction* | *Regulation* | *Comment sample citations*[a] | *Government* | *WHO* | *PubMed* | *Industry* | *Travel guide* | *Other* |
| | | | | | Union countries; signs of issues related to drinking in pregnancy | | | | | | |
| Morocco | | | ✓ | | WHO, 2014: no information; non-stable policies | ✓ | ✓ | | ✓ | ✓ | |
| Niger | | | ✓ | | WHO, 2004 | | ✓ | | | ✓ | |
| Nigeria | | | ✓ | | | | ✓ | ✓ | | | |
| Oman[d] | | | ✓ | | Non-Muslims can drink in hotels and | ✓ | ✓ | | | ✓ | |
| Pakistan[d] | | ✓ | | | [1]; non-Muslims can drink: from other sources | ✓ | ✓ | ✓ | | ✓ | |
| Palestine | | ✓ | | | Non-member observer State | | | | ✓ | | ✓ |
| Qatar | | | ✓ | | WHO, 2014: no information | | ✓ | ✓ | ✓ | | ✓ |
| Saudi Arabia[d] | ✓ | | | | [1] | | ✓ | | | | |
| Senegal | | | ✓ | | [1]; there are signs of prohibition in some areas | | ✓ | | | | ✓ |
| Sierra Leone | NAP | NAP | NAP | NAP | WHO, 2011: no alcohol policy present in the country | | ✓ | | | | ✓ |
| Somalia | ✓ | | | | | | ✓ | | | | |
| Sudan | ✓ | | | | | | ✓ | | | ✓ | |
| Syria | | ✓ | | | WHO, 2011: total ban; under war | | ✓ | | | | ✓ |
| Tajikistan | NI | NI | NI | NI | WHO, 2009: no information; WHO, 2011: no information available | | ✓ | | | | |
| Tunisia[d] | | | ✓ | | Policies vary according to times of the year, days and hours; frequent change in legislation; new revolution in 2012 | | ✓ | | ✓ | | ✓ |
| Turkey[d] | | | | ✓ | [25,26] | ✓ | ✓ | ✓ | ✓ | | |
| Turkmenistan | | | | ✓ | WHO, 2004; WHO, 2014 | | ✓ | | | | |
| United Arab Emirates[d] | | | ✓ | | WHO, 2014: no information. | ✓ | ✓ | | ✓ | ✓ | |
| Uzbekistan | | | | ✓ | WHO, 2001; WHO, 2009; WHO, 2011. | | ✓ | | ✓ | | |
| Western Sahara | | | | | Non-self-governing territory; limited numbers of hotels serve alcohol | | | | | | |
| Yemen | | ✓ | | | WHO, 2014; total ban | | ✓ | | | ✓ | |

The fully referenced version of this table is available via online appendix.
[a]Sources of information: English, Arabic and Persian language sources were reviewed, including government websites for each country; WHO and PubMed. If information was unavailable or inconclusive from these sources, alcohol industry, tourism and some non-governmental organizational websites were searched, using Google and Google scholar. Searches were conducted in additional depth for countries that were chosen to illustrate key policies and issues. NI = no information available/not enough evidence; NA = not applicable according to this source; MMCs = Muslim majority countries; NAP = no alcohol policy according to this source[*]. [b]Definitions used in this report: *Prohibition:* where total prohibition of alcohol consumption and trade is applied in the country. *Prohibition with concession:* where prohibition is present in the country but minority groups are excluded. *Restriction*: where some subregions or suburbs have prohibition of consumption and trade while others do not, and usually a licence is required for purchasing and consuming alcohol. *Regulation*: where alcohol is available and consumption is permitted for all with some regulatory policies such as age limit. [c]Additional sources of information were accessed for some, but not all countries. The symbol '–' indicates that no search was conducted for that country. [d]These countries were further researched in this paper to illustrate the challenges. MMCs were selected via: *Pew Forum* (2011). The Future of the Global Muslim Population (retrieved 5 May 2013). Available at: http://www.pewforum.org/future-of-the-global-muslim-population-muslim-majority.aspx (Archived by WebCite® at http://www.webcitation.org/6SltnzeJ2).

and Chinese [33]. This racial differentiation has been reflected in the different alcohol policies for different regions, according to that region`s majority ethnic group [22]. In fact, legal pluralism exists in the country where it has three different legal systems and three different court systems [34]. Alcohol was imported to Malaysia initially, then started to be produced domestically, until it began to form a high portion of the country's industry [32]. The current alcohol policy has attempted to balance Malay alcohol rejection against the wishes of other major subpopulations which rely upon alcohol production [22].

### *Regulation policies*

If alcohol is available and consumption is permitted for all, with some standard regulatory policies such as age limit, the policy is defined for this report as regulatory. For

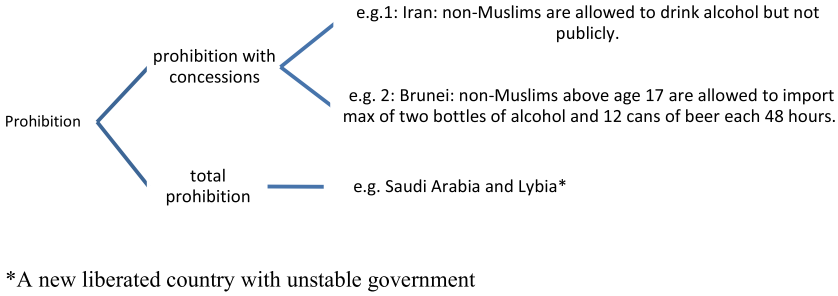


**Figure 2** Example of variation in prohibition policies

example, in Turkey 98.6% of the population is Muslim [35], and only in 1926, after the reform of the highly conservative Muslim Ottoman Empire, were Muslims in modern Turkey allowed to consume, produce and sell alcohol [36]. Turkey has separated Islamic law from its legislative law, reforming laws on alcohol prohibition into regulatory strategies. Turkey is one of few MMCs with a written national alcohol policy [25].

Overall, of the 50 identified MMCs, we identified 10 with prohibition with concessions, 17 with restriction policies and 11 with regulation policies. Only five have a civil policy of total prohibition.

## CHALLENGES FACING MMCS

Several challenges face MMCs with regard to civil alcohol policy and are described briefly, as follows.

### Policy and implementation may vary

In MCCs not all written policies are actually implemented or even implementable. For example, in Iraq, an unstable country with much political turbulence [37], the alcohol policy measures and results reported by WHO [20] do not necessarily reflect the current situation. From available descriptions, it might be concluded that this country has a European-style alcohol policy. However, in Iraq a high percentage of its population adheres to Islamic law [38] that prohibits alcohol. Due to the presence of extremists in Iraq, alcohol consumption and trade is unsafe and there have been many incidents of bombing of liquor shops [39].

### Homemade alcohol

Alcohol can be produced using many different agricultural resources, and its illegal distribution is often highly visible in MMCs (e.g. Libya [21], Oman [16], Turkey [40], Tunisia [41] and Indonesia [42]). Illegal homemade alcohol is strong and inexpensive, but if not made correctly can cause methanol poisoning [43]. For instance, Iran and Indonesia both have evidence of morbidity and mortality caused by methanol poisoning [42–44] and cases involving travellers in Indonesia have been publicized widely [45,46].

### Pressures from 'Big Alcohol'

The global alcohol industry, particularly the top alcohol-producing companies in the world (known collectively as 'Big Alcohol'), undertakes various strategies to increase alcohol sales. As part of this, industry may attempt to reduce the effectiveness of public health policies aimed to limit consumption or oppose their implementation [47]. In MMCs the influence of stakeholders, such as the global alcohol industry, are particularly relevant, because Muslims are themselves prohibited from alcohol production [5,7,10,11]. Accordingly in most MMCs alcohol must be imported. In MMCs, the most recognizable global alcohol brands already tend to be the most commonly consumed [48].

The global alcohol industry has offered assistance in developing the alcohol policies in some developing countries adjacent to MMCs [26,49]. Accordingly, the draft national alcohol policies of four African countries, Uganda, Lesotho, Botswana and Malawi, were each written with the help of SAB Miller and the International Centre for Alcohol Policies, a body established with Industry funding [50]. Moodie *et al.* [18] argue that the policy documents are written more for the benefit of the alcohol industry than for public health. MMCs may be vulnerable to such industry involvement, as many are either under political transition, developing new interest in tourism and global economics or lack experience in alcohol policies and funds to develop them.

Liquor companies may also emphasize and exaggerate the presence of black market trade and the undercover circulation of alcohol in the country. This argument is then used to oppose the limitation of legal alcohol supply [18].

#### *Alcohol promotion*

In most MMCs it is illegal to promote alcohol consumption; however, alcohol suppliers and marketers have developed strategies to circumvent such bans. For example, in Malaysia, some alcohol producers encourage their workers to promote their brand person-to-person, often via heavy drinkers [23]. For on-premises consumption, in addition to the presence of women in bars and



 

restaurants, companies also sponsor seasonal activities with highly sexual promotions [23,32]. Advertising for alcohol on television media and commercials is forbidden in Malaysia except in Sabah and Sarawak districts, which rank second (19.7%) and third (18.4%) after Kuala Lumpur (20.3%) in the prevalence of alcohol consumption, respectively [51]. However, despite prohibition on advertising, many companies use print media and cinemas to promote their products through product placement and event sponsorship [52].

To enhance brand awareness, young people or even children are targeted [53,54]. For instance, school bags and accessories were distributed to young children in a primary school in Malaysia by a well-known alcohol company 'as a contribution for better education'. This reportedly induced parental and student gratitude and inadvertent promotion, despite parents being unaware of the logo's significance [53]. Consistent with this approach, the alcohol industry has recently been targeting children, adolescents and young people in several developing countries [24], and exposure to the amount and type of alcohol marketing is associated closely with their alcohol consumption [24]. This exposure may be particularly important in developing countries with traditionally low alcohol consumption and with possible naivety about the potential harms of alcohol [24].

### Globalization leading to increased consumption

#### *Youth and modernization*

Many young people in the developing world regard alcohol consumption as westernized, modern and open-minded behaviour, and have little knowledge of its potential adverse consequences, including on health [55]. Therefore, alcohol consumption has been used as a tradition-breaking tool by young people [55].

#### *Media*

Media, and more specifically TV channels, have introduced different cultures increasingly into MMCs compared to past times, in which the country's media was based more on local, censored programmes [56]. For example, in the Arab countries the first international satellite was launched in early 1985, which marked the beginning of wide exposure to the alcohol-consuming cultures of other nations [56]. In addition, the recent popular Arabic-translated, Turkish dramas introduce alcohol consumption as not only a norm, but a healing process from shocks and life failures [57]. This is particularly influential because of the shared cultural heritage between Arab Muslims and Turks. Such portrayals of alcohol are particularly risky when introduced to unstable populations with high stress and anxiety due to factors such as financial crises, war, civilian conflicts or unstable societies and governments.

#### *Facebook/social media*

Facebook and other social media are influential in the majority of MMCs. For example, the official international Arabic news channels have a section in their news for comments made on Twitter and Facebook [58]. Additionally, the recent revolutions in the Middle East may have been fanned and directed through social media [59,60]. Given the wide adoption of social media within MMCs, the active social media presence of alcohol advertisements and promotions targeting young people [61,62] could be particularly potent in an alcohol-naive culture.

#### *MMC-origin Muslims residing in non-Muslim countries*

Many people from MMCs travel, study, work or live in other European and alcohol-centric countries, facilitating greater exposure and integration into other cultures. Studies of minority Muslim populations living in alcohol-norm cultures have shown that many of them adopt the alcohol consumption patterns of their new countries [63]. A study in Kuwait shows that not only does living in western countries change the perception of young Kuwaitis towards alcohol and drug misuse, but the amount of time they spend there is of significance [64].

### Economic pressure

Some MMCs have implemented new alcohol policies for economic reasons. For example, UAE, apart from oil and natural gas, has an economy highly reliant upon the foreign work-force [65,66]. It is also a destination for international tourists [67]. Therefore, despite an anti-alcohol culture, UAE has developed some alcohol policies to allow for its foreign work-force and visiting tourists. However, connecting alcohol consumption to a tourism attraction promotes alcohol indirectly to the local population. For instance, while alcohol advertising is banned in the UAE [68], many residents, especially young adults, are exposed to alcohol and its use via their connection to tourist attractions and hotels [66]. Therefore the promotion of alcohol is achieved via direct observation of tourists' consumption.

### Dearth of relevant policy tools

All these pressures to increase alcohol availability and consumption, and the inevitable health impacts that are associated with higher drinking levels, suggests that alcohol needs to be addressed as a health issue rather than simply a religious issue in MMCs. Despite the religious influence, alcohol consumption has increased noticeably in countries such as Turkey [59], which adopted new policies earlier than many other MMCs. In addition UAE, which only in

the recent past has developed new civil alcohol policies as described above, has a much higher burden of alcohol-attributable morbidity and death [1] compared to most MMCs. This is of added concern, as the availability of treatment for alcohol dependence is inconsistent in MMCs [70].

In dealing with pressures, such as the promotions of 'Big Alcohol', most countries in the world can use global templates or strategies in developing evidence-supported alcohol harm-minimization strategies. However, many of these strategies are irrelevant or difficult to implement in MMCs. For example, in the WHO Global Strategy on Decreasing the Harmful Consumption of Alcohol [71], most of the policy options and interventions have arisen from studies in developed and high-income countries with only a minority in developing countries, where the alcohol consumption is lower [71]. Therefore, it is valuable to focus on the policy of MMCs, as part of the developing world, because they have a complex and challenging environment in which to develop alcohol policy, but have thus far successfully kept alcohol-related harms low.

## CHALLENGES IN STUDYING ALCOHOL POLICY IN MMCS

There has been little research on the topic of civil alcohol policies in MMCs [17,72], especially on newly adopted policies such as concessions, restrictions and regulations of alcohol. It is also difficult to monitor the success of policy implementation. Recorded alcohol consumption is likely to underestimate actual consumption substantially, as there are many unrecorded sources of alcohol in most MMCs [1] (e.g. home-produced, cross-border shopping). Unrecorded alcohol consumption can reach as much as 50% of the overall consumption in Senegal and 500% in Indonesia [1]. Knowing that alcohol consumption is forbidden in Islam, alcohol can be a very sensitive subject in many MMCs. As a result, social desirability bias is a key limitation in surveys of consumption and drinking may be reported in terms of religious expectations, resulting in misleading data [64]. Anecdotally, many MMCs resist speculation about the presence of alcohol-related harms in their countries [73–75], despite many being aware of alcohol consumption. Therefore, a sensitive and a collaborative approach is needed to further advance the field.

### Limitations of this report and future directions

The dearth of published literature on alcohol policy in MMCs meant that a systematic review of that literature was not feasible. In addition, many MMCs are low- to middle-income developing countries [2], where electronic databases are limited or non-existent and many do not present their policies online. Furthermore, due to the political instability of many MMCs, alcohol policies may change frequently over time. Accordingly, this paper is presented as a discussion point rather than as a definitive statement of the situation.

There is a pressing need for alcohol policy to be viewed as a public health issue rather than as a sensitive and often unmentionable moral concept in MMCs. This may assist governments to discuss their existing civil alcohol policies more openly. Also, more research and collaboration will allow policy development to be better informed.

Global organizations such as WHO need to develop more detailed approaches in assessing current alcohol policies in MMCs. These would aim to detect specific policy approaches used in MMCs, such as different policy arrangements for subdistricts and for Muslim compared with non-Muslim subpopulations.

## CONCLUSION

Although MMCs have a high proportion of Muslims who reject alcohol consumption [72], factors such as globalization mean these countries' governments and population face growing challenges in balancing appropriate responses regarding alcohol. MMCs have developed various civil alcohol policies to maintain and improve their global engagement, such as industrial and tourist-based developments. This has left only five countries with total prohibition and 10 with prohibition with concessions (e.g. for non-Muslims). However, this policy evolution has opened a door for the experienced global alcohol industry to direct pressure on these countries, which are relatively new to alcohol policy development. Many other challenges were also identified in policy development, including the influence of media and social media.

Despite having civil alcohol policies in place, the implementation of these varies. Moreover, homemade alcohol is a common issue that needs consideration, particularly given the incidence of methanol poisoning.

Understanding current alcohol policies in MMCs can aid the development of further evidence-based strategies. It may also help in identifying additional strategies for other developing countries and for global alcohol policy. To inform policy development and monitoring, it will also be important to improve data collection on alcohol use and related harms. Furthermore, it is important to raise awareness of alcohol as a public health issue in MMCs and of the challenges which may be posed by the influence of 'Big Alcohol'. In so doing, global health organizations and non-governmental organizations need to provide support to MMCs which have previously been thought immune to alcohol's harms.

### Declaration of interests

None.

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*Further detail on grey literature sources used is included in the online Appendix to this paper.Where required, additional detail on Islamic sources (e.g. subchapter, Hadeeth number) is available from the authors.

†Individual country sections of this report are updated separately byWHO. The online appendix includesweblinks to the actual sections thatwere available for each country at the time of writing.



 

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## Supporting information

Additional supporting information may be found in the online version of this article at the publisher's web-site:

**Appendix S1** Table 2 with full list of sources*: A broad overview of civil policy approaches to alcohol availability in 50 MMCs.

**Civil alcohol policy in Muslim majority countries: need for global tools, expert support and local partnerships**

The following pages set out our published response to three commentaries (Appendices 2-4) written by international experts at the invitation of the journal Addiction. Those commentaries (see Appendices 2-4) and our response were published in the same issue as our invited review.

*Ghent, Belgium,*[3] *University College Ghent, Faculty of Education, Health and Social Work Ghent, Belgium*[4] *and Ghent University, Department of Social Work and Social Pedagogy, Ghent, Belgium*[5]
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## CIVIL ALCOHOL POLICY IN MUSLIM MAJORITY COUNTRIES: NEED FOR GLOBAL TOOLS, EXPERT SUPPORT AND LOCAL PARTNERSHIPS

*Comprehensive, informed and culturally sensitive government policy is needed to prevent pressure from the global alcohol industry in Muslim majority countries. Policy formation could benefit from external expert support, partnerships with key stakeholders within the country, and research to inform policy development and to evaluate outcomes.*

We thank the diverse group of experts who each endorsed the need for distinctive civil alcohol policy approaches in Muslim majority countries (MMC) and noted the importance of our paper [1].

Our paper acknowledged the use of soft resources (noted by Kalema *et al.* [2]) and described the dearth of published scientific literature on alcohol policy in MMCs [3]. This lack of quality data would stand in the way of Kalema and colleagues' suggestion of comparing per capita alcohol consumption of MMCs according to policy types. Furthermore, that task was not within the scope of our commentary. As we point out, alcohol consumption is a sensitive issue to research, and there is often a sizeable difference between recorded and unrecorded consumption in many MMCs. In keeping with this, Bahelah notes smuggling and illegal production of alcohol as areas where policy development is particularly needed [4,5].

Kalema and colleagues point out a number of topics worthy of future research—in-depth analysis of how Islam may help prevent alcohol excess, whether shame hinders treatment engagement, and whether faith improves addiction recovery. These require separate studies. We simply provided a snapshot of the origin of alcohol policy and prohibition [6–10] in MMCs and Islam's contribution to reductions in alcohol consumption. We noted the low prevalence of alcohol consumption in MMCs, but also recent increases in consumption concomitant with globalization.

Assanangkornchai and colleagues [11] further emphasize the role of the global alcohol market in increasing alcohol consumption in MMCs, especially its effect on youth via

social media, internet and user-generated content such as Facebook and Twitter. Indeed Bahelah [12] notes that alcohol policy development should specifically target youth alcohol consumption.

Kalema and colleagues point out the intra- and international ethnic and religious variation in attitudes to alcohol in MMCs. We used Malaysia as one example of this diversity, where separate civil alcohol laws have been developed for different ethnic groups [13]. Evaluation of alcohol policy approaches of MMCs such as Malaysia in mitigating alcohol-related harms would be beneficial.

The complex social composition of MMCs poses a challenge for civil alcohol policy development (and research), and differences within and between MMCs can be a barrier to developing a 'one-size-fits-all' alcohol policy approach. Nevertheless, broad policy principles could be developed globally for MMCs. More specific tools could then be created for each of the key MMC regions (e.g. Arabian/Persian Gulf, Africa and Asia-Pacific), as MMCs within each region will often share similarities. Finally, policies could be tailored to the individual MMC's needs.

As our paper and each commentary suggests, MMCs would benefit from customized, religious and culturally sensitive policies. To achieve this, Assanangkornchai and colleagues propose an integrated policy development approach within each MMC, bringing together governments, religious leaders, public health professionals and academics. It is also important to identify key stakeholders [14], measure their influence on alcohol consumption, then engage and cooperate with them in developing culturally sensitive policies. As Bahelah agrees, assistance from external expertise may be necessary, as well as research to inform policymaking and measure outcomes [15].

There is consensus from public health experts that the alcohol industry is one stakeholder that should be kept at arm's length from alcohol policy consultations. The industry reequires profit to operate [16], so industry involvement in policymaking risks serving their interest rather than the public good [17,18]. Therefore comprehensive and informed government policy is needed to help control pressure from the global alcohol industry in MMCs [16].

### Declaration of interests

None.

**Keywords** Alcohol, alcohol industry, Islam, Muslim, policy, prevention, prohibition, religion.

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Chapter 5

# Alcohol policy in Iran: policy content analysis

# Chapter 5: Alcohol policy in Iran: policy content analysis

## Introduction to chapter

In the previous chapter we documented that total prohibition is not the only civil alcohol policy in MMCs. We saw that the governments in MMCs have undertaken various alcohol policy approaches. We categorised their approaches into four types. These range from total prohibition at one end of the spectrum, where alcohol consumption, trade and production is prohibited for all; through to the regulatory approach, where alcohol is available and consumption is permitted for all, and there are standard regulatory policies such as a minimum age limit, or drink driving regulations.

Having explored the extent of alcohol prohibition in the civil alcohol policy in these 50 MMCs, we will now present a case study of the alcohol policies of the Islamic Republic of Iran. We selected Iran as a case study for several reasons. These include the type of prohibition, where alcohol is prohibited for the majority population but allowed for minority non-Muslims; the geographical location, as it is located in the EMR where most countries are MMCs; familiarity with the language (Persian); and our ability to identify a local collaborator in that country.

Another consideration was the presence of a WHO Representative Office in the country. When we chose Iran in 2015, in the Eastern Mediterranean region, Egypt and Iran were the only two countries that had a WHO Representative Office. The official language of Egypt is Arabic which is one of the languages this project is used, and that country had a restriction approach to civil prohibition. However, the government in Egypt was going through turbulence, with frequent government changes and political instability due to the Arab Spring. These would be highly disruptive factors for a research project on a sensitive topic like alcohol.

As described in the previous chapter, alcohol policy in Iran can be described as prohibition with concessions. The existence of any prohibition, for some scholars was a reason to

discourage the work. For example, one international researcher commented in a one-to-one interview "What would be the alcohol policy in a country with alcohol prohibition? This would be a useless project. There will not be policies there to be analysed".

However, from the insights obtained in the earlier stages of this project (Chapter 4), we realised that prohibition for the majority Muslim population is a policy approach that has not been examined until recently at the global level. This is mainly because all the international definitions for laws and policies around alcohol have been designed to detect the usual approaches used in developed and developing non-Muslim countries. For instance, when WHO mentions prohibition in the country profile, "total ban" is then entered for all policy approaches that country may take around alcohol. Therefore, we realised that we need to explore the type and range of approaches adopted in the civil alcohol policies within a MMC with prohibition, to describe their unique characteristics and bring them to the global discussion table. This will help in identifying and documenting existing alcohol policies in Iran and other MMCs. It will also help the international community to better understand the cultural context around alcohol policy and the way a country's context has influenced either policy development or implementation. This research will also help to build, stone-by-stone, on the evidence base for the policy approaches that work the best in societies with a high percentage of alcohol abstainers.

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Policy Analysis

# Alcohol policy in Iran: Policy content analysis

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ABSTRACT

*Background:* Muslim majority countries (MMCs) typically have limited alcohol policy development due to Islamic prohibition of alcohol consumption. In response to recent increases in alcohol consumption and related harms, MMCs have introduced civil alcohol policies, ranging from total prohibition to European-style regulations. Using Iran as a case study, we describe how alcohol prohibition is translated into policy in the face of influences from globalisation.

*Methods:* We collected information from publicly available literature and policy documents, because of the sensitivity of the topic of alcohol in Iran. The search was conducted in English and Persian. We verified information through consultations with policy actors. We also reviewed newspapers over periods just before the 1979 Islamic revolution, and before and after the 2011 alcohol policy (2008–2010; 2014–2016) was introduced. We analysed policy content based on WHO policy recommendations and used the Walt & Gilson health framework to identify policy content, context, actors and process.

*Results:* Despite its broad approach of civil prohibition with concessions for the non-Muslim population, Iran has developed approaches to reduce the harmful impacts of alcohol and adopted nine of ten policy interventions recommended by WHO. Pricing policy was the only intervention not used. We identified contextual challenges, such as resources, stigma and cultural offence that influence policy development.

*Conclusion:* MMCs face challenges in creating civil alcohol policies. Iran has taken steps, including a national alcohol strategy, to reduce alcohol-related harms. The socio-cultural, governance and historical context have shaped Iran's adaptation of policy interventions recommended by WHO.

## Background

Harmful alcohol consumption causes the death of 3.3 million people each year world-wide and is responsible for 5.1% of the global burden of disease and injury (World Health Organization, 2014a). Alcohol policies have been introduced globally to reduce unsafe alcohol consumption. However, in Muslim Majority Countries (MMCs), because of Islamic alcohol prohibition, little attention has been given to alcohol policy development (Al-Ansari, Thow, Day, & Conigrave, 2016; Madureira-Lima & Galea, 2017).

In MMCs the overall prevalence of alcohol consumption is very low when compared to other countries (World Health Organization, 2014a). However, in many MMCs alcohol consumption and related harms have increased over the past 20 years (World Health Organization, 2011) and there is growing recognition of the need for a policy response (Al-Ansari, Day, Thow, & Conigrave, 2016; Al-Ansari, Thow et al., 2016; Amin-Esmaeili et al., 2017). In addition, the prevalence of heavy episodic drinking among drinkers may still be high in a MMC, for example a rate of 31.9% was reported in Indonesia (World Health Organization, 2014d) (compared to 13% among drinkers in Australia, a non-MMC) (World Health Organization, 2014c). There are various challenges facing MMCs in developing robust and culturally appropriate alcohol policies. These include globalisation, such as through media, tourism and economic pressure, leading to increased consumption (Al-Ansari, Thow et al., 2016). Further, the global alcohol industry sees developing countries (which most MMCs are) as important emerging markets (Bakke, 2007; Jernigan & Jernigan, 2000).

Limited global understanding of policy tools relevant for Islamic countries is an obstacle in facing these challenges. Despite an international perception that alcohol prohibition is the only policy approach in

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MMCs, many MMCs have implemented a broader range of civil alcohol policies (Al-Ansari, Thow et al., 2016). Overall, there are four broad approaches (Al-Ansari, Thow et al., 2016) ranging from total prohibition to European-style alcohol regulation. Under total prohibition, alcohol consumption, production and trade are banned for all. In contrast, prohibition with concessions allows non-Muslims to produce and consume alcohol. In a restrictive policy approach, alcohol is banned in some geographic locations but not in others; usually only non-Muslims can drink and in many countries a licence is required for a person to purchase alcohol. A regulation policy approach allows alcohol consumption for all and alcohol can be produced legally in the country, however there are regulatory laws in place such as age limit and taxes (Al-Ansari, Thow et al., 2016). Therefore, all approaches except the last, have integrated the Islamic prohibition of drinking into civil policy.

The Islamic Republic of Iran is one MMC with a civil alcohol policy of prohibition. Iran is the most populated Middle Eastern MMC, with a population of over 80 million (Amar, 2018) and 99.6% are Muslims (Statistical Centre of Iran, 2018). A broad overview of Iran's approach to alcohol policy has been described (Al-Ansari, Thow et al., 2016), however, there has not been any detailed analysis of policy instruments, their content and context. Indeed, we were unable to identify such an analysis in any MMC with a civil policy of alcohol prohibition (Al-Ansari, Thow et al., 2016; Ghandour et al., 2016). Before the Islamic revolution, Iran was a well-known producer of alcohol in the Middle East (Daneshgar, 2014) but post-revolution, alcohol production, trade and consumption were prohibited, other than for non-Muslim minority groups (Al-Ansari, Thow et al., 2016).

Illegal trade, diverted alcohol produced legally for medical purposes, and home-made alcoholic beverages are the suspected major source of alcohol for the Muslim majority in Iran (Sanaei-Zadeh, Zamani, & Shadnia, 2011). Alcohol is mostly traded in from neighbouring countries such as Turkey, Iraqi Kurdistan, Azerbaijan, Turkmenistan and Afghanistan. Home-made alcohol is also common in Iran, largely due to the cost of illicitly purchased or commercial alcohol. As a result, methanol poisoning is a public health issue in Iran (Hassanian-Moghaddam et al., 2015; Moghadami et al., 2015). For example, in 2013 694 people were affected by a methanol poisoning outbreak in Rafsanjan (Hassanian-Moghaddam et al., 2015).

Iran's population is relatively young with more than 50% aged under 40 years, and 15% aged between 15 and 25 years (Statistical Centre of Iran, 2018). Youth are more vulnerable to harmful alcohol consumption and the associated acute risks (World Health Organization, 2014a) and anecdotally, alcohol consumption is increasing among young people in Iran, especially at weddings and parties (Qudsonline, 2016). These factors support the concern that alcohol problems are increasing in the country (Hassanian-Moghaddam & Zamani, 2016).

Often MMCs are excluded from global studies on alcohol policy because of their civil alcohol prohibition or missing information on alcohol policies. One example of this was the exclusion of most MMCs from an international comparison of alcohol policy across 167 countries (Madureira-Lima & Galea, 2017). The aim of our study is to address the gap in global understanding of alcohol policy in MMCs by providing a detailed analysis of the content of policy instruments in Iran, and their context. Information regarding Iran's experience and approach can be used to support other MMCs to develop appropriate and effective alcohol policy, including through global support by actors such as the World Health Organization (WHO).

## Methodology

We conducted an analysis, focussed on content of alcohol-related policy across a range of sectors in Iran. This was underpinned by the Walt and Gilson health policy analysis framework (Walt & Gilson, 1994). Our research questions were: 1) How is alcohol governed in Iran? and 2) What framing and contextual considerations are evident in Iran's alcohol-related policy approach?

We collected information only from publicly available literature and policy documents, because of the sensitivity of the topic of alcohol in Iran. We identified relevant policy sectors based on the Global Alcohol Policy (World Health Organization, 2010). This was used to develop a matrix for data collection and extraction (Table 2). We identified relevant documents by searching the websites of official organisations, such as the Ministry of Health and Medical Education, and the Ministry of Justice. The key search terms used (translated into Persian) were "alcohol", "alcoholic", "alcohol consumption", "intoxication" and all other possible derived words.

We searched the internet from inside (in Persian) and outside Iran (in Persian and English). Keywords used were alcohol, policy, poisoning; and Iran. In English language sites we also searched for the term 'wine', after discovering the Persian word for alcohol was sometimes translated into 'wine', and we also searched for 'addiction'. We did not search for the term 'addiction' in Persian language sites, as results were swamped by articles on opioid dependence. Extra material was also obtained directly from Iranian academics or institutes.

We identified additional information on the policy context through a review of newspaper articles at three points in time. These time-points provided a snapshot of pertinent periods - before the 1979 Islamic revolution, a decade ago (2008–10; which was before the 2011 alcohol policies), and in the last three years (2014-16). Using these different time periods enabled an examination of changes in policy context over time. The key search terms used in newspaper searches were "alcohol", "alcohol consumption", "intoxication" and all other possible derived words (in Persian). The first author, who is fluent in Persian language, hand-searched two daily newspapers from before the 1979 Islamic revolution: *Ettelaàt* (founded in 1926) and *Kayhan* (founded in 1943) (Shapour Ghasemi, 2006). These focus on political, cultural, social and economic news. We also reviewed two months from *Ettelaàt,* April–May 1978 (Persian calendar: Farvardeen-Ordebehesht, 1357), and the subsequent month, June 1978 (Persian calendar: Khordad, 1357) from *Kayhan*. We were constrained in the number of hard copy newspapers we could search, because of cost in this unfunded study. We also selected nine electronically available newspapers with different levels of conservativeness and political perspectives. Because of the large number of online newspaper issues, and sometimes the basic search facilities available, only certain months' issues were selected for review. As shown in Table 1, we examined the electronic newspapers for two sets of three-year periods, both before and after the 2011 introduction of new alcohol policies in Iran (2008–2010 and 2014–2016). The months reviewed are presented using the Persian calendar (with their translation into the Gregorian calendar).

We conducted seven consultations, including six with the key individuals directly or indirectly involved in alcohol policy development and implementation, to 1) verify that we had identified all relevant policy documents; 2) ensure that we had correctly interpreted the policy content; and to 3) gain additional understanding of the policy context. We identified these stakeholders through the WHO office in Tehran, and then through direct contact with the Department of Mental, Social Health and Drug Abuse at the Ministry of Health and Medical Education in Tehran. Those consulted included past and present senior government officials and policy makers (n = 2) health professionals (n = 2), and academics and researchers (n = 3). Some individuals have had more than one role but only their primary role is shown to protect interviewees' identity and uphold confidentiality. Six consultations were conducted face-to-face and one via phone. Consultations were focussed on publicly available information that formed part of the individuals' normal work role and responsibilities.

We analysed policy content using a matrix based on WHO policy recommendations. We also used the Walt & Gilson health policy analysis triangle (Walt & Gilson, 1994) as a framework for analysis. This identifies content, context, actors and process as key factors for understanding policy. The process of analysis included coding the policy

**Table 1**
Details on the electronic newspapers which were searched, and the months which were searched during the two recent time periods.

| # | Newspaper website | Newspaper name | [b]Year | Months[a] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Farvardin (Mar-Apr) | Ordibehesht (Apr-May) | Khordad (May- Jun) | Tir (Jun- Jul) | Mordad (Jul-Aug) | Shahrivar (Aug- Sep) | Mehr (Sep- Oct) | Aban (Oct-Nov) | Azar (Nov- Dec) | Dey (Dec-Jan) | [a]Bahman (Jan-Feb) | [a]Esfand (Feb-Mar) |
| 1 | isna.ir | ایسنا<br>Isna | 2016 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| | | | 2015 | | | | | | | √ | √ | | | | |
| | | | 2014 | | | | | | | √ | √ | | | | |
| | | | 2010 | | | | | | | √ | √ | | | | |
| | | | 2009 | | | | | | | √ | √ | | | | |
| | | | 2008 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| 2 | hamshahrionline.ir | همشهری<br>Hamshahri | | | | | | | | | | | | | |
| | | | 2016 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| | | | 2015 | | | | | | | √ | √ | | | | |
| | | | 2014 | | | | | | | √ | √ | | | | |
| | | | 2010 | | | | | | | √ | √ | | | | |
| | | | 2009 | | | | | | | √ | √ | | | | |
| | | | 2008 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| 3 | ilna.ir | ایلنا<br>Ilna | | | | | | | | | | | | | |
| | | | 2016 | | | | | | | √ | √ | | | | |
| | | | 2015 | | | | | | | NA | NA | | | | |
| | | | 2014 | | | | | | | NA | NA | | | | |
| | | | 2010 | | | | | | | NA | NA | | | | |
| | | | 2009 | | | | | | | NA | NA | | | | |
| | | | 2008 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4 | Ettelaat | اطلاعات<br>Ettelaat | | | | | | | | | | | | | |
| | | | 2016 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| | | | 2015 | | | | | | | | | √ | √ | √ | |
| | | | 2014 | | | √ | | | | | | √ | √ | √ | |
| | | | 2010 | | | | | | | | | NA | NA | NA | |
| | | | 2009 | | | | | | | | | NA | NA | NA | |
| | | | 2008 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 5 | Kayhan | کیهان<br>Kayhan | | | | | | | | | | | | | |
| | | | 2016 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| | | | 2015 | | | | | | | | | √ | √ | √ | |
| | | | 2014 | | | | | | | | | √ | √ | √ | |
| | | | 2010 | | | | | | | | | NA | NA | NA | |
| | | | 2009 | | | | | | | | | NA | NA | NA | |
| | | | 2008 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 6 | irna.ir | ایرنا<br>Irna | | | | | | | | | | | | | |
| | | | 2016 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| | | | 2015 | | | | | | | √ | √ | | | | |
| | | | 2014 | | | | | | | √ | √ | | | | |
| | | | 2010 | | | | | | | √ | √ | | | | |
| | | | 2009 | | | | | | | √ | √ | | | | |
| | | | 2008 | | | | | | | NA | NA | | | | |
| 7 | tasnim.ir | تسنیم | | | | | | | | | | | | | |

(*continued on next page*)

**Table 1** (*continued*)

| # | Newspaper website | Newspaper name | [b]Year | Months[a] | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Farvardin (Mar-Apr) | Ordibehesht (Apr-May) | Khordad (May- Jun) | Tir (Jun- Jul) | Mordad (Jul-Aug) | Shahrivar (Aug- Sep) | Mehr (Sep- Oct) | Aban (Oct-Nov) | Azar (Nov- Dec) | Dey (Dec-Jan) | [a]Bahman (Jan-Feb) | [a]Esfand (Feb-Mar) | | |
| | | Tasnim | 2016 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | | |
| | | | 2015 | | | | | | | √ | √ | | | | | | |
| | | | 2014 | | | | | | | √ | √ | | | | | | |
| | | | 2010 | | | | | | | √ | √ | | | | | | |
| | | | 2009 | | | | | | | √ | √ | | | | | | |
| | | | 2008 | | | | | | | √ | √ | | | | | | |
| 8 | alef.ir | الف Alef | 2016 | | | | | | | √ | √ | | | | | | |
| | | | 2015 | | | | | | | √ | √ | | | | | | |
| | | | 2014 | | | | | | | √ | √ | | | | | | |
| | | | 2010 | | | | | | | √ | √ | | | | | | |
| | | | 2009 | | | | | | | √ | √ | | | | | | |
| | | | 2008 | | | | | | | √ | √ | | | | | | |

√ Indicates that the newspaper issues for that month were searched.
NA: Not applicable because for that month or year the newspaper either did not exist, or the online version did not exist or was not available.
[a] Because of the large volume of online newspapers, and the relatively simple search facilities available, only certain months were selected for review. The searched months in the Persian calendar and their (abbreviated) equivalent in the Gregorian calendar.
[b] The new alcohol policy was initiated in 2011. In this paper the years 2008–2010 are referred to as the pre- and 2014–2016 as post- this 2011 alcohol policy.

content and the contextual data from newspapers, augmented with insights from consultations, using the health policy analysis triangle. We synthesised findings, with a specific focus within each theme on how Iran is governing and operationalizing alcohol policy in a context of prohibition and a high level of sensitivity about the use of alcohol. Further details of the methodology can be found in Appendix A.

## Findings and analysis

A. Policy content

WHO sets out ten policy areas, each comprising a variety of policy options and interventions. Countries can choose approaches that best suit their local circumstances. We identified only four policy documents through our internet search, and an additional 11 through consultations. The policy documents spanned Ministry of Health, Treatment and Medical Education; Legislative Assembly; Ministry of Education; government services; Department of Transport and Roads; Police; Ministry of Tourism; the Judiciary System; Ministry of Attorney General; and Ministry of Interior Affairs.

From the pre-1979 newspaper search we identified approximately 12 articles mentioning alcohol compared with 97 mentioning tobacco or other drugs. From the electronic newspaper search we identified approximately 80 articles from the pre alcohol policy period (2008–10) that mentioned alcohol compared with approximately 300 from the post-alcohol policy period (2014-16). Due to their basic search facilities, we were not able to quantify the change in ratio between alcohol and tobacco or drug articles in the electronic journals.

Table 2 highlights the main strategies initiated in Iran for each of the ten WHO recommended alcohol policy areas (World Health Organization, 2010). We also illustrate how such approaches have been adapted for the Iranian context.

I *Leadership, awareness and commitment:* Each of the seven WHO options for leadership, awareness and commitment has been included in some way in Iranian alcohol policy (Table 2). Iran's 'National Strategy for Primary Prevention of Addiction' (2010) (Hamied Serami, 2010) covers policies on any psychoactive substance, including alcohol. In 2011, a separate 'Comprehensive Program for Prevention, Treatment and Reduction of Alcohol-Related Poisoning 2011-2015' (Dmāry, ʿly nyk Frǧām, & Mʿāryān, 2011) was developed.In addition, the Government of Iran has integrated, multi-sectoral approaches to alcohol policy development and has introduced a committee to monitor alcohol policies. Policy planning is coordinated across different tiers of government and integrated with other divisions' strategies (Dmāry et al., 2011). The Ministry of Health also provides guidelines for the Department of Education to support awareness raising, education and other preventive strategies (Dmāry et al., 2011). This includes an attempt to reduce stigma and discrimination.

II *Health services' response:* All seven WHO intervention options in this area have been included in Iranian alcohol policy (Table 2). According to Iranian policies on prevention and treatment of alcohol-related issues, 150 alcohol treatment units have been integrated into existing drug treatment services around the country. Specialised treatment is provided on a broader base of screening, brief intervention, referral into treatment, and hospitalisation when needed. Special settings for alcohol withdrawal management and educational courses are also provided (Hashemian et al., 2017). Furthermore, our findings suggest that these services are designed to be delivered through culturally acceptable health and social facilities. The policy content review identified an initiative to increase use of services through providing phone lines for those seeking treatment (Hamshahri reporter, 2015) and we identified through the consultations, the presence of a live TV program that discusses alcohol issues in the community, specifically targeting youth. It seeks to answer questions on alcohol related issues and

**Table 2**
Alcohol policy initiatives in Iran compared with the WHO suggested strategies.

| Key alcohol policy areas suggested by WHO on national level (World Health Organization, 2010) | Key strategies initiated in Iran | Adaptation of these key strategies in Iran | Source of data |
|---|---|---|---|
| **1. Leadership, awareness and commitment** | 'National Strategy for Primary Prevention of Addiction, 2010' | Addiction in this document refers to any consumption that could lead to addiction. Alcohol is part of all strategies related to addictive substances | (Hamied Serami, 2010) |
| | 'Prevention, Supply Reduction, Treatment, Harm Reduction and Rehabilitation of Alcohol Use, 2013–2017' | Following the 'Comprehensive Program for Prevention, Treatment and Reduction of Alcohol-Related Poisoning 2011-2015' this policy has an alcohol-only focus | (Dmāry et al., 2011; Shariatirad et al., 2016) |
| | Monitoring and evaluation in place | 'Supervisory Board of the Program' or country committee has been formed for the above alcohol-harm reduction program | (Dmāry et al., 2011) |
| | Multi-sectoral management of alcohol strategies between levels of government and other sectors | Multi-sectoral management is present e.g. through Ministry of Health and Education, the Law Enforcement Force of the Islamic Republic of Iran (NAJA) and the justice system | (Dmāry et al., 2011; Sarpoosh, 2018) |
| | Effort in creating accessible information and effective education and public awareness programmes and some prevention measures | For example, school-based alcohol awareness programs have been initiated; as have prevention measures e.g. breath testing, screening in primary health care | (Dmāry et al., 2011; Mental Health Social Health & Addiction Offices, 2012; United Nations Office on Drugs and Crime in Iran) |
| | Raising awareness, avoiding stigmatization and discouraging discrimination | Government is working to involve media such as TV and newspapers to present alcohol consumption as a health issue, where treatment should be sought if needed. | Consultation; (Dmāry et al., 2011) |
| | Integrated multi-sectoral approach | Many sectors are involved in developing and implementing these strategies | (Dmāry et al., 2011) |
| **2. Health services' response** | Development of alcohol treatment service models in Iran | Iran has established 150 pilot alcohol treatment units (integrated with drug treatment) | Consultation; (Noroozi et al., 2014; Shariatirad et al., 2016) |
| | Guidelines for training of Family Doctors and the Referral System [section 8, first chapter, 2010] | Iran is ntegrating prevention, treatment and reduction of alcohol-related harms in all programs of health services | (Dmāry et al., 2011) |
| | Increasing capacity of health and social welfare systems | | (Ayatollah Khamenei, 2014) |
| | Supporting initiatives for screening and brief interventions for alcohol consumption and for harmful drinking in primary health care | The Ministry of health has distributed age-specific packages for screening and brief interventions in primary health care | (Ministry of Health and Medical Education, 2019a,2019b,2019c,2019d) |
| | Improving capacity for prevention of, identification of, and interventions for individuals and families | The Ministry of Health has developed a specific flowchart for all relevant services on providing the necessary interventions | (Ministry of Health and Medical Education) |
| | Development and coordination of integrated / linked prevention, treatment and care strategies and services | | (Ayatollah Khamenei, 2014) |
| | Provision of culturally sensitive health and social services as appropriate | | (Dmāry et al., 2011) |
| **3. Community action** | The eighth strategy of the overall policies on combating drugs issued by the Supreme Leadership Authority 2006 is aiming to encourage presence and involvement of individuals and families and to support community-based organisations in prevention and reduction of alcohol's harms and treatment of those with alcohol or drug dependence. | Mainly being implemented through "Basij" (The mobilisation), NGOs and "Community-focused groups" | (Ayatollah Khamenei, 2006) |
| **4. Drink-driving policies and countermeasures** | Introduction of an upper blood alcohol concentration level and enforcing it | Introducing and enforcing zero blood alcohol concentration limit for all drivers (limit of 20 g/100 ml on breathalyser) | (Mental Health Social Health & Addiction Offices, 2012) |
| | Drink-driving policies [section B, material 10, 2010] | Administrative suspension of driving licences, fine and referral to treatment when needed | (Dmāry et al., 2011) |
| | Promoting breath-testing | Breath-test is done after several screening stages, only when a driver is suspected to be under the influence of alcohol | (Mental Health Social Health & Addiction Offices, 2012) |
| | Promoting a detailed protocol for the road and traffic police | Each stage has a specific protocol that the officers have to follow and, in each situation, at least two officers have to be involved for their safety as well as for supervisory purposes | (Mental Health Social Health & Addiction Offices, 2012) |
| | Monitoring and evaluation on a national level | | (Mental Health Social Health & Addiction Offices, 2012) |

(*continued on next page*)

**Table 2** (*continued*)

| Key alcohol policy areas suggested by WHO on national level (World Health Organization, 2010) | Key strategies initiated in Iran | Adaptation of these key strategies in Iran | Source of data |
|---|---|---|---|
| | | A specific monitoring and evaluation system is in place with frequent reporting to the local and national level. | |
| | Using the media to target drink driving in situations | | (Ilna Reporter, 2016) |
| **5. Availability of alcohol** | Ban with concessions | Alcohol consumption and trade is banned in the country for Muslim majority population. Only minority non-Muslims can consume alcohol, and produce and sell it to each other. But they cannot drink in public. | (Al-Ansari, Thow et al., 2016) |
| | According to Article 174, non-Muslim drinking is not considered a crime if alcohol is not consumed publicly | Only minority non-Muslims are allowed to produce and consume alcohol, but not in public | (Al-Ansari, Thow et al., 2016) |
| | Medical use alcohol is legally produced | This is ethanol e,g.,for disinfecting purposes | (Hussien Mehrparvar, 2010) |
| | The third of the overall policies on combating drugs issued by the Supreme Leadership Authority 2006 | Strengthening, equipping and developing units and information systems in order to control the country's borders and prevent entry of illicit substances (including alcohol) and their precursors; strengthening the structure of anti-drug specialist units in the police force and other related mechanisms | (Ayatollah Khamenei, 2006; Dmāry et al., 2011) |
| | Establishing, operating and enforcing an appropriate system to regulate production, wholesaling and serving of alcoholic beverages by the below measures | Total ban on alcohol production for Muslim majority population; gaining support to promote policies of decreased alcohol availability; increased fines for Muslim alcohol consumers and providers | (Dmāry et al., 2011) |
| | Establishing, operating and enforcing an appropriate system to regulate production, wholesaling and serving of alcoholic beverages by the measures below | Regulation setting out no on-premise or off-premise alcohol outlets for the Muslim population | Consultation; (World Health Organization, 2014e) |
| | Exemption for minorities | Only non-Muslim minorities are allowed to sell alcohol, and only to non-Muslims | |
| | Regulating retail sales in certain places | Only stores owned by non-Muslims and within their community can sell alcohol | Consultation |
| | Age limit is not relevant for general population, and not in place for minorities who can consume alcohol | Any consumption by Muslims at any age is prohibited, and no age limit is set for minorities | (3danet.ir., 2016; World Health Organization, 2014e) |
| | | Policies are in place regarding drinking in public places or at the functions of official public agencies for the entire population, including minorities | (World Health Organization, 2014e) |
| | Adopting policies to eliminate availability of illicit production, sale and distribution of alcoholic beverages as well as to regulate or control informally produced alcohol | Heavy policing is in place with fines, Hadd (Islamic punishments) and penitentiaries for offenders | (Iran Human Rights Documentation Center, 2013b) |
| | Special licensing system | The religion of citizens is recorded on their citizenship document, and so acts as a licence for minority non-Muslims to sell and purchase alcohol | Consultation; observation |
| **6. Marketing of alcoholic beverages** | Alcohol marketing is highly regulated | Marketing is banned even for non-Muslim stores; they are not allowed to display alcoholic beverages or advertise alcohol | (World Health Organization, 2014e) |
| **7. Pricing policies** | This recommendation is not implemented in Iran | There are no pricing policies or allocated taxes for non-Muslims (who can sell alcohol) | Consultation |
| **8. Reducing the negative consequences of drinking and alcohol intoxication** | The government aims to reduce the negative consequences of drinking and intoxication | Enforcing the zero alcohol consumption policies (zero tolerance) | |
| | The government aims to reduce the negative consequences of drinking and intoxication | Ban on any alcohol serving for majority and non-Muslims have no laws against serving to intoxication | (consultation; (World Health Organization, 2014e)) |
| | | No premises are allowed to sell alcohol except stores owned by non-Muslims | (consultation) |
| | | Apart from alcohol being banned for Muslim majority, there is no consumer information about, or labelling of alcoholic beverages to advise of potential harms | |
| | Adoption of preventive strategies for dealing with threats and injuries caused by addictive substances (including alcohol) | The use of governmental and non-governmental services; and strengthening people's religious beliefs and cultural practices; arts, sports, education and | (Ayatollah Khamenei, 2006; Dmāry et al., 2011; Iran Human Rights Documentation Center, 2013b) |

(*continued on next page*)

**Table 2** (*continued*)

| Key alcohol policy areas suggested by WHO on national level (World Health Organization, 2010) | Key strategies initiated in Iran | Adaptation of these key strategies in Iran | Source of data |
|---|---|---|---|
| | | propaganda in the family environment, work, education and training, and cultural and public centres | |
| | Production and distribution of alcohol is controlled | Any production and distribution of alcoholic beverages is banned except for the minority non-Muslims; Specific fines and punishments in place; gaining support to promote policies of decreased alcohol availability; and to increase fines for consumers and providers | (Dmāry et al., 2011) |
| **9. Reducing the public health impact of illicit alcohol and informally produced alcohol** | Regulating sales of informally produced alcohol | Policing system | (Hamied Serami, 2010) |
| | A powerful regulation and implementation system | | (consultation) |
| | Established systems to detect and trace illicit alcohol | Policing in place | (consultation; (Hamied Serami, 2010)) |
| | Ensuring necessary cooperation and exchange of relevant information on combating illicit alcohol among authorities at national and international levels | | (consultation; (Ayatollah Khamenei, 2014)) |
| | Advising the public about toxins and other health-related issues from informal or illicit alcohol | Use of different media such as newspapers, TV program and school-based awareness to advice on alcohol consumption and related health consequences | (consultation; (Mehr News Agency, 2014)) |
| **10. Monitoring and surveillance** | Frameworks for monitoring and surveillance activities including periodic national surveys on alcohol consumption and alcohol-related harm | Establishing effective frameworks for monitoring and surveillance activities including periodic national surveys on alcohol consumption and alcohol-related harm but no exchange and dissemination of information except among the policy makers | (consultation; (Dmāry et al., 2011)) |
| | | Establishing an organisational entity responsible for collecting, collating, analysing and disseminating available data, including publishing national reports | (consultation; (Dmāry et al., 2011)) |
| | Tracking a common set of indicators of harmful use of alcohol and of policy responses and interventions to prevent and reduce such use | 'as above' | (Dmāry et al., 2011) |
| | Developing evaluation mechanisms - early stages | Data collected to determine the impact of policy measures, interventions and programmes to reduce the harmful use of alcohol | (consultation; (Dmāry et al., 2011)) |

provides information about available services.

III *Community action:* WHO recommends a range of interventions relating to community action in relation to alcohol, including measures to highlight alcohol-related harms and promote solutions, and to assist with identified gaps and priorities (Table 2). Some of these have been implemented in Iran. The Iranian Government has developed a plan to involve the community and widen the capacity of community-based organisations such as "Basij" (The Mobilisation) and Non-Governmental Organisations (NGOs) (Hamied Serami, 2010). A goal for community-based organisations, encouraged by government, is to provide care and support for affected individuals and their families (Dmāry et al., 2011). Additionally, the Ministry of Health has introduced models of care for alcohol users that can be used by the individual, family and health services, and outlines ways to implement care in urban and rural areas (Dmāry et al., 2011). The 'Social, Mental and Addiction Group' is a working-group formed in the health system development plan. One of its outputs is to promote prevention, treatment and reduction of alcohol poisoning by the year 2025 (āyrānmnš, 2011).

IV *Drink-driving policies and countermeasures:* WHO has recommended nine interventions here (Table 2) and policies are in place in Iran to address all to some extent. The highest BAC allowed when driving in Iran is 0 g/100 mL. However, when breath testing, an upper limit of 20 g/100 ml is implemented (Mental Health Social Health & Addiction Offices, 2012). This is to allow for i) the possibility of other medications, food or drinks affecting the BAC; and ii) any inaccuracy of the breathalyser. In regards to traffic and road policies, specific strategies are in place, with monitoring and evaluation, and frequent reporting to local and national road and traffic bodies (Mental Health Social Health & Addiction Offices, 2012).

V *Availability of alcohol:* The WHO recommended policy options to manage availability of alcohol includes regulating production and serving of alcohol and of illicit alcohol, restriction on service to intoxicated persons and a minimum drinking age (Table 2). The Iranian Government implements a total ban on alcohol consumption and production for Muslims of all ages (Qudsonline, 2016). The Government has provided an exception for non-Muslims, who are permitted to drink and produce alcohol, but are prohibited from consuming alcohol in public spaces or during public events (Fāṭimī, 2014; Hussien Mehrparvar, 2010). Alcohol can only be consumed in private homes or gatherings. Therefore, apart from prohibition for Muslims, the control of retail sale is only applied to

non-Muslim minorities, who can sell alcohol to other non-Muslims. Such sales usually occur privately (consultation). There are no specific laws on licensing of sellers or ID requirements for purchasers. In addition there are no policies to prevent sale to intoxicated persons and no minimum age for purchase and consumption of alcohol among non-Muslims (3danet.ir., 2016). Most alcohol sold by non-Muslims to non-Muslims is produced in Iran. There is no legal alcohol import to the country. The only permissible national production of alcohol is for medical, laboratory or industrial uses (Association of Iranian Alcohol Producers, 2018) and monitoring is in place to ensure this (e.g. production of alcohol for skin disinfection or as solvents). There are policies to eliminate the illegal production, sale and trade of beverage alcohol within the country and to eliminate its trafficking from neighbouring countries. The Iranian government has specific fines, jail and other punishments in place for related offences (Iran Human Rights Documentation Center, 2013a).

VI *Marketing of alcoholic beverages:* WHO has recommended three interventions for the marketing of alcoholic beverages (Table 2). These include diverse regulation on marketing techniques, restrictions on marketing and type of product. Alcohol marketing is banned in Iran, including in non-Muslim owned stores, where alcohol cannot be displayed or advertised (consultation; (Ayatollah Khamenei, 2006)).

VII *Pricing policies:* The WHO articulates pricing policies through creating systems for alcohol taxation and for enforcing them, prohibiting or controlling below-cost sales and unlimited volume sale (Table 2). For the Muslim majority population in Iran, this recommended policy area is redundant due to prohibition. However, for non-Muslim minorities there is no taxation or pricing regulation (consultation).

VIII *Reducing the negative consequences of drinking and alcohol intoxication:* The WHO recommends six interventions in this area (Table 2). These include regulating the setting in which alcohol is served to minimise violence and inappropriate behaviours (3danet.ir., 2016). This recommendation is largely redundant for the majority population, for whom alcohol consumption is prohibited. However, for non-Muslim minorities, there are no laws prohibiting the sale or service of alcohol to intoxicated persons.

IX *Reducing the public health impact of illicit alcohol and informally produced alcohol:* WHO uses indicators, such as the presence of relevant regulations, to measure countries' approaches to reducing the public health impact of illicit and informally produced alcohol. In Iran, this is addressed through prohibition of alcohol for the Muslim majority, where any alcohol consumption is seen as dangerous for health and carrying a risk of future consequences (consultation). Thus, alcohol has a similar status to illicit drugs (Table 2). Production and distribution of alcohol within the Muslim majority population are strictly controlled by enforcing prohibition, especially for home-produced alcohol. Law enforcement and other relevant authorities collaborate and exchange information to combat illegal alcohol. Moreover, there are public alerts on the hazards associated with its production. For non-Muslim minorities who can legally produce alcohol, there is no regulation on production. Consultations suggest that the government largely "trusts" the minorities' skills in alcohol production.

X *Monitoring and surveillance:* There is an agency solely responsible for gathering, comparing and analysing available data on alcohol use, harm or production and publishing national reports (Table 2). These data are for internal government use and exchange and dissemination of information to outsiders is not allowed.

B. Actors

The government of Iran has identified internal and external stakeholders with respect to alcohol policy. The Ministry of Health is considered an internal body while other organisations such as the State Welfare Organisation of Iran are considered close external bodies (Dmāry et al., 2011). The latter is the key governmental funding institute that supports through public funds disadvantaged people or individuals with disabilities. One of its subdivisions is the Centre for the Prevention and Treatment of Addiction (The State Welfare Organisation of Iran, 2012). Each plays a different role in alcohol policy. The main interest of The Ministry of Health, for instance, is in harm minimisation. We identified a range of actors relevant to alcohol policy, including policy developers and decision makers, ministries and organisations. The stakeholders [8] are divided into seven areas based on their involvement, as described below:

*Policy developers and decision makers:* Policies in the Iranian system are required to be culturally and religiously appropriate and to pass rigorous approval processes through governmental bodies such as the Commission of Public Health, Treatment and Social Health of the Islamic Parliamentary Council. There are several bodies involved in policy development and decision making. This starts with the highest bodies, such as the Base of Representativeness of the Supreme Leader; and the Expediency Discernment Council of the System (Persian: Majma' Tašxis Maṣlahat Nezâm). It also includes those who are directly involved in health, such as the Commission of Public Health, Treatment and Social Health of the Islamic Parliament Council; the Senior Council of Food, Health and Safety; and the Policy Making Council of the Ministry of Health.

Seven actors are responsible for decision making with respect to alcohol. The Ministry of Health is the lead actor in alcohol policy. It has a collaborating research institution which conducts surveys and collects other data, which are used to inform policy development. Through the responsible committee, the Ministry of Health identifies problems and associated policy gaps, assesses the situation and makes recommendations to the upper decision-making bodies. The Ministry of Health is directly involved in the development of policies for treatment and prevention. For example, the Ministry of Health and the Ministry of Interior developed 'Prevention, supply reduction, treatment, harm reduction, and rehabilitation of alcohol use, 2013 – 2017' (Shariatirad et al., 2016). The Ministry of Health is also involved in implementation by providing health services and coordinating alcohol strategies between different levels of government (Dmāry et al., 2011).

The Ministry of Health, Treatment and Medical Education (Mazandaran University of Medical Sciences, 2015) each have specified centres focussing on different aspects of alcohol policy. One of the priorities of the Ministry of Health is to direct programs which aim to minimise the consumption of alcohol, particularly among youth. This includes collaboration with Law Enforcement to measure driver safety and identify drivers affected by alcohol consumption (Mental Health Social Health & Addiction Offices, 2012).

The Ministry of Health's Mental Health office has merged mental health services with primary healthcare, to improve mental, social, addiction-related and alcohol-related health (Mazandaran University of Medical Sciences, 2015).

*Implementing and enforcement bodies:* A total of 18 bodies were identified as having roles in implementation and enforcement in relation to alcohol. The most active was the police force: The Law Enforcement Force of the Islamic Republic of Iran (NAJA). NAJA has several divisions nationally, each with different roles. For example, the Traffic Police of NAJA is responsible for policing drink-driving, and for road and traffic issues; while the Anti-Narcotics Police, combat the illegal drug use and sale including alcohol, and refer people engaged in illegal alcohol-related activities (e.g. Muslim drinkers, producers or retailers) to the criminal justice system (Sarpoosh, 2018).

The Border Guard Command is responsible for preventing alcohol being smuggled in from neighbouring countries and has direct engagement with other government institutes for the legal (criminal) system such as Judiciary, Prevention Office and Prisons Organisation

(Sarpoosh, 2018).

*Community and religious actors:* Religious seminaries across the country, the Islamic Propaganda Organisation, and Ministry of Culture and Islamic Guidance are other influential stakeholders. For example, the Ministry of Health obtained a Fatwa from two scholars to decriminalise treatment-seeking by people with alcohol-related issues (consultation; (Shariatirad et al., 2016)). A Fatwa is an answer to a question given by an Islamic scholar with "recognized authority", from a point or view of the Islamic law. In addition, according to their direct involvement with community-based, school-based and national events and various types of lecturing on a daily or weekly basis, scholars play a significant role in raising awareness and providing advice and guidance to prevent alcohol consumption and to reduce its consequences.

*International agencies:* Some international or global agencies, such as United Nations International Children's Emergency Fund (UNICEF), the United Nations Office on Drugs and Crime (UNODC) and the WHOs representative in Iran (from their Eastern Mediterranean Region's Office) are identified in policy documents as stakeholders in alcohol policy making in Iran.

Iranian policy documents articulate a role for international agencies in advising on policy development through assistance with data analysis and in conducting alcohol-related health awareness campaigns. UNODC has recently, for example, published a series of posters in Persian aiming to raise awareness among young people of the physical and psychological effects of drugs and alcohol. More than 8000 copies of these posters were distributed to schools and universities across the country (UNODC Islamic Repablic of Iran, 2017).

*Researchers:* The Iranian policy documents present researchers as influential stakeholders in developing best practice for prevention and treatment of alcohol-related harms. In the last decade in Iran, research and the number of published research articles on alcohol have significantly increased (Ehsani, Azami, Najafi, & Soheili, 2017). The Ministry of Health has allocated addiction prevention and treatment specialists in all the research centres and universities under its subdivisions. In 2009, the Ministry of Health measured the status of alcohol consumption, alcohol-related issues and other relevant data to support alcohol policy development.

Despite the sensitivities surrounding alcohol, a conference on alcohol poisoning and treatment was held in Iran in 2015, where many nationwide alcohol-related studies were presented and published (consultation).

*Industry*: Industry actors have very little role in Iran's alcohol policy as only pharmaceutical companies and non-Muslims produce alcohol legally.

C. Policy context

We identified several contextual issues that have shaped Iran's implementation of the WHO best practice policy interventions. These relate to socio-cultural, governance and historical policy context in the country.

Policy processes:

*Agenda setting*: The process of alcohol policy development has taken place in several stages. In 2006, the general policies of fighting against substance misuse were informed by the supreme leader, Ayatollah Sayed Ali Khamenei (Ayatollah Khamenei, 2006). Alcohol was considered as part of substance misuse in the country and included in a fight against the planting, production, import, export, storage and distribution of all substances related to illegal drugs.

In 2010, the Ministry of Health's Office of Mental, Social and Addiction launched a national advocacy campaign on alcohol and in the same year, the Office estimated the size of the alcohol-using population. In the years preceding 2011, high levels of alcohol poisoning had been identified, despite prohibition and the government recognises this problem (Dmāry et al., 2011) and acknowledges that the harmful use of alcohol can be prevented if effective action is taken.

The general policy direction was then set in the over-arching policies on "Health" and "Comprehensive Health" in the 20-year vision plan of the 'Fifth National Development Plan' in 2014 (Ayatollah Khamenei, 2014). Some of these general policies aim to improve mental health, specifically among students, and to prevent harms from drugs, psychedelics and alcohol. According to a senior government official, under the eleventh government (2013–2017) health became a higher priority and this has resulted in the allocation of a larger health budget for treatment nationally (Social Security Organization, 2018).

*Policy formulation/ decision making*: It appears that the Government of Iran chose the alcohol policy approach of prohibition as a way of balancing contextual and religious factors, together with their increasing awareness of the existence of alcohol-related health harms. Our consultations revealed that prior to 2010, national data indicated that alcohol was a health problem. The policy developed in 2011 enabled the Ministry of Health to progress toward alcohol treatment – and is consistent with the WHO recommendations of health services' response to alcohol (Noroozi et al., 2014; World Health Organization, 2010). In response, the Ministry of Health and relevant health professionals developed a proposal for alcohol-specific policies. At the time they were unsure if the government would consider such steps. However, once officials were made aware of the issue and the necessity of responding, they approved the policies and encouraged any further necessary steps.

*Implementation*: The Iranian government attempts to achieve a balance in implementation between criminalising alcohol consumption and encouraging treatment seeking. According to consultation, whether alcohol consumption is treated as a criminal act is dependent upon whether a person under the influence of alcohol is caught by the police. Individuals who present to a health facility for treatment are not reported to the police but are managed as patients (consultations; (Shariatirad et al., 2016)).

*Evaluation*: The Ministry of Health and Medical Education has formed a 'Supervisory Board' which is part of a national committee to establish alcohol harm reduction programs. This will help to issue biennial recommendations on policies and so to discuss and reach agreement with the Ministry of Health policy-making council (Dmāry et al., 2011). All interventions, including board formation, must be initiated in the first five years of a program, then every five years suggested interventions are evaluated and revised by this committee.

Stigma and cultural offense

Stigma and cultural offence are the main contextual challenges in developing and implementing alcohol policies in MMCs. This stigma applies to both the drinker and their family. However, in recent years, the Iranian government has shifted toward dealing with alcohol consumption as a health issue, as reflected in the 'Comprehensive Program for Prevention, Treatment and Reduction of Alcohol-Related Poisoning 2011-2015' (Dmāry et al., 2011) and people are encouraged to seek treatment when needed. Therefore, each sector has designed protocols and methods to overcome such sensitivity in implementing alcohol policies.

In relation to driver breath testing, it is considered culturally offensive to stop drivers randomly for alcohol breath testing. Therefore, mobile units named 'Patrol drivers health controls' are called if a driver is stopped due to a possible traffic infringement and is suspected of being under the influence of alcohol or drugs. Breath testing is only conducted following several steps in a specific protocol. If the driver's blood-alcohol concentration is high, their drivers' license will be suspended for six-months and the driver will be reported to judiciary officials (Dmāry et al., 2011; Mental Health Social Health & Addiction Offices, 2012).

Alcohol treatment is integrated with drug treatment because the sensitivity toward alcohol is far greater than toward other illicit drugs in Iran (Noroozi et al., 2014; Rezaee & Ekhtiari, 2014). Nevertheless, implementation of treatment remains challenging. For example, even though notices in newspapers encourage people needing treatment to use phone lines to seek help, the use of posters to advocate for alcohol treatment remains culturally unacceptable (consultation).

Resources

A factor influencing alcohol policy development is the shortage of resources for implementation. This is another reason why alcohol treatment was integrated into drug treatment facilities.

Another significant issue is the economic barrier to policy implementation. For example, producers of medical or industrial alcohol are encouraged to add a bitter liquid to products to reduce consumption but this is not economically viable for all producers (Mehr News Agency, 2014). Instead, warnings and prevention initiatives have been implemented to prevent alcohol intoxication and poisoning due to the consumption of medicinal alcohol and methanol (wood alcohol).

Framing and understanding the problem

On examination of the newspapers, we found that alcohol was reported differently in the three historical stages: pre-revolution, and pre and post the 2011 alcohol policy development.

*Pre-revolution:* Prior to 1979, Iran was a well-known producer (Daneshgar, 2014) of alcohol in the Middle East. Therefore, in comparison to the post Islamic revolution period, we hypothesised that there would be more alcohol advertising or alcohol-related news articles. However, on the contrary, alcohol was mentioned rarely and never advertised. There were no data reporting alcohol consumption or the negative consequences of alcohol, except one article on drunks who destroyed a café (Kayhan-reporter, 1971); and one on the increased price of alcohol (Ettela'at-reporter, 1978d). On issues related to motor accidents, alcohol consumption was not reported or considered as a possible risk factor (Ettela'at-reporter, 1978a), even though some of the months reviewed were during the holiday periods.

Pre-revolution period, other substances were more commonly mentioned, for example, cigarettes, including several articles highlighting their negative health impacts, the prohibition of smoking while driving (Ettela'at-reporter, 1978b) and some advocating a national smoking ban (Ettela'at-reporter, 1978c).

Therefore, although alcohol was consumed in Iran before the revolution, there was little or no information on its health-related consequences and on the national policy position on alcohol in the newspapers we reviewed. At that time, it seems that the main factor dissuading alcohol consumption in Iran was the Islamic prohibition on alcohol consumption.

*Pre- 2011 alcohol policy development (2008–10):* Alcohol was reported significantly more in newspapers than pre-revolution. It was also more present in current newspapers than in those 8–10 years ago. The influence of the new alcohol policy vision of the country is recognised by the number and content of alcohol-related articles. Previously, alcohol was mainly mentioned in criminal reports and illegal smuggling seizure news. There was little or no evidence of awareness about the unhealthy use of alcohol and no reporting on any relationship between alcohol and health. There were not even religious messages discouraging alcohol consumption. In the period prior to alcohol-advocacy in Iran (e.g. pre-2011), alcohol consumption and trade were mentioned mainly in a criminal context. Many articles were reported on cross-border illegal trade, the amount of alcohol seized and the punishments assigned (Hamshahri reporter, 2008). Apart from the legal consequences and fines, there was no sign of alcohol policy recommendations or announcements. In addition, policy makers were not interviewed about alcohol nor did they provide any warnings on alcohol harms. The only discouragement of consumption was religious and cultural.

Post-alcohol policy (2014-16): After the establishment of alcohol-advocacy and awareness policies (2011), alcohol was more regularly discussed in the newspapers and alcohol was noted as a public health issue. Many articles referenced the WHO and discussed cancers associated with unhealthy consumption (71006 Reporter, 2014; Representation of University of Isfahan, 2016). Alcohol poisoning was discussed, including the dangers of incorrectly-made and illegal home-made alcohol and the consumption of medicinal alcohol.

Many policy makers are actively present in the news articles and share their concerns openly (3danet.ir., 2016). Some publicly propose solutions and encourage improved preventive strategies (Mehr News Agency, 2014). Many cross-sectoral discussions are published openly in some newspapers (Ettela'at-reporter, 2014; 71539 Reporter, 2016).

## Discussion

To our knowledge this is the first alcohol policy analysis for an MMC or for a country with current civil alcohol prohibition. It was evident that Iran has covered most of the WHO alcohol policy recommendations though these have been enacted in a way that considers the unique context of a MMC in regards to alcohol.

Despite 30 years of alcohol prohibition in Iran, in recent years the country has taken considerable additional steps to develop alcohol policy. The involvement of a variety of stakeholders in policy development and decision making is indicative of a multi-sectoral alcohol governance system, where many relevant issues have been considered. In addition to identifying harms associated with alcohol consumption and working toward better alcohol management and prevention approaches in Iran, Islamic prohibition of alcohol remains the focal point that policies are designed to suit.

The recent policy vision has been to present alcohol as a public health issue although findings suggest that there is blurring between treating alcohol as health issue and as a criminal act. This is similar to the responses to illicit drugs in Western countries such as Australia, where harm minimisation and treatment approaches as well as legal responses are applied. Furthermore, like attitudes to illicit drugs in Western countries, our findings suggest that any alcohol consumption in Iran is seen as hazardous, increasing the risk of intoxication, addiction, and even poisoning and death (particularly if methanol is consumed).

It is legal for non-Muslims to consume and produce alcohol in the country, and this appears mainly to be home-made alcohol, increasing the risk of accidental methanol poisoning. Furthermore, we found no regulatory policies on alcohol availability and consumption among minority non-Muslims, which may place them at a higher risk of alcohol-related harms.

The newly developed health service response to alcohol is in its pilot stage and it is not clear from the analysis whether geographic distribution of these services matches potential need, and accounts for different distributions of non-Muslim minorities who legally consume alcohol and other populations who consume it illegally. Also, the high stigma around alcohol consumption, particularly among majority Muslims, poses challenges for implementing alcohol screening in primary care, and in estimating the prevalence and patterns of alcohol consumption through surveys.

Iran has a relatively advanced infrastructure for research on addictions. This includes national and international addiction conferences, such as the Annual International Congress on Addiction Science (UNODC, 2015). In addition, there are several national centres for addiction research that are usually integrated into universities (Tehran University of Medical Sciences, 2012; UNODC, 2016). Iran has implemented a range of prevention and harm reduction measures for illicit drugs, including alcohol. Several MMCs face barriers to understanding alcohol issues, ranging from the core concept of Islamic prohibition to weak research infrastructure (Ghandour et al., 2016), instability, war (Lubell & Derejko, 2013; Marshall, 2017) and limited resources (Carina Ferreira-Borges, Davison Munodawafa, & Alisalad, 2010). Most MMCs are developing countries, with little experience in alcohol and addiction research. Therefore, understanding the alcohol policy of Iran as a MMC, and how effective these policies are in the Iranian context, is valuable. As Iran has tried to tackle the challenge of alcohol harm prevention and treatment, it provides a unique example for other MMCs and for developing countries.

Many of the evidence-based policies recommended by WHO have been examined in developed countries rather than in developing

countries, such as MMCs (World Health Organization, 2010). Furthermore, MMCs have often been excluded from the global alcohol policy conversation, based on the assumption that all MMCs have civil alcohol prohibition as their only alcohol policy. For example, it has been reported in WHO databases (World Health Organization, 2016) that Iran has a total ban on alcohol and so a written national alcohol policy document is not applicable. In contrast, our findings show that Iran has a detailed national policy on alcohol and thus the WHO databases need revising. The error may have resulted from the lack of policies on taxation or pricing of alcohol in Iran for non-Muslims, who are allowed to drink alcohol.

Moreover, to understand approaches to overcome stigma in MMCs, it is important to explore the adaptations that Iran has made when implementing global policy recommendations. For example, Iran's approach to breath testing, which is only conducted after behavioural screening for intoxication, provides a strategy to overcome stigma. While it may result in under-detection of drink driving, it is a significant improvement on the absence of any breath testing that is often the case in other MMCs (Ghandour et al., 2016).

In contrast to MMCs such as Oman, United Arab Emirates and Kuwait, there are no legal imports of globally known alcohol brands to the country. In Iran, the main channel of entry for the international alcohol industry is through illegal import and smuggling. Therefore, policies on taxes and pricing, which are the most effective at alcohol control globally (Anderson, Chisholm, & Fuhr, 2009; Babor, 2010; Wagenaar, Salois, & Komro, 2009), are not applicable for the Iranian Muslim majority population. Consequently, the main strategy to control the alcohol industry is carried out by the Border Guard Command. Home-made alcohol is legal for the non-Muslim minorities, but there is a lack of policies to govern sale of alcohol by and to non-Muslims. Accordingly, additional monitoring and a licensing system to allow only skilled people to produce alcohol might be beneficial.

Internationally, prohibition of alcohol as a policy approach is often framed as a failure, or a policy that will have unintended consequences – usually with reference to the USA's experience of alcohol prohibition between 1920 and 1933 (Hall, 2010). However, the experience and impact of alcohol prohibition in MMCs is likely to be quite different and should be acknowledged in global recommendations regarding alcohol policy. The main difference is that the civil policy approach of prohibition spread as Islam expanded and became a social and cultural norm in MMCs. In Islam, drinking alcohol is considered an evil deed. Therefore, alcohol refusal rates have been high in these countries, reflected by relatively low rates of alcohol consumption and related morbidity and mortality. Applying prohibition in MMCs then is less challenging than applying it in a country like the USA.

This cultural or religious rejection of alcohol is reflected by our findings from the review of newspapers before the revolution. It shows that despite alcohol being legally permitted and consumed at parties, gatherings and by many minority and traditional groups, it was largely stigmatised due to the Islamic ban (Anderson, 2014; Matthee, 2014). This concept is illustrated in other MMCs such as Turkey where alcohol prohibition is not implemented in secular law, however, alcohol remains stigmatised and the consumption rate is far lower than in non-MMCs (World Health Organization, 2014b).

## Limitations

Cultural sensitivity is a barrier to openly discussing alcohol in MMCs and it is likely to lead to under-reporting of consumption and related harms, including deaths from alcohol poisoning (Hassanian-Moghaddam et al., 2015). In addition, many studies have identified the potential effects of its illegal status and its social offensiveness on the reliability of research findings and the feasibility of conducting further research on alcohol in Iran (Ziaei et al., 2017). Accordingly, methodologies for this project had to be tailored to respect local sensitivities, and to make use of a range of data sources. However, it is possible that there were other relevant documents which were not available to us as not all the reports on alcohol use and harms are publicly shared. Moreover, while we were able to comment on the existence of policy documents, we were not always able to establish the extent to which policies had been implemented. The newspapers reviewed may have been limited by availability (especially the pre-revolution period) so some articles about alcohol may have been missed. Similarly, limiting the search for the content analysis to electronic papers from recent years may have resulted in unknown biases. Only an approximate number of the newspaper articles retrieved was recorded as the study did not set out to perform quantitative analysis. Further research is warranted on the newspaper content as a method by which to analyse changing attitudes to alcohol in Iran and in MMCs.

## Conclusion

Although Iran prohibits alcohol consumption and trade among its Muslim majority population, it has a range of well-developed alcohol policies. Some have been in place for many years, such as those that restrict the availability of alcohol and monitor the borders to prevent illegal trade of alcohol. Other policies have been developed and implemented more recently. The latest are policies that focus on health service response such as screening, prevention and treatment for alcohol-related health issues.

By comparing Iran's alcohol policy to WHO global recommendations, we can see that Iran has adopted nine of ten recommended policy areas in one way or another. It is vital to understand the alcohol policy environment in MMCs to help identify relevant evidence-based recommendations, which are also contextually appropriate.

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## Appendix A. Detailed Methodology

We conducted a policy analysis, focussed on the content of alcohol-related policy across sectors in Iran. Because alcohol is a sensitive topic in Iran we focussed on publicly available literature and policy documents, and we verified information through consultations with policy actors. We also identified additional information on the policy context through a comprehensive review of newspaper articles from just before the 1979 revolution to recent years. Our research questions were: 1) How is alcohol governed in Iran? and 2) What framing and contextual considerations are evident in Iran's alcohol-related policy approach? We analysed policy content data using a matrix based on WHO policy recommendations. We also used the Walt & Gilson health policy analysis triangle (Walt & Gilson, 1994) as a framework for analysis; this identifies content, context, actors and process as key factors for understanding policy.

### *Reviewing the relevant policy documents*

We identified relevant policy sectors based on the WHO Global Alcohol Policy (World Health Organization, 2010), which was used to develop a matrix for data collection and extraction (Table 2). We identified relevant policy documents by searching the key words

websites of official organisations', such as the Ministry of Health and the Ministry of Justice. The key words were "alcohol", "alcoholic", "alcohol consumption", "intoxication" in Persian language and all other possible derived words. Relevant data were extracted to the matrix.

*Newspapers*

There were three purposes in reviewing newspapers: 1) To understand the social context of alcohol and how alcohol was presented in newspapers before the revolution. 2) To understand the current situation of alcohol in the country, how it is reported and from which perspective, i.e. religious, economic, political, health, criminal, justice. 3) To observe if and how the language in newspapers has changed regarding alcohol. This focussed on the language and context of alcohol before and after the date in which a separate alcohol national policy was developed. The number of editions and months examined was determined according to practical constraints, such as time available for direct access to hardcopy newspapers.

a

a *Reviewing hardcopy newspapers:* We reviewed the hardcopy of two daily newspapers from before the 1979 Islamic revolution. The newspapers were chosen based on their importance and their national coverage. *Ettelaàt*, founded in 1926, had a high circulation during the Mohammad Reza Shah era (before 1979). *Kayhan* was founded in 1943 and had a circulation of more than one-million copies before the Islamic Revolution (Shapour Ghasemi, 2006). Both newspapers focus on political, cultural, social and economic news. We reviewed two months from *Ettelaàt,* April–May 1978 (Farvardeen- Ordebehesht, 1357), and the subsequent month, June 1978 (Khordad, 1357) from *Kayhan* newspaper. This was done by hand-searching every issue for the key words of "alcohol", "alcohol consumption", "intoxication" and all other possible derived words in Persian language. Also, other articles with different headings but relevant context were read. For example, articles about accidents and road and traffic injuries.

b *Reviewing electronic newspapers:* In recent years many newspapers in Iran have become available electronically. We selected various newspapers that target different audiences and with different levels of conservativeness (Table 1). The key words were "alcohol", "alcohol consumption", "intoxication" and all other possible derived words in Persian language.

*Literature*

We looked for reports and scientific literature related to alcohol policy in Iran. Also, we searched the Web from inside (Persian) and outside (Persian and English) Iran. This was done through obtaining extra material directly from academics or institutes. The key words were alcohol policy, addiction, wine, alcohol, poisoning and Iran.

*Consultation*

We conducted consultations to 1) verify that we had identified all relevant policy documents; 2) ensure that we had correctly interpreted the policy content; and to 3) gain additional understanding of the policy context. We identified relevant stakeholders to participate in consultations through the WHO office in Tehran, and then direct contact to the Department of Mental, Social Health and Drug Abuse at the Ministry of Health and Medical Education in Tehran. Through this we were able to obtain an overview of Iranian alcohol policy and the concerns of the Ministry of Health. Also, we were introduced to key people who were involved in alcohol policy development and implementation. Furthermore, we could obtain hard and soft copies of the publicly available alcohol policy documents.

We conducted seven consultations six of which were with the key individuals directly or indirectly involved in alcohol policy development and implementation, either directly or indirectly; some individuals have had more than one role from different hospitals, universities and research institutes. These included: past and present senior government officials and policy makers (n = 2) health professionals (n = 2), and academics and researchers (n = 3). In addition, one health policy researcher and academic outside the addiction field was consulted. We have not provided further information on roles or identity to protect their confidentiality, as alcohol can be a very sensitive topic in Iran. Six consultations were conducted face-to-face and one via the phone. The consultation questions asked about relevant policies and interpreting the alcohol policy, and legal documents and their context. The questions were tailored to the consultants' profession and interest. Consultations were strictly focussed on publicly available information that form part of the participants' normal work and responsibilities, and focused on the ten key alcohol policy options recommended by WHO at the national level.

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# Chapter 6

# Alcohol treatment systems in Muslim majority countries: case study of alcohol treatment policy in Iran

# Chapter 6: Alcohol treatment systems in Muslim Majority Countries: case study of alcohol treatment policy in Iran

## Introduction to chapter

As stated earlier, alcohol policy research is limited in MMCs. This is mainly because of the Islamic prohibition of alcohol consumption. As seen in Chapter 4, despite the prevalent global perception of civil prohibition, MMCs have recently adopted a range of civil alcohol policies. Out of 50 MMCs, from the identified four policy approaches, only five have implemented total prohibition. Another 10 have implemented prohibition with concessions for non-Muslims. In Chapter 5 the analysis of alcohol policy used Iran as a case study of a MMC with prohibition with concessions. This showed that global understanding of the recently developed policies is limited. Out of the 10 domains of the WHO Global Strategy to Reduce the Harmful Use of Alcohol (2010), Iran has covered nine. However, as explained in the previous chapter, due to the context of alcohol in Iran as a MMC, some of these policy domains have been interpreted and implemented differently from how they might appear in a non-MMC.

The second alcohol policy area recommended by WHO is the health policy response to unhealthy alcohol consumption. However, this topic has not been clearly described in the academic literature in relation to most MMCs. This chapter presents the analysis of alcohol treatment policy in Iran. It analyses the policies by analysing the context, process, actors and the content of alcohol treatment policy development. It demonstrates the challenges and efforts underway to address these in this context of a MMC with an alcohol policy of prohibition with concessions

This chapter consists of an article that has been accepted for publication in a peer-reviewed journal, the International Journal of Drug Policy:

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We have placed both tables for this chapter at the end of the chapter (before the references). The material in Appendix 5 has also been accepted for publication as supplementary material for that report.

# Alcohol treatment systems in Muslim Majority Countries: case study of alcohol treatment policy in Iran

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# Alcohol treatment systems in Muslim Majority Countries: case study of alcohol treatment policy in Iran

**Keywords:** Alcohol policy, Muslim majority countries, prohibition, alcohol treatment, Iran

**Abstract**

**Background:** Alcohol is a leading risk factor for death and disability globally. Due to the Islamic prohibition of alcohol consumption, alcohol policy is an under-studied and sensitive topic in Muslim majority countries (MMCs). In addition, drinkers in these countries may face barriers to treatment access due to stigma or the legal status of alcohol. Using Iran as a case study this paper explores how alcohol treatment is planned and delivered in the complex environment of an MMC.

**Method:** We searched academic and grey literature, clinical manuals, guidelines and policy documents for information on the development and implementation of alcohol treatment policy in Iran. The search was conducted in English, Persian and Arabic. We conducted 6 consultations to verify information obtained. We analysed information based on the Walt & Gilson health policy analysis triangle, which identifies context, process, actors and content as key factors for understanding policy.

**Results:** Iran initiated an alcohol-specific national strategy in 2011-2012 that aims to prevent, reduce and treat alcohol use disorders. This strategy has been designed to be implemented on a multi-sectoral level. Screening and prevention are mainly initiated in primary health care and cases are referred accordingly. Alcohol treatment is provided in specialised outpatient and inpatient settings. Due to contextual factors such as stigma, feasibility and affordability, alcohol outpatient units are planned to be integrated into existing public/ private

drug addiction treatment facilities. However, the Ministry of Health has faced many challenges in implementing this pilot project. To date only small numbers of outpatient and inpatient units have formally commenced offering alcohol treatment.

**Conclusion:** Implementing alcohol treatment has been challenging for Iran. Approval of new treatment programs may not be seen as a priority because of the low prevalence of alcohol use disorders in the country. Also, policy makers are implementing treatment services with caution due to the existing alcohol prohibition for the country's Muslim majority population. Barriers to treatment seeking need to be addressed at the micro and macro levels. Support from international agencies such as the WHO could assist MMCs to develop appropriate services that are feasible for their unique alcohol policy environment.

## Introduction

There is an increasing recognition that alcohol-related harms are rising in Muslim Majority Countries (MMCs) (Mehrabi et al., 2019; World Health Organization, 2011). However, in the context of Islamic prohibition of alcohol consumption, cultural factors affect treatment-seeking and can affect willingness to provide treatment services. Moreover, research and policy development on alcohol is limited in MMCs (Ghandour et al., 2016). Accordingly, it can be challenging for these countries to adapt the World Health Organization (WHO) policy recommendations for treatment provision.

MMCs have undertaken varied approaches toward alcohol prohibition (Al-Ansari et al., 2016). Some have implemented a total ban while others have regulatory approaches (Al-Ansari et al., 2016). Still others combine a ban for the Muslim population with concessions that permit the non-Muslim population to consume alcohol (Al-Ansari et al., 2016). While increasingly popular in a globalised context, the latter dual approach that is followed by various countries including Iran, can add to the challenges in alcohol treatment policy development.

### *Characteristics of alcohol treatment services: a global perspective*

The WHO Global Strategy to Reduce the Harmful Use of Alcohol, 2010 (World Health Organization, 2010a) recommends a multisectoral approach to prevention/earlier detection and treatment of unhealthy drinking (i.e. hazardous, harmful use or dependence). Alcohol treatment services typically consist of integrated segments designed according to patient need and can be broadly classified as outpatient, inpatient, and residential (UNODC/WHO, 2017). They can include a range of therapeutic approaches such as brief interventions, withdrawal management, pharmacotherapies, psychotherapy and psychosocial services, mutual support and therapeutic communities. In some countries, services may be less integrated or provide centralised specialised services only (Babor & Winstanley, 2008; World Health Organization, 2010b). Key elements of treatment services are set out in the Substance Abuse Instrument for Mapping

Services (WHO-SAIMS) (World Health Organization, 2010b), the International Standards for the Treatment of Drug Use Disorders (UNODC/WHO, 2017), and the Substance Use Disorder Treatment Facility Survey (WHO/UNODC, 2018).

*The Islamic Republic of Iran*

Iran is a middle-income developing country with a population around 80 million (Statistical Center of Iran, 2016b, 2018). Over the past decade the Government of Iran has been active in developing alcohol-related policies under an umbrella of prohibition for Muslims, who account for 99% of the population (Nikfarjam et al., 2014). However, concessions are made for minority non-Muslims who may consume alcohol in private (Al-Ansari et al., 2016). Because of the prohibition for most citizens alcohol is mostly home-made; therefore methanol poisoning is a serious public health concern (Aghababaeian et al., 2019; Hassanian-Moghaddam et al., 2015; Hassanian-Moghaddam et al., 2007; Massoumi et al., 2012).

Prevalence of lifetime alcohol use in Iran is 28%, with 5.7% for use in the past 12-months; use is significantly associated with male gender (odds ratio of 1.7 compared to females) (Amin-Esmaeili et al., 2017; Sharifi et al., 2015). The 12-month prevalence of alcohol use disorders (AUD) (DSM IV/V criteria) and of harmful alcohol use (ICD-10 criteria) is between 1-1.3 % and 0.6% respectively (Amin-Esmaeili et al., 2017). AUDs are markedly more common in men than in women, with an odds ratio of 13.3 (Amin-Esmaeili et al., 2017).

In 2010/11 Iran released a national strategy on prevention and treatment of alcohol poisoning in response to epidemics of methanol toxicity from home-made alcohol (Damari et al., 2010). This was in addition to the pre-existing national policies on drugs (Damari et al., 2015; Iran Council of Expediency, 2010; Momtazi et al., 2015). Since that time, efforts to establish treatment facilities for AUD have been ongoing (Shariatirad et al., 2016), but there is limited literature on alcohol treatment in Iran (Shariatirad et al., 2016).

We selected the Islamic Republic of Iran as a case study because it has made significant advances in addiction policy and research over the past decades (Damari et al., 2018; Khalili et al., 2018; Momtazi et al., 2015). Iran may provide useful lessons for other MMCs which are innovating and adapting their alcohol-related policies in response to globalisation. Its efforts can also inform other countries and the broader global health community who may support MMCs.

This study aimed to explore how alcohol treatment is delivered in the complex environment of Iran. Specifically, we examined i) who can access alcohol treatment and ii) the key considerations in establishing treatment services. We also examined the country's approach to treating unhealthy alcohol use; the challenges alcohol treatment providers face that are unique to MMCs and to Iran, and their solutions.

**Methods:**

*Data Collection*

Data sources include: 1) academic and grey literature; 2) policy documents, grey literature, clinical manuals and guidelines; and 3) consultation.

We searched for information on alcohol treatment services in Iran in academic literature and related policy documents, including WHO sites, publicly available policy documents, government websites and reports (including the Ministry of Health and Medical Education [MOHME] of Iran), and selected non-published materials (e.g. relevant conference presentations). Searches were conducted in Persian, English and Arabic, in 2018. Key search terms were alcohol, policy, addiction, treatment, detox, rehabilitation and Iran.

For the academic databases PubMed, EMBASE, WOS and Scopus, the search terms were: Addiction OR treatment OR detox OR rehabilitation OR wine AND Iran AND policy AND alcohol. The term 'addiction' was included, as it was observed that sometimes alcohol treatment was covered in a broader 'addiction' policy. Searches of included studies' reference

lists, and additional searches in Google Scholar using these terms, were used to identify additional reports. We included documents/ reports that refer to alcohol policy either directly or by implication.

Consultations were used to check the accuracy of information obtained. Consultations were used rather than formal interviews because alcohol is a highly sensitive issue in Iran. These sensitivities were compounded as the research was being conducted by an overseas-based, and non-governmental research organisation. Moreover, ministerial approvals would have been needed for each interview and these interviews would ideally be face-to-face. We had tight constraints on time and resources in this unfunded study. Content from an Iranian-based international conference on addictions, the first (to our knowledge) to publicly discuss policy and practice around alcohol treatment, was also used.

Consultations with six key stakeholders involved in policy making, implementation, service provision or research in this field were undertaken to ascertain the completeness and accuracy of our understanding of the publicly available policies. We identified initial stakeholders through direct approaches to MOHME and the Alcohol Treatment Clinic of Iranian National Centre for Addiction Studies (INCAS) and via participants of the 12$^{th}$ International Addiction Science Congress in Tehran, 2018. We then used a snowball approach to identify further stakeholders for consultation.

We sought to check our understanding with the help of the consultees' experience and skills (from their day-to-day work in the field). Consultations were in the form of group discussion or individual meetings. There were no fixed questions, but instead there was free-flowing conversation. Each person was asked to comment on or to clarify our findings from the policy

documents and other material that were searched. The study had ethical approval from Tehran University of Medical Science (Approval ID: IR.TUMS.VCR.REC.1397.289).

*Data analysis*

We analysed our information based on the framework of the Walt & Gilson health policy analysis triangle (Walt & Gilson, 1994). It identifies context, process, actors and content, as key factors influencing policy making. To analyse the policy content, we developed a matrix based on recognised frameworks for mapping addiction treatment services. We derived this from the WHO-SAIMS (World Health Organization, 2010b), the International Standards for the Treatment of Drug Use Disorders (UNODC/WHO, 2017), and the Substance Use Disorder Treatment Facility Survey (WHO/UNODC, 2018). We then assessed policy content against the matrix's indicators: treatment modalities and interventions, access to services, education of the population, and human resources, with reference to 'best practice' services for alcohol treatment (Table 1).

**----------(Table 1: to be placed about here)----------**

## Findings and analysis

### *A. Policy context*

Several contextual factors have affected development and implementation of alcohol treatment policies and programs in Iran. The main factors are (i) the dual legal status of alcohol; (ii) the stigma of alcohol; (iii) resource constraints, including the role of the private sector and need for out-of-pocket patient payment; and (iv) the lack of alcohol consumption guidelines given the stand of 'no safe level'.

1. *Dual legal status of alcohol*

In Iran Muslims are prohibited from making, trading or consuming alcohol (Hassanian-Moghaddam et al., 2007; MOHME, 2013). In contrast, non-Muslims are permitted to produce and consume alcohol in private. These non-Muslims have no access to officially imported alcohol nor to any legal domestic commercial production. They are typically reliant on home-made alcohol or industrial ethanol (Hassanian-Moghaddam et al., 2007). Although Iranian non-Muslims are believed to be skilled in alcohol production (consultation), the risk of methanol poisoning remains.

Because alcohol is banned for most of the population, there has been limited past public education on the health effects of alcohol (consultation). Accordingly, there is a lack of knowledge and awareness about risks of alcohol consumption, and this may be a barrier to treatment-seeking ((Massoumi et al., 2012; Shokoohi et al., 2019); consultation).

2. *Stigma*

The Quran prohibits alcohol use by name. Therefore in MMCs, including Iran, alcohol is more stigmatised than drug use, which falls under the broad term of 'intoxicating substances', (AlMarri & Oei, 2009; Michalak & Trocki, 2006). As a result, alcohol consumption is associated with a strong religious prohibition and with social refusal of consumption in MMCs. Alcohol consumption by Muslims in Iran is also linked to legal consequences and punishment based on Islamic teachings (consultation). In contrast, fines or other punishment for illicit drug use is determined only on the basis of civil policy (Al-Ansari et al., 2019).

The degree of stigma depends on social and cultural background. Among higher socioeconomic classes in Iran, alcohol is less stigmatised than drugs such as opium, heroin or methamphetamine (consultation). And in the middle and upper classes typically only alcohol use resulting in harm is stigmatised (consultation).

Generally, it is considered embarrassing to ask people about alcohol consumption in a MMC, including in Iran (Welle, 2018); consultation). Alcohol consumption is typically associated with shame to the family and the community. This stigma contributes to delay in treatment-seeking (Hassanian-Moghaddam et al., 2007). Because alcohol consumption is also relatively uncommon, this poses challenges in making screening and brief interventions (BI) routine in primary healthcare (PHC). PHC staff may be reluctant to engage with such patients, have pre-conceptions or feel judgemental about them, and lack confidence in delivering alcohol treatment.

Stigma also affects the overall treatment facilities. For example, according to consultation, specialised psychiatric centres would prefer that the facility not deal with substance use issues (Welle, 2018). Furthermore, some of the outpatient addiction treatment centres that have started to treat alcohol problems do not advertise this on the front of the unit to minimise discomfort to clients (consultation).

Despite considerable progress in drug treatment and policy development (Damari et al., 2018; Momtazi et al., 2015), alcohol treatment availability and research in Iran remains limited.

3. Health system structure

As part of PHC, ‘health-houses’ or ‘health posts’ are the first level of contact between individuals and families and the health system. These are run by nurses who collaborate closely with health volunteers employed from catchment areas. Then larger Community Health Centres (CHCs) are distributed across the country (MOHME, 2018b, 2018d, 2018e, 2018f) and each is responsible for numerous satellite health houses/posts (consultation). There are five to six CHCs in each district, totalling 4000 active centres countrywide.

The next level of care is comprised of specialised outpatient drug treatment centres. These are comprised of multi-disciplinary groups working under the supervision of a general physician

trained in the assessment and treatment of illicit drug use disorders. These public or private centres are designed primarily for treatment of opioid use disorder, as opioids are the main problematic drugs in Iran. A key focus of treatment is opioid agonist pharmacotherapies ((Momtazi et al., 2015); consultation). These outpatient drug treatment centres are considered the cornerstone of substance use treatment services in Iran (Ekhtiari et al., 2019). Where appropriate, referrals are made to other levels of care and services, such as inpatient or residential facilities (Noroozi, 2018).

Provision of services for addiction treatment is provided across the public and private sectors, but only about 5% of all outpatient drug treatment programs are run by the public sector (consultation).

4. Resource constraints; and public versus private services

A harm reduction program was initiated in Iran in 2002 and in 2006 was announced as a component of drug control policies (Ekhtiari et al., 2019). As a result, publicly owned drug treatment clinics were established in Iran in 2006. Currently, there are around 180 public drug treatment programs, mainly in large cities, which provide low-cost treatment for opioid dependence (consultation).

INCAS is a research centre affiliated with Tehran University of Medical Sciences established in 2002 as part of the first pilot project on methadone maintenance treatment ((Rahimi Movaghar et al., 2002); consultation). In 2015 INCAS established Iran's first outpatient alcohol treatment unit. In 2016 INCAS commenced an independent pilot project on the feasibility and effectiveness of outpatient alcohol withdrawal management and relapse prevention treatment. At the time of writing the report was in preparation (consultation).

The existing public outpatient and inpatient drug treatment services have had long experience in providing addiction treatment across Iran (Shariatirad et al., 2016). This is in addition to approximately 6500 private outpatient substance use services (Shariatirad et al., 2016).

Anecdotally most people seek treatment for substance use disorders through the private sector and through specialist health professionals rather than through government-run services. A general practitioner's referral is unnecessary for people to seek specialist opinion or treatment for any medical condition. Government-run services are designed as a backup to the private services. There have been some attempts from the Iranian government to integrate the overall public and private sectors; however, this plan was not advanced due to cost (consultation).

Despite the private sector's involvement in drug treatment, its extent of involvement in delivering treatment for alcohol use disorders is unclear and has been reported to be low (consultation). Although some inpatient wards provide alcohol treatment in the private sector, these are not officially known as alcohol treatment wards or beds (consultation).

One obstacle to involving the private sector in alcohol treatment is the challenge in communication and sharing information between the sectors. According to consultation, there is limited communication between different service providers, even within the public sector.

Additionally, medical and psychosocial services for alcohol treatment are not usually covered by health insurance and so the cost to the patient can be challenging. However, consultation suggests that, unlike people with drug use disorders, many individuals with AUDs are from medium to high socioeconomic levels (Welle, 2018) and so can usually afford treatment (consultation). However, there is no comprehensive population survey to confirm the perceived association between harmful alcohol use and class.

5. *Sensitivity of guidance on an alcohol consumption level*

An alcohol consumption guideline is considered an essential component of alcohol policies in countries where alcohol consumption is legally and socially acceptable (Supplement 5) (World Health Organization, 2010a). Such guidelines provide evidence-based advice on the level of alcohol consumption that reduces the risk of harm. However, in Iran the concept of safer alcohol consumption is problematic, as any alcohol consumption is believed harmful (consultation) and any alcohol consumption is banned for the Muslim population (MOHME, 2018d).

*B. Policy processes*

In 2011, for the first time since the 1979 revolution, stand-alone alcohol policies were discussed and developed in Iran. This reportedly followed a national study, performed on the instruction of the Mental Health, Social Health and Addiction Office of MOHME in 2012. This research showed that the prevalence of alcohol consumption had noticeably increased in the years leading up to 2011 (Amin-Esmaeili et al., 2017; Nikfarjam et al., 2017). However, according to consultation, mass epidemics of methanol toxicities in Iran were more influential than epidemiological data on alcohol consumption in informing alcohol policy development. Regardless of the prime trigger, since 2011 alcohol consumption has been listed as a public health issue in Iran (Damari et al., 2010).

Development of the national plan occurred in three stages. Prior to 2012 the first stage was to prepare and establish the national strategy, including implementation planning. Between 2014 and 2016 the aim was to focus on implementing the agreed interventions, including coordination between all national alcohol interventions by government. The third stage (from 2019) is to evaluate the policy interventions and their implementation and to carry out the necessary national surveys. Any necessary decisions for the next stage of the program will be

made during this period (MOHME, 2013). All alcohol prevention, screening and treatment approaches are designed for use across the country and focus on both legal and illegal consumption without distinction (Damari et al., 2010; MOHME, 2013; Shokoohi et al., 2019).

We found that the first alcohol policy plan focused on alcohol poisoning: the 'Comprehensive program for prevention, treatment and reduction of alcohol poisoning: 2011-2015' (Damari et al., 2010). This first policy was also based only on a map of health system development. This focus was then expanded in the 'National Document on Prevention, Confronting, Treatment, Harm Reduction and Rehabilitation of Alcohol Consumption: 2013-2017' (MOHME, 2013), That broad focus was then maintained in the 'National Written Document on Prevention, Confronting, Treatment, Harm Reduction and Rehabilitation of Alcohol Use: 2018-2022' (MOHME, 2018g). These last two strategies have been developed based on both social transformation plans and a map of health system development for Iran.

Professional care for alcohol-related issues has been designed as a three-tier model. The first tier involves the least costly, non-specialised services. Screening and referral for alcohol issues are to be integrated into existing PHC facilities.

In the second and third tiers, more comprehensive, specialised and expensive services are provided. These are both outpatient and inpatient units. Outpatient alcohol treatment is planned to be integrated into the existing specialised drug treatment services. This integration process was initiated in 2014-2015 (Table 1).

In addition, residential services for drug rehabilitation are provided by non-government organisations and include private centres (Alam-Mehrjerdi et al., 2015) and women-only

centres (Alam-mehrjerdi et al., 2016). Such programs are typically run by individuals recovered from addiction and provide abstinence-based recovery programs predicated on a social model.

Efforts have been made to overcome the stigma and legal consequences associated with alcohol use. This includes through MOHME's plans to integrate alcohol treatment services into existing outpatient drug treatment centres and inpatient psychiatric hospitals (Noroozi et al., 2014). One reason for this was potential community intolerance for stand-alone alcohol treatment centres ((Noroozi et al., 2014); consultation). Also, PHC screening protocols incorporate alcohol into other substance use and general health assessments (MOHME, undated a, undated b, undated c, undated d, undated e, undated g). When rapid screening for alcohol risk is positive, 'Behvarz' (family healthcare workers) are then guided to provide feedback and referral to a mental health worker for complete screening and further referral as needed (MOHME, 2018b, 2018d, 2018e, 2018f).

Although the process of integrating alcohol-specific treatment services into existing drug treatment units started in 2015, progress has been slow. Apart from the 150 pilot centres, very few publicly-owned drug treatment centres have volunteered to participate in the initiative (consultation).

As the drug treatment centres were historically established primarily as centres for opioid treatment ((Ekhtiari et al., 2019); consultation) the integration of alcohol treatment was envisaged as a staged process. The government planned to start with a small number of enhanced substance use treatment services with capacity to deal with alcohol use disorders. One-quarter of the medical treatment for alcohol use disorders in each facility was designed to be provided by psychiatrists and the remainder by general practitioners. Initially, of the 150pilot private or public units that were to be trained and accredited, half were to be in the

capital, Tehran, and the other half across the country. The process of training and accreditation is described in Supplement 4. MOHME could then measure the benefit and the feasibility of this integration (Shariatirad et al., 2016). This capacity would then be gradually expanded across the country.

Once the pilot alcohol treatment services have commenced, they are to be regularly monitored by MOHME. MOHME recommends that services implement an online system for clinical data collection. Again, this system was developed primarily for data monitoring in opioid treatment programs (the 'Iranian Drug Addiction Treatment Information System' [IDATIS]) ((Farhoudian, 2018); consultation) and it is not yet operational for alcohol.

At the time of writing, 100 pilot services had been selected. However, several obstacles have left most of the new alcohol-focussed services suspended in the planning stage ((Farhoudian, 2018); consultations). According to consultation, one possible reason for this may have been community and religious organisations' concerns (sensitivity) on the issue of alcohol treatment. As a result, in 2016, MOHME decided to decrease the scale of the pilot outpatient alcohol treatment project to 20 centres in six provinces, excluding Tehran (consultation).

The alcohol-specific treatment policies are starting with the public sector and slowly extending to the private sector. For example, the design of the pilot study has indirectly involved the private outpatient units in its plan. This is because of the qualifications required for outpatient services that wish to develop an alcohol-specific unit that matches the private sector more. However, inpatient alcohol treatment wards are mainly established in government academic hospitals.

Stigma and the religious and legal prohibition of alcohol (for the Muslim majority population) was a key consideration in the design and delivery of treatment for alcohol use disorders in Iran. To overcome the potential legal consequences of alcohol treatment-seeking in Iran, MOHME obtained a special 'fatwā'[2] to decriminalise alcohol treatment-seeking. This is under a condition that the person presents themselves to any treatment facility rather than being caught consuming alcohol by the police (Shariatirad et al., 2016). Subsequently MOHME have used many channels, including newspapers, to convey this exemption to the public and to encourage them to seek treatment when needed ((Nwry, 2018); consultation). MOHME have also allowed the certified pilot centres to identify 'having an alcohol treatment unit' in their advertisements and signs (consultation).

In addition, to reduce stigma and for the purpose of prevention and public education, MOHME is collaborating with national television and radio services to provide educational programs, information and awareness-raising initiatives to the general population ((Hamshahri reporter, 2015; MOHME, 2013, 2018g; The Voice of the Islamic Republic of Iran, 2018); consultation).

***B.*** *Actors*

Alcohol-specific prevention and treatment policies and programs have been led by MOHME but have also included other decision-making bodies within government, and implementers (MOHME, 2018g). Since 2011, senior decision makers have come together in a 'National Committee for Alcohol Prevention and Control' (MOHME, 2018g).

MOHME contributes to the development and distribution of guidelines and protocols for prevention, screening, brief intervention and referral in primary care settings (MOHME,

[2] A fatwā in Islamic law is authoritative legal opinion that is given by a qualified Islamic scholar/ Islamic jurist on issues pertaining to the Sharia/Islamic law

undated f). MOHME also supports integration of alcohol treatment into the PHC program (MOHME, undated a, undated b, undated c, undated d, undated e, undated f, undated g), and is involved in monitoring and refining implementation of outpatient alcohol treatment into drug treatment units (MOHME, 2019). Finally, MOHME supports and provides advice, as needed, for most actors involved in alcohol prevention and treatment plans (MOHME, 2013, 2018g).

The Ministry of Education (MoE) is responsible for designing and distributing guidelines on community-based alcohol prevention (MOHME, 2013). This includes MoE policies to prevent the at-risk student from quitting school and efforts to provide appropriate management for such a student (MOHME, 2013).

For the university setting, the Ministry of Science, Research and Technology is responsible for researching and developing guidelines for early identification and care for university students with risk factors for alcohol misuse (MOHME, 2013) (MOHME, 2018g).

National organisations, such as the State Welfare Organization of Iran are responsible for the establishment of residential rehabilitation services as part of the third tier of treatment services [27]. International organisations, such as the WHO Office in Iran are stakeholders in data analysis. The WHO has also supported a project measuring the psychometric properties of a Persian version of the Alcohol Use Disorders Identification Test (AUDIT) ((Babor TF et al., 2001; Rafiemanesh et al., 2019); consultation). The United Nations Office on Drugs and Crime (UNODC) is listed as a stakeholder in alcohol health promotion in the national plan (MOHME, 2018g). UNODC have provided an alcohol health promotion sheet in Persian (UNODC Islamic Repablic of Iran, 2017), though it is unclear if, or how widely, this was distributed.

Due to the Islamic identity of Iran, religious scholars play an active role in many aspects of policy development and implementation (MOHME, 2018g). This is particularly true when considering alcohol consumption, as it is seen as a religiously unacceptable for Muslims and 'harmful' in general (Daneshgar, 2014). The Islamic Propaganda Organization is responsible for the religious and cultural charter to promote spiritual health. This organization is also responsible for examining current capacity for alcohol and drug use prevention and identifying at-risk groups in order to provide assistance (MOHME, 2013, 2018g). A separate focus on alcohol is a relatively new responsibility.

The policy content suggests that there is a strong influence of the health sector on the overall inclusion of alcohol as a public health issue, but the wording and focus reflects concerns of religious scholars.

***C.*** *Policy content*

We identified 13 government policy documents and guidelines related to alcohol through consultations and direct contact with MOHME (Table 2). The 'National Strategy for Primary Prevention of Addiction, 2010' (Hamied Serami et al., 2010b) was developed by the Iranian Drug Control Headquarters for the primary prevention of any illicit drug use. While alcohol is included in its focus (being illegal for the majority of the population), many prevention policies and programs included in it, such as life skills or parenting training, are not substance-specific (Hamied Serami et al., 2010b) (consultation). In addition, we identified three versions of 'The National Plan for Prevention, Treatment and Reduction of Alcohol-Related Harms' (Iranian National Committee for NCDs Prevention and Control, 2015; MOHME, 2013, 2018g) from 2011 onward. We also identified the 'Standards of Treatment Services for Harmful Drinking and Alcohol Dependence in Outpatient Units' ((MOHME, 2019); consultation).

----------**(Table 2: to be placed here)**----------

Prior to 2011, alcohol treatment was considered part of any substance use disorder treatment program (consultations) and no specific plans or aims were in place. However, from 2011 alcohol consumption and related issues were targeted explicitly. In 2013 the goal of the national plan on alcohol was to reduce the burden of alcohol consumption by 25% by 2025 (MOHME, 2013). This goal was subsequently revised to a more modest 10% reduction by 2025 in the 2015-2025 National Plan for Non-Communicable Diseases (Shokoohi et al., 2019).

The national plan for alcohol treatment aimed to provide effective and affordable responses to AUD. Accordingly MOHME introduced a multilevel system to provide prevention, treatment and harm reduction. The overall aim focuses on the training and accreditation of the alcohol treatment units within specialised community-based drug treatment centres in major cities (Hashemian et al., 2017). It also sets out plans to establish specialized inpatient alcohol treatment programs within psychiatric wards of academic hospitals in large cities (Table 1).

*Overall Iranian approach to alcohol treatment services*

The family healthcare workers in health-posts (urban) and 'Behvarz' in health houses (rural) are responsible for a 'rapid screening of substance use' using the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST). Anyone who screens positive is referred to mental health workers within CHCs ((MOHME, 2018e); consultation).

Each CHC includes at least one general practitioner and a clinical psychologist. The clinical psychologist is responsible for the comprehensive substance use disorder screening using Persian versions of ASSIST (Shariat SV et al., 2013) and the AUDIT-C (a 3-item tool which

includes the alcohol consumption questions of the AUDIT) and for referrals to the general practitioner (Rafiemanesh et al., 2019).

Where a person screens as positive for hazardous or harmful alcohol use, the individual receives a brief motivational intervention and follow-up by the clinical psychologist. Any person who is screened as positive for alcohol dependence is referred to a specialised addiction treatment centre.

Despite these efforts, it seems likely that comprehensive screening and brief intervention for hazardous and harmful alcohol use has yet to be successfully implemented into PHC ((MOHME, 2018e; Shokoohi et al., 2019); consultation).

International frameworks such as SAIMS assess integration of mainstream treatment with traditional healing practices. As AUDs have not been traditionally common in Iran there are no alternative or traditional treatments that can be integrated with PHC. According to consultation, some NGOs provide their own method for recovery from AUD. However, these are not officially endorsed approaches.

SAIMS assess presence of discrete day facilities for substance use treatment, where clients attend for a whole day at a time. These are not currently available in or planned for Iran (Table 1).

*Inpatient or residential treatment*

As per the WHO/UNODC recommendation, the third level of alcohol treatment in Iran includes specialised inpatient treatment wards or centres, and residential services (Table 1). The first

inpatient ward for alcohol treatment was initiated in 2013 in Taleghani Academic Hospital in Tehran. By 2014, one inpatient ward had been formed in each of three other provincial capitals (Isfahan, Shiraz, and Mashhad; consultations). These wards are located within psychiatric hospitals and deal with alcohol withdrawal syndromes which are anticipated to be severe (Supplement 1) ((Ali Kheradmand, 2018); consultations).

National guidelines set out that patients with AUD are eligible for residential alcohol rehabilitation only after withdrawal management in outpatient or inpatient treatment units. However, alcohol-focused rehabilitation in the residential substance use rehabilitation centres has yet to be implemented (consultation).

*Training professionals in relation to AUD*

Training on diagnosis and treatment of AUDs is not currently integrated into medical education (Table 1). However, such training is provided for any drug treatment centre that wishes to participate in the pilot study of outpatient alcohol treatment (Supplement 3) ((Farhoudian, 2018); consultation).

Clinician and service guidelines for screening, brief intervention and referral to treatment in PHC have been created and disseminated (MOHME, 2018a, 2018e, 2018f, undated a, undated g). The alcohol screening tools (including ASSIST and AUDIT-C) and related guidelines are authorised for use by family healthcare workers and mental health workers in PHCs in Iran (Table 2) (MOHME, 2018d, 2018e, 2018f, undated a, undated g). Screening is to be carried out among different age groups, including youth, and among vulnerable groups such as pregnant and breastfeeding mothers.

Similarly, treatment guidelines have been provided for specialised outpatient alcohol treatment units (MOHME, 2019). Additionally, educational resources have been developed, including the 'National Guideline on Treatment of Harmful Use and Alcohol Dependence' (Noroozi A, 2016). Separate clinical guidelines are also available for psychosocial treatment approaches, including for family education; acceptance and commitment therapy; motivational enhancement therapy; and mindfulness exercises (Supplement 3) (Farhoudian, 2018; Farhoudian A, 2017).

As the drug treatment clinics had a prime focus on opioid maintenance treatment, the shift to alcohol treatment produces challenges, including the need for staff training. As part of the national alcohol treatment plan, protocols are in place to guide physicians and psychologists in outpatient and in-patient units for these shifts in focus (Noroozi, 2018). Drug treatment units then need to apply for certification from MOHME to provide alcohol treatment as explained earlier.

There are national clinical guidelines on the use of the medicines to treat alcohol withdrawal and prevent relapse (Table 1). These medicines and their use are in line with global recommendations (Supplement 2) (Brathen et al., 2005; el-Guebaly et al., 2015; World Health Organization, 2012b).

*Mutual help and family associations*

Alcoholics Anonymous (AA) (Ajri & Sabran, 2011) is present in Iran as a nonprofessional mutual-support association. In addition, support is available for families through family associations such as Al-anon and NarAnon (Ajri & Sabran, 2011; Etemadi et al., 2015).

Engagement of family associations into alcohol plans is mentioned in the policy documents (MOHME, 2018g).

*Physical and financial resources of implementing alcohol treatment policies*

To our knowledge there has been no additional funding attached to alcohol treatment policy implementation (consultation). For example, data on funds allocated to integrate alcohol screening, BI and referral into existing, public PHC services are unavailable (consultation). As the outpatient specialised alcohol treatment units were to be established within existing private sector drug treatment centres, the cost of treatment in these services is borne by the client (consultation).

While the inpatient specialised alcohol treatment units are established in academic, public-owned hospitals, health insurance does not cover alcohol treatment (consultation). Accordingly the treatment costs in principle need to be covered by the patient. In practice however, most people who are admitted for inpatient alcohol treatment also suffer from comorbid psychiatric disorders and so may still benefit from insurance coverage for their hospital stay.

**Discussion**

This study is the first policy analysis on alcohol treatment in an MMC with any type of alcohol prohibition and so addresses a significant gap in the literature. It presents the contextual factors that influence alcohol treatment policies in Iran, the process of developing these policies, the actors who are involved and the overall content of the alcohol treatment policies. At the time of writing, it was less than seven years since the introduction of alcohol-specific treatment and related policies into Iran. Our findings draw attention to the planned activities and the current extent of implementation.

Iran's alcohol strategy is designed to have a multi-sectoral approach to prevention, reduction and treatment of alcohol's harms. There remains, however, a need to build capacity for alcohol policy development and for implementation of treatment.

The policy shift from a poisoning focus to one of AUD prevention and treatment was evident in this analysis. In broadening the focus, Iran has adopted most of the WHO recommendations for prevention and treatment of alcohol use disorders. However, these recommendations are designed for countries without alcohol prohibition and with far less stigma around alcohol consumption, such as western countries. The very different context in many MMCs may act as barriers to implementing some of these approaches, such as integration of BI into PHC in Iran. It is likely that relevant lessons can be learnt from the experience of attempts to implement screening, BI and treatment for illicit drugs in PHC of western countries (Islam et al., 2010; Mofizul et al., 2013).

The highly stigmatised status of alcohol makes it difficult to implement several aspects of global alcohol policy. Many global secondary prevention or early intervention approaches rely on communicating a safe level of consumption. However, MMCs have zero tolerance of alcohol consumption for their Muslim majority population. Conversely, individuals who consume alcohol, including non-Muslims (who do so legally), need to be informed about 'less harmful' consumption. Defining 'safer levels of consumption' and conveying this to the population is a significant challenge identified in this analysis.

This dilemma highlights the challenge of the dual legal status of alcohol consumption in many MMCs including Iran, which offer concessions for non-Muslims. In other MMCs there are defined regions in which many non-Muslims can legally consume alcohol (Al-Ansari et al., 2016). The WHO recommendations are designed for countries where alcohol policies are applicable for the entire population. Following best practice as recommended by WHO-SAIMS (World Health Organization, 2010b) or WHO global alcohol policy recommendations, is difficult for a country operating in such a unique policy environment.

To integrate treatment into overall alcohol policies, the first two requirements are the definition of 'cases' of alcohol use disorders and estimation of the proportion of cases that would seek treatment (Babor, 2010). Cases are expected to be few in Iran, as the estimated prevalence of alcohol dependence is only 0.6% (Mehrabi et al., 2019). Accordingly, the main national plan for treatment in Iran is to extend alcohol treatment first to major cities (MOHME, 2018g). Therefore the main focus has been on the establishment criteria for the universities or hospitals voluntarily providing treatment, rather than the definition or estimation of the prevalence of cases in those cities (Farhoudian, 2018).

In Iran non-Muslims, who can consume alcohol legally, are mainly citizens and are distributed around the country with no specific pattern (Statistical Center of Iran, 2016a). Similarly, the distribution of alcohol consumption across provinces does not follow a clear pattern (Nikfarjam et al., 2017); apart from the central and west provinces having been identified as having the highest consumption (Nikfarjam et al., 2017). This contrast with other MMCs such as the UAE, where less than 20% of the population are citizens (Al Ghaferi et al., 2017; De Bel-Air, 2015). Non-Muslim minorities are usually non-citizens and are concentrated in specific areas. If non-Muslims in the UAE wish to purchase and drink alcohol, they need to obtain a license, which means there is an estimate available of the number of drinkers. Even though the National

Rehabilitation Centre provides alcohol treatment in the UAE only a small proportion of the ethnic workforce can access that facility due to complicated legal processes for non-citizens (Al Ghaferi et al., 2017).

Previous studies have shown that alcohol treatment availability differs among MMCs and is often poorly defined (Babor, 2017). For example, in Saudi Arabia, which has total prohibition, there are few addiction treatment units (Dararehab, 2018) and only citizens are eligible to access treatment inside the country. Due to alcohol-related stigma, the majority of those in need (including citizens) voluntarily seek alcohol treatment overseas (Dararehab, 2018). This may be either in regular treatment facilities, such as those in the United Kingdom and the USA, or in treatment units specifically developed for Saudi citizens, such as in Thailand (Dararehab, 2018). However, such options are largely unavailable to those with alcohol dependence in Iran. Firstly, the recent sanctions have impacted Iran's currency such that the overseas treatment is very expensive (Deutsche Welle Reporter, 2018; Motamadi, 2019). Secondly, there are few countries to which people from Iran can travel without visas, and many countries restrict travel for Iranian citizens (The Passport Index, 2019).

In contrast in MMCs with a regulatory approach, such as Turkey, alcohol is only restricted in terms of age and driving limits (Al-Ansari et al., 2019). In Turkey alcohol treatment is publicly available (World Health Organization, 2012a).

Findings suggest that treatment seeking is encouraged in Iran (Nwry, 2018), both by removing punishment and via a telephone helpline. Anecdotally, there has been a noticeable increase in inquiries to these helplines. However, matching this demand with treatment service capacity has remained a challenge (Welle, 2018).

Our findings suggest that only 5% of treatment of substance use disorder is provided by the public health sector. Yet the new alcohol treatment plan focuses mainly on public facilities.

Extending the treatment plan to the private sector is a significant need (Nunes et al., 2017). Because of the training and criteria required for drug treatment centres to be accredited to commence integration of alcohol treatment into their services, all the units selected for the pilot study are from the private sector.

There is no data available on the extent to which the need to pay for care is a barrier to treatment seeking. It has been reported that alcohol consumption is more common among people of higher socioeconomic status in Iran (Mehrabi et al., 2019) and according to consultation, people seeking treatment for AUD are usually of higher status than those seeing treatment for other substances. It is unclear if this socioeconomic difference in treatment seeking is because illegally imported alcohol is very expensive, or if it is because poorer people cannot afford treatment and so do not attempt to present themselves.

Our analysis shows that the integration of alcohol brief interventions and treatment into PHC has yet to reach the implementation stage. Treatment in primary care appears to be less stigmatised than stand-alone addiction treatment services (Agerwala & McCance-Katz, 2012; Babor et al., 2017; Babor et al., 2007; Babor et al., 1989; D'Souza-Li & Harris, 2016) and so offers some advantages. However, even in non-MMCs, where alcohol use is more prevalent and less stigmatised, ongoing effort is needed to build general practitioners' confidence and willingness to provide alcohol-related care (Keurhorst et al., 2015). As already described, the challenges are even greater in MMCs (Matheson et al., 2018) such as Iran, where treatment services for opioid dependence, the main drug class used in Iran, have yet to be integrated into PHC.

*Limitations*

Because alcohol in MMCs is a sensitive topic, face-to-face consultations with local experts was deemed more appropriate than telephone consultation. This created constraints on the number of consultations that could be conducted in this unfunded study.

Because the national plan on alcohol policy is in its initial stages, the extent of implementation was sometimes unclear. A published evaluation of implementation is as yet unavailable, and data such as the number of patients being seen in the treatment units that have initiated alcohol treatment were not publicly available. Furthermore, a lack of centralised data collection has impeded ongoing monitoring at a local and national level.

Finally, the individuals who were consulted might not be representative of professionals in the sectors involved in alcohol treatment policy development and implementation. For example, those consulted might be more involved or more supportive of the policies than who were not invited to participate. Further research is recommended with systematic interviews of relevant stakeholders.

*Recommendations for policy or practice*

Given the dual legal status of alcohol and the practical challenges of developing alcohol treatment services, implementation of alcohol treatment services is likely to require long-term effort and evaluation. In parallel with this Iran would benefit from increased strategies for prevention, including public education. Such strategies can act as a bridge between alcohol consumption being a moral issue to alcohol consumption as a public health matter.

Ongoing studies of the prevalence of alcohol consumption and AUDs are needed to determine the number and location of treatment services. The integration of alcohol treatment education into the basic medical training and nursing programs would also help to increase the workforce and decrease alcohol treatment stigma. In the interim, increasing the availability of alcohol treatment through drug treatment centres in cities with a high proportion of non-Muslims may

be beneficial. Given the public resource constraints in Iran, engaging the private sector in delivering alcohol treatment services in urban areas is also likely to be beneficial.

Finally, this study shows that it is not necessarily the case that all recommended global alcohol treatment policies are implementable in MMCs. For those policies that are implementable, the process of implementation is harder and may need adaptation due to the unique policy context. The experience of implementing alcohol treatment policy should be monitored and evaluated carefully to build a clearer insight on how alcohol treatment might be implemented successfully alongside prohibition. As a result, the WHO may need to develop specific global alcohol policy recommendations for countries with various degrees of alcohol prohibition.

Overall, there is a need for the global community, including the WHO, to increase their understanding of the complexities involved in providing alcohol treatment in MMCs. This is important as approximately one-quarter of the world's countries are MMCs. Regional partnerships and cooperation are also needed to better understand the alcohol treatment services provided by each country and so identify gaps and the possible collaborative endeavours which may help overcome them.

**Conclusion**

Implementing alcohol treatment services has been challenging for Iran. Establishing new treatment programs might not be considered a government priority due to a low AUD prevalence and many financial and other pressures. Moreover, policy makers are implementing a treatment services with caution due to the stigma due to the prohibition of alcohol for the country's Muslim majority population. Barriers that prevent treatment seeking and treatment provision for AUDs are also factors that need to be addressed at the micro and macro level.

Support from international agencies such as the WHO could assist MMCs to develop appropriate and feasible services for their unique alcohol policy environment.

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**Table 1: Content and implementation of policies relevant to alcohol treatment in Iran; analysed using a matrix on alcohol treatment services derived from WHO-UNODC and WHO-SAIMS**

| Main areas/ sub- division | Policy content | Apparent implementation | Ref. |
|---|---|---|---|
| **1. Treatment services for alcohol and drugs** | | | |
| 1.1 Organizational integration of alcohol treatment services | Integration of SBIRT[1] in PHC[2]<br>o Rapid screening (alcohol use during last 3 months) in health houses/health posts (rural/urban areas respectively)<br>o Comprehensive screening (ASSIST+AUDIT-C) by mental health workers in community health centres | - Anecdotally implementation of screening and BI in PHC is in its early stages. No reports on availability, accessibility and coverage publicly available | ((MOHME, 2018d, 2018e, 2018f); consultation) |
| 1.2 Alcohol outpatient facilities | - Community-based services<br>- Effort to establish 150 alcohol-specific treatment units at existing drug treatment centres | - Only a few outpatient specialised alcohol treatment units, such as INCAS[3] academic clinic<br>- About 100 pilot alcohol-specific treatment units have been certified by MOHME. Due to administrative issues (e.g. lack of approving tariffs to provide services) patient recruitment has not yet started. | ((Farhoudian, 2018; Noroozi, 2018); consultation) |
| 1.3 Day treatment facilities | - Not available in Iran | | (consultation) |
| 1.4 Community-based alcohol inpatient units | - To provide more specialised care in inpatient settings | - The first inpatient services started to accept alcohol cases in 2013<br>- Two existing services in Tehran<br>- Mainly in psychiatric hospitals<br>- Three in other cities | ((Kheradmand , 2018); consultation) |
| 1.5 Community residential facilities | - A multi-sectoral approach to alcohol treatment is suggested, including NGO[4]s | - Community residential facilities generally exist for drug rehabilitation but facilities for alcohol have not been implemented yet | (consultation) |

| Main areas/ sub- division | Policy content | Apparent implementation | Ref. |
|---|---|---|---|
| 1.6 Specialized alcohol treatment facilities | - Pilot study of 150 community-based units<br>- Specialised inpatient treatment wards/centres<br>- A few academic clinics affiliated to universities | - More than 100 pilot alcohol-specific treatment units have been certified, however due to administrative issues patient recruitment has not started yet<br>- Only academic university clinics have started to offer alcohol treatment<br>- For example, INCAS[3] academic clinic, affiliated to Tehran University of Medical Sciences | ((Farhoudian, 2018; Hashemian et al., 2017; Kheradmand, 2018; MOHME, 2019; Noroozi, 2018; Shariatirad et al., 2016); consultation) |
| 1.7 Other residential facilities | - Non-medical, social model of care providing mutual-help groups | - It is not clear if these facilities have started to provide alcohol rehabilitation services | (consultation) |
| 1.8 Availability of psychosocial treatment in alcohol treatment facilities | - Psychosocial treatment is available in inpatient and outpatient facilities<br>- Each of 150 units to have at least one clinical psychologist<br>- 25% of the treatment provided in each facility to be provided by psychiatrists<br>- | - The workforce in pilot outpatient units include clinical psychologists.<br>- The clinical psychologists in the pilot centres had completed two training courses<br>- A specific psychosocial manual for alcohol use disorders has been developed by MOHME.<br>- For other inpatient and outpatient facilities these have been implemented | ((Farhoudian, 2018; Kheradmand, 2018); consultation) |

| Main areas/ sub- division | Policy content | Apparent implementation | Ref. |
|---|---|---|---|
| 1.9 Availability of medicines to treat withdrawal and to prevent relapse | - Diazepam and other medicines for withdrawal management<br>- A range of evidence-based relapse prevention medicines | - Several evidence-based medicines are in use for relapse prevention for alcohol dependence<br>o Naltrexone and acamprosate are first line<br>o Limited availability of disulfiram as second line<br>- Guidance to service providers on pharmaceutical treatment of alcohol dependence has been provided by MOHME | ((Kheradmand , 2018; Noroozi, 2018); consultation) |
| **2. Prevention and treatment of alcohol use disorders in primary health care** | | | |
| 2.1 Physician-based primary health care | - [5]Community Health Centres (CHC), offers prevention, screening and referral to treatment<br>- Staffed by a GP and one clinical psychologist<br>- Prevention, comprehensive screening and referral to specialised alcohol unit for treatment<br>- BI provided in PHC[2] for cases of hazardous and harmful alcohol use. For those who screen positive for alcohol dependence they are referred to physicians. | - Physicians in PHC[2] are involved only in diagnosis of alcohol use disorders among people who score positive for alcohol dependence<br>- If diagnosis confirmed, then referred to specialized treatment centres<br>- BI for alcohol has not been implemented in PHC yet | ((MOHME, 2018d, 2018f, undated a, undated g); consultation) |
| 2.2 Non-physician-based primary health care | - Prevention, initial screening and referral in health houses and health posts<br>- Comprehensive screening in CHC by the clinical psychologist | - Non-substance specific primary prevention programs, including on parenting of children and adolescents are implemented in CHC by clinical psychologists. | ((MOHME, 2018e); consultation) |

| Main areas/ sub- division | Policy content | Apparent implementation | Ref. |
|---|---|---|---|
| | | - It is not clear to what extent screening and brief interventions for problematic alcohol use has been implemented across the country | |
| a. Interaction with complementary/alternative/traditional practitioners | - Not present yet | | (Consultation) |
| **3. Number of human resources** | | | |
| 3.1 Number of human resources (in specialised services; others) | - Specialised services<br>o Outpatient and inpatient units: clinical psychologist, nurses and general practitioners<br>- Others<br>o CHC[5]s: General practitioner and clinical psychologist<br>o Health houses/bases: "Behvarz"/Family health care worker and nurses<br>- Each district has 5-6 CHC[5]s and each CHC[5] is responsible for several health houses/bases | - Specialised services haven't been broadly implemented yet but exist in a few academic clinics affiliated to medical universities<br>- A count of the number of health professionals in these centres was not publicly available | ((Farhoudian, 2018; MOHME, 2018d, 2018e, 2018f); consultation) |
| 3.2 Training professionals in alcohol use disorders | - Training for specialists in the 150 outpatient drug units on alcohol treatment<br>- Several clinical guidelines and educational materials for alcohol treatment have been developed | - Training is provided for GPs and psychologist before accreditation and certification of alcohol treatment units<br>- Most of these outpatient units are private<br>- Service packages distributed<br>- Limited training has been integrated into medical education | ((Farhoudian, 2018); consultation) |

| Main areas/ sub- division | Policy content | Apparent implementation | Ref. |
|---|---|---|---|
| 3.3 Mutual help and family associations | - Engaging family association into alcohol plans<br>- Groups such as Al-anon<br>- Alcoholic Anonymous (AA) | - AA started in Iran 17 years ago. Reports to have meetings in 26 out of 31 provinces<br>- Al-Anon exists, e.g.in Mashhad | ((Ajri & Sabran, 2011; Etemadi et al., 2015; Noroozi, 2018); consultation) |
| 3.4 Activities of mutual help associations, family associations and other NGOs[4] | - e.g. (Kongaraye Shast) Congress 60 that offer support/help for those with drug/ alcohol problems | - Their activities for alcohol treatment have not been officially endorsed | (consultation) |
| **4. Prevention and public education** | | | |
| 4.1 Policy and legislative framework for prevention | - "National Document on Prevention, Confronting, Treatment, Harm Reduction and Rehabilitation of Alcohol Use, 2018-2022" | - See Table 2 | (Damari et al., 2010; MOHME, 2013, 2018g; Shariatirad et al., 2016) |
| 4.2 Prevention programmes on alcohol | - Primary prevention<br>- To provide alcohol-specific prevention programmes, for example:<br>o parental interventions at CHC[5]s;<br>o educational interventions through the Islamic Propaganda Organization<br>o introducing prevention services into community-based organisations | - Implementation efforts are underway | (MOHME, 2018g; Shokoohi et al., 2019) |
| 4.3 Public education and awareness campaigns on alcohol | - Through:<br>o newspapers<br>o phone lines<br>o radio and TV programs | - Implemented<br>- Efforts in place to create further campaigns on alcohol | ((Hamshahri reporter, 2015; MOHME, 2013, 2018g; The Voice of the Islamic |

| Main areas/ sub- division | Policy content | Apparent implementation | Ref. |
|---|---|---|---|
| | | | Republic of Iran, 2018); consultation) |
| **5. Links with other sectors** | | | |
| 5.1 Links with other sectors: formal collaboration | - Many organisations are involved/collaborate in action on alcohol; e.g. the State Welfare Organisation of Iran, Police, Ministry of Sciences, National TV & Radio and Ministry of Education | - Active | ((Damari et al., 2010; MOHME, 2013, 2018g; Shariatirad et al., 2016; The State Welfare Organisation of Iran, 2012); consultation) |
| 5.2 Links with other sectors: activities | - Policies cover links with other sectors such as:<br>o The Traffic Police of NAJA[6]<br>o Islamic Republic of Iran Broadcasting<br>o State Welfare Organisation of Iran<br>o Ministry of Education<br>o Other | - Traffic Police of NAJA: implementing breath testing and referral<br>- Islamic Republic of Iran Broadcasting: awareness raising and advocacy<br>- The State Welfare Organisation of Iran has been initiated through the government Centre for the Prevention and Treatment of Addiction<br>- Ministry of Education: efforts to implement screening, awareness and prevention via the | ((Damari et al., 2010; Mental Health Social Health and Addiction Office, 2012; MOHME, 2018g; The State Welfare Organisation of Iran, 2012); consultation) |
| **6. Monitoring and research** | | | |

| Main areas/ sub- division | Policy content | Apparent implementation | Ref. |
|---|---|---|---|
| 6.1 Monitoring alcohol services | - To gather data and to monitor treatment in the 150 pilot outpatient treatment units, the MOHME designed an online system (IDATIS[7]) | - IDATIS[7] has not yet started<br>- Each of the established alcohol treatment units such as INCAS[3] has its own ongoing monitoring programs | ((Farhoudian, 2018); consultation). |
| 6.2 Alcohol and drug research | - To increase research on alcohol in all sectors | - Active research is occurring in many sectors and associations<br>- e.g. MOHME, Universities, research institutes such as INCAS[3]<br>- Annual scientific conference | ((MOHME, 2013, 2018g); consultation) |

SBIRT[1]: Alcohol screening, brief intervention, and referral to treatment; PHC[2]: Primary Health Care; INCAS[3]: Iranian National Centre for Addiction Studies; NGO[4]: Non-governmental organisation; CHC[5]: Community Health Centre; NAJA[6]: Law Enforcement Force of the Islamic Republic of Iran; IDATIS[7]: Iranian Drug Addiction Treatment Information System

**Table 2: List of relevant policy documents identified**

| Policy document | Reference |
|---|---|
| National Strategy for Primary Prevention of Addiction, 2010 | (Hamied Serami et al., 2010a) |
| Comprehensive Program for Prevention, Treatment and Reduction of Alcohol-Related Toxicity 2011-2015 | (Damari et al., 2010; Shariatirad et al., 2016) |
| Clinical guidelines for physicians and non-physicians on drug use disorders for:<br>- Prenatal care, pregnancy, delivery, birth and breastfeeding<br>- Youth, middle aged and elderly | (MOHME, undated b, undated c, undated d, undated e) |
| Clinical guidelines for physicians and non-physicians on alcohol use disorders for:<br>- Prenatal care, pregnancy, delivery, birth and breastfeeding<br>- Youth, middle aged and elderly | (MOHME, undated a, undated g) |
| Physician and Non-physicians Substance Use Disorder Guide | (MOHME, 2018e, 2018f) |
| Mental Health Worker Substance Use Disorder Guide | (MOHME, 2018d) |
| Health Volunteer Substance Use Disorder Guide | (MOHME, 2018c) |
| National Policy Document on Preventing, Confronting, Treatment, Harm Reduction and Rehabilitation of Alcohol Use, 2013- 2017 | (MOHME, 2013) |
| National Policy Document on Preventing, Confronting, Treatment, Harm Reduction and Rehabilitation of Alcohol Use, 2018- 2022 | (MOHME, 2018g) |
| National Action Plan for Prevention and Control of Non-Communicable Diseases and the Related Risk Factors in The Islamic Republic of Iran, 2015–2025 | (Iranian National Committee for NCDs Prevention and Control, 2015) |

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# Chapter 7

# Discussion

# Chapter 7: Discussion

## Introduction

This thesis has explored alcohol policies in Muslim majority countries (MMCs). Iran's alcohol policies were analysed as a specific example of a MMC with some policy initiatives targeting alcohol use and the treatment of alcohol use disorder (AUD). Due to the Islamic prohibition of alcohol, there is high stigma around this topic, and this has resulted in a dearth of literature on alcohol consumption, alcohol-related harms and alcohol policies in MMCs. Accordingly, after setting the scene with the history of alcohol in MMCs, this thesis has identified some of the existing alcohol policies in MMCs, including the overall extent of civil alcohol prohibition. This was done with the objective of informing alcohol policy in MMCs globally.

The three studies in this thesis have been the first of their kind to introduce and analyse civil alcohol policies in MMCs with prohibition. According to Michalak and Trocki (2006) [1], there had been close to zero research presentations on alcohol in MMCs in global conferences, such as Kettil Bruun Society for Social and Epidemiological Research on Alcohol (KBS), prior to this work. In addition to filling the gap in the scientific literature, the publication of the first study (Chapter 4) and presentation of findings of Chapters 4-6 at conferences, has contributed to a rise in global attention and awareness on this issue. For example, the findings of this thesis overall were presented in KBS 2018, in a panel session titled "Alcohol Policies in MMCs" [2].

MMCs account for approximately 25% of countries around the world, and as such, the limited support for alcohol policy development is a significant concern. Some MMCs are located in the Asia Pacific, Europe or Africa but the majority are in the Eastern Mediterranean Region (EMR). The geographic spread highlights the diverse historical, geographical and social characteristics of MMCs. However, they all share the Islamic religion that prohibits alcohol.

In this thesis four different categories of alcohol policy approaches by MMCs were identified: (1) total prohibition where alcohol is banned for all; (2) prohibition with concessions, where non-Muslims are exempt; (3) a restriction policy, where non-Muslims are exempt but some districts have a total ban and (4) a regulation policy, where alcohol is permitted for all and there are regulatory laws, such as minimum drinking age. Some of the historical, agricultural and other differences have contributed to shaping these policies. However, many of these minor alcohol policies, some of which are under an umbrella of prohibition, are not detectable by the global alcohol policy measures.

In Chapter 5, the analysis on alcohol policies in Iran, as an example of an MMC, has shown that this country implements many of the components of the WHO Global Strategy to Reduce the Harmful Use of Alcohol (2010) [3], even though it is under the umbrella of prohibition. Many relevant contextual factors, such as stigma and limitations in resources were identified. Each has played a significant role in shaping the implementation of the nine identified global recommended areas of alcohol policy in this country. As it will be discussed later, this reflects many similarities to other MMCs.

The global analysis in Chapter 6 also highlighted that due to the Islamic ban on alcohol and the dearth of alcohol-related literature, the characteristics of health services' response to unhealthy alcohol use (i.e. drinking above recommended limit or alcohol use disorder) in MMCs is not clear. Using Iran as a case study this thesis has analysed the alcohol treatment policy approach in one MMC with a broader alcohol policy approach of prohibition with concessions. This research also highlighted several issues which arise in other MMCs.

This body of research has exemplified a number of areas where MMCs need regional and global support. It also raises the question of what approaches we needed to improve the status of alcohol policies in MMCs.

**Implementation of Islamic alcohol prohibition in MMCs through history**

As this thesis sets out (Chapter 4), before Islam the Arab society had alcohol consumption as a key focus for social gatherings. Alcohol was consumed on a daily basis and was used to celebrate victories and special occasions [4, 5]. After the rise of the Prophet Mohammed, as has been reflected in several verses of the Holy Quran, alcohol was prohibited in three main stages over the years of the Prophet's life.

For non-Muslim minorities in a Muslim majority society, exceptions were implied. For example, for any Muslim there are obligated payments such as "Zakat" and "Khoms" that must be paid for the Islamic governors or scholar (when it is not an Islamic government). Each is measured using a very specific economic measure and the payments are distributed in specifically defined circumstances and to people in need. This was a very similar concept to taxes imposed by modern governments. As an Islamic law principle, for non-Muslim minorities, such as Christians or Jews, similar tax-like payments were paid to the government. This acted rather like a contract, wherein these individuals are free to follow their own practices, such as alcohol production or alcohol consumption. However, due to the contradiction with the majority beliefs, they should not consume in public [6-9]. In addition, any money that came from selling alcohol or any trade related to alcohol is called "Sohoq", which means prohibited money that no Muslim can own. However, non-Muslims can trade in alcohol and spend its money as their own, even as a dowry for a bride [6-9]. Therefore, alcohol policy becomes an ethically complex issue in MMCs, even today.

On a global level in modern times, alcohol has increasingly been viewed from a perspective of health and other associated harms. However, this modern public health perspective on alcohol is not typically the main driver to avoiding alcohol consumption in many MMCs. Even though the alcohol refusal rate is high among the population of MMCs [10], the extent to which this is due to alcohol's health effects is questionable. In many (non-Muslim majority) societies, alcohol consumption is considered a norm, and it has obtained many associations and connotations, including as an expression of love. For example, couples at a wedding may each drink a glass of champagne with their-arms intertwined as a stylish celebration of happiness [11]. However, in MMCs the Islamic prohibition has greatly influenced the perspectives on alcohol consumption and numerous social stigmas among Muslims regarding alcohol consumption have developed over time.

In some MMCs when we look at the cultural practices, we can see that some of the pre-Islamic cultural aspects of alcohol consumption have not really ended [12]. In the Arab world before the onset of Islam, alcohol and alcohol intoxication were part of mainstream cultural practices. The overall principle of the ban on alcohol consumption has been accepted and strongly emphasised by Islamic scholars through the Quran's verses and the Prophet's teachings and statements "Sunnah". However, the day-to-day attitude of the people differs on many occasions throughout the history of MMCs [13]. After Islam spread to other countries and different states of "Khalifs" and "empires" formed (as political states). Alcohol remained a part of life of the higher socioeconomic classes as an exception and "undercover" yet common practice [14]. For example, in the latest Islamic empire, the Ottoman Empire, alcohol was consumed secretly within the governing class [13, 15]. This perceived exemption from the rule was not as visible as for the general population.

Much historical literature and poetry has highlighted this issue, leaving alcohol consumption as an unwanted yet persistent activity through the Islamic history. However, the presence of alcohol in Arabic and Persian literature may be used to express the author's state of love or worship and does not necessarily refer to actual consumption. For example, one of the 18th century Islamic scholars, Mohammed Saeed Almahboubi, has described red wine in his famous poetry in a way that no one had described it before. As a result, people who knew his poems but did not know him suspected he was drinking. However, when he was asked he used to answer with his famous sentence "By God, I have never tasted wine" [16].

Other cultural uses of alcohol remained in some MMCs, for example, consuming a traditional alcohol-based food or drink on a special occasion. For example, in some areas of Morocco, there is a traditional alcohol-based drink that is consumed [1]. Malaysia is another example, where during the era of the total Islamic ban on alcohol (during the sultanates of peninsular Malaysia and before the Portuguese and Dutch arrival in the16$^{th}$-17$^{th}$ centuries) in the districts of Sabah and Sarawak (only), rice wine "tauk" was still consumed to celebrate the harvest season [17].

On the other hand, some historical events have contributed to ongoing alcohol consumption in MMCs. For instance, after British colonisation of Malaysia, workers from India and China were transported to the country to work in the mines [18]. Malaysia gradually became a multi-racial society, made of Malays, Indians and Chinese. Alcohol was imported from Europe to encourage mine workers [18]. Later alcohol was made locally from palm trees, and it started to be one of the most important economic resources for the country [19].

This finding also relates to Iran as an MMC. In regards to alcohol production in the various stages of the Ottoman Empire, for example, even with the ongoing Islamic ban on alcohol

consumption, alcohol production had not been prohibited by civil law [20]. Even though alcohol consumption was not prohibited in the Shah era (before 1979), it was stigmatised and was not considered as an acceptable act among most Iranians. Alcohol was said to have been consumed mainly among the high socioeconomic or royal class.

In Iran, prior to the 1979 Islamic revolution, Shiraz was known for its alcohol production and distribution to the Middle East. However, the analysis of hard-copy newspapers before the revolution shows that there were no advertisements on alcohol (Chapter 5). There was also no sign of alcohol in newspaper stories, except in cases where there were accidents in bars. A range of other psychoactive substances were mentioned, including shisha. Cigarettes were mentioned intensively in the news articles, and policies around smoking were discussed. This is a similar case to other MMCs where discussing tobacco is much less stigmatised and so tobacco use has been for more researched than alcohol [21, 22].

This situation is reminiscent of the earlier historical situation in regard to alcohol consumption in the Muslim world. Higher socioeconomic people still consumed alcohol and bars were established however, culturally and religiously drinking was not accepted. Nonetheless, nowadays, the main explanation given for this mixed attitude to alcohol is that it is a reflection of a modernised, westernised lifestyle. Many studies from MMCs have reflected the same ideology and indeed, youth reportedly use alcohol consumption as a culture-breaking and westernised tool to attain or demonstrate superiority [23-25].

All these historical factors and the complex set of attitudes towards alcohol signify the challenge of civil alcohol policy development. This is in addition to the effect on the underreporting of the prevalence of alcohol consumption in MMCs through history. In addition

to that, as it will be explained later, many recent challenges have been added to the development of civil alcohol policies in MMCs.

**Challenges MMCs face in alcohol policy and potential increases in consumption**

Overall, MMCs today have a very low prevalence of alcohol consumption and associated health issues. Nonetheless, compared to two decades ago, the prevalence is increasing [26]. These changes, and the recent influences such as globalisation and economic growth, have triggered the development of civil alcohol policies in MMCs.

As well as the high stigma around alcohol and a historical reliance on the existence of a low prevalence of alcohol consumption in MMCs, a number of factors have challenged policy makers. These have set off alarms for the need to introduce evidence-based and tailored alcohol policies. In MMCs this is particularly important given the current political instabilities and social turbulence among many MMCs, such as the rise of the "Arab Spring". These events reflect an increase in many external and modern forces on culture in MMCs. This might include the effect of social media on increasing exposure to culturally non-acceptable behaviour such as alcohol consumption [27]. This is particularly true, knowing how effective the social media was on the dissemination of revelations against decades-long regimes [28-31]. On the other hand, globally, these channels of media have been used to promote alcohol consumption to youth by the alcohol industry [32]. In addition, this exposure to alcohol at a young age increases the risk of future consumption [33, 34].

Having undefined regional alcohol policies in neighbouring MMCs can introduce further challenges for these countries. For example, Turkey implements a ban on any alcohol advertisements or promotions on TV series or other media [35]. However, when Turkish series are made for an external audience, including when they are translated into different languages

for the surrounding MMCs, these laws are not implemented [36]. This is particularly hazardous after the Arab Spring, after which the media has had limited surveillance in the Middle Eastern countries [31]. Accordingly, all age groups including young aged have been exposed to all media.

The weak infrastructure of research in many MMCs and the newness of the concept of civil alcohol policies together raise concerns with respect to regulation of alcohol consumption, availability and trade. For example, overall research on addictions in the Arab countries started in the 1980s, but rarely contained alcohol-related research [37]. This is particularly important as the experienced alcohol industry is seeking new markets in developing countries [38, 39]. For example, the influence of the alcohol industry on increased alcohol availability in Africa has been documented [40].

In addition, the influence of alcohol industry on legislation is recognised globally [41-43]. However, this effect might be even more of a concern in countries with less experience in alcohol policy development, such as MMCs. This is evident in the partnership of the industry with the governments of four African countries (neighbours of MMCs) in developing their national alcohol policy plan [44]. It has been seen that the industry drafted these policies where, as might be expected, its own benefit has been prioritised over the public health benefit [38, 44]. Examining such influences has not been given the required attention in MMCs.

Moreover, in many MMCs, civil alcohol policies are poorly defined and difficult to identify. Often to understand the approaches used in MMCs there is a need to explore all possible sources of information, including non-scientific literature. This is particularly the case, because alcohol drinking is associated with level of religiosity among Muslims ([1, 45] and by

observation), and so little research is conducted on the issue and little information is provided publicly by the governments on their existing policies.

On the other hand, in the global alcohol policy tools, such as those designed by WHO [3], the unique approaches used by MMCs toward alcohol policies are not defined. Accordingly, the policy approaches are not addressed or reflected in WHO overviews of global alcohol policies [46, 47]. For example, the different laws for Muslims versus non-Muslims in regard to alcohol consumption are not captured [47]. This is because most of these global tools are designed for countries with policies similar to those of Western developed countries, where prohibition is not implemented [3]. This leaves MMCs with a lack of international guidance on civil alcohol policies.

*Alcohol availability in MMCs*

Overall, as explained earlier, the trade of alcohol is prohibited in Islam as is the money earned from such trade. However, in different political situations this vision has been reformed. For example, in the Ottoman empire the money that came from alcohol was initially considered as illegal [20]. However, later authorities adopted a form of taxation on alcohol that was produced by local non-Muslims and on the drinks that were sold by foreign traders inside the empire [20]. Despite the alcohol consumption ban, trade was not prohibited.

Nowadays there are some legal channels of alcohol import into MMCs, such as in the United Arab Emirates (UAE). A large amount of this alcohol is then re-exported to the surrounding MMCs, where Islamic alcohol prohibition is implemented in various ways [48]. Some MMCs such as Turkey, apart from legal import of global brands of alcohol, have local production of alcohol [35]. In addition, many alcohol producers in Turkey prefer to export their products to other countries due to the high local- taxes [35]. On the other hand, there are unclear policies

in the region around monitoring or regulation of these channels of alcohol supply. Also, many of these MMCs have no defined policies on pricing on alcohol, nor do they have allocated taxes.

Because of the existing prohibition on alcohol trade and consumption in many MMCs, illegal cross-border entry of global brands of alcohol is challenging in many aspects [46]. This includes the instability of some governments and the resulting limited border supervision that not only affects the country itself but also puts extra pressure on surrounding countries [49], for example, Iraq and Syria [50]. This is particularly significant when the global alcohol industry is taking an approach of expanding their market by focusing on the harms from illegal and informal distribution of alcohol [51].

On the other hand, the lack of a channel of legal alcohol supply in some MMCs has contributed to the increased price of illicit, branded alcohol. The majority of people who consume alcohol might not be able to afford this. Accordingly, home-made alcohol is a real concern for many MMCs [52-56]. This type of alcohol is more affordable for all socioeconomic classes [57] but carries the risk of methanol poisoning due to incorrect distillation [58, 59]. Heavy drinking is often common amongst drinkers, and these drinkers prefer cheaper alcohol [60].

The issue of home-made alcohol is particularly of a concern in the case of MMCs like Iran, where dual policies on consumption exist. Non-Muslims are allowed to consume and trade in alcohol but have no legal importation of alcohol (see Chapter 5). This means that the chief source of alcohol for the minority non-Muslims is home-made alcohol. There are no policies on supervision on alcohol production to help to minimise outbreaks of methanol poisoning.

This situation is equivalent to the supply of illegal drugs of varying quality and safety in high income developed countries like Australia. Due to the criminalisation of illicit drugs, there is an ever-present risk of impurities and so toxicity, infection or other harm. There are also wide variations in potency with risk of overdose. This is one key driver to the drug decriminalisation movement in Western countries [61]. The ideology behind this is to reduce harm associated with illegal drugs. It is viewed that building legal availability and controlling the purity and pricing of drugs is more helpful than leaving consumers at risk of illegal and toxic drugs.

*Stigma associated with alcohol*

Social refusal of alcohol consumption is a unique characteristic of MMCs. Despite the slight increase in consumption and associated harm over recent years, this still acts as a barrier against increased alcohol-related harm. The same can be observed when religious prohibition was extended to tobacco. For example, as the majority of the EMR's countries are MMCs, an Islamic prohibition was obtained to minimise the increase in prevalence of tobacco smoking in this region. This semi- to total prohibition on tobacco was obtained as a result of the WHO Regional Office for the Eastern Mediterranean (WHOEMRO) consulting with several well-known Islamic scholars to generate an updated Islamic "fatwā"[3] on tobacco [62, 63].

If we consider other drugs or tobacco in Western countries, we can notice that increasing the taboo around these harmful substances can lead to decrease in usage and harms. However, this stigma acts as a double-edged sword where in one hand it encourages people to not consume harmful substances but may also discourage treatment-seeking when needed. Therefore, one of the goals that policymakers need to consider in MMCs is to how reduce stigma around alcohol consumption and place it as a public health issue rather than as purely a religious issue.

[3] A fatwā in Islamic law is authoritative legal opinion that is given by a qualified Islamic scholar/ Islamic jurist on issues pertaining to the Sharia/Islamic law

At the same time, they need to invest in addressing the social behaviour of alcohol consumption to help to maintain a low prevalence of consumption and harms.

For instance, after the development of the stand-alone alcohol policy in Iran (2011), Iran's approach toward reducing the stigma around alcohol has been growing (Chapter 5 and 6). Despite the alcohol prohibition for Muslims, the government has taking major steps, including increasing public awareness on alcohol consumption and encouraging those with AUDs to seek treatment when needed. This has been done through newspapers and various public broadcasting media. In addition, there were efforts, including obtaining a "fatwā"[4] to allow Muslims to seek treatment for unhealthy alcohol consumption without legal costs.

**Civil alcohol prohibition in MMCs**

Approaches to alcohol policy in MMCs range across a spectrum from total prohibition through to European-style regulation. However, most of the approaches that have a degree of prohibition are recorded as 'total ban' in the WHO country profiles [46]. Despite this, countries such as Saudi Arabia and Iran differ markedly. Saudi Arabia, like Libya, implements total prohibition of alcohol consumption. Production and trade are banned for all people and everywhere in the country. In contrast, Iran has allowed minority non-Muslims to drink alcohol but not in public. In Chapter 4, four distinct approaches toward civil alcohol prohibition in MMCs were identified. These each implement Islamic prohibition in different ways. These are: total prohibition, prohibition with concessions, restriction, and regulatory policy approaches. This varying nature of alcohol prohibition within MMCs has shaped many related issues, starting from attitudes towards alcohol, through to research on this topic, and treatment availability and implementation within different MMCs. Accordingly, this thesis provides

[4] A fatwā in Islamic law is an authoritative legal opinion that is given by a qualified Islamic scholar/ Islamic jurist on issues pertaining to the Sharia/Islamic law

support for a more nuanced approach to classifying alcohol policy in MMCs, with implications for global alcohol policy.

Some MMCs have experienced a range of historical factors and as a result have built a more complex approach toward alcohol policy. Countries such as Oman, UAE, Kuwait and Malaysia all are categorised as having alcohol restrictions (Chapter 4). However, the definition and implementation of this varies. For example, Malaysia, with 61% of the population being Muslim, is officially an Islamic nation and Islam is the state religion [18]. However, as explained earlier, Malaysia is a multi-ethnic country and has legal pluralism [64]. For example, it has three legal systems, including three court systems, according to the religion of its population [64]. This has led to application of different policies on alcohol in different provinces. In regions that have a high percentage of Muslims, alcohol prohibition is implemented [65].

On the other hand, the UAE with close to 100% of its citizens being Muslim, is a high income developing country with a population of around 9.4 million [66]. Apart from oil and natural gas, the economy of the country is highly reliant on the foreign workforce. More than 70% of GDP comes from the non-oil sector [66]. A policy allowing full foreign business ownership and nil taxes in free-trade zones means that investors from around the globe are attracted to the UAE. This adds to the country's global significance. Apart from the 14 free-zones in Dubai, UAE has a large number of them across the country [66]. For example, 7% of the employment in Dubai belong to the Jebel Ali free-zone which has a total workforce of 170K [67]. This is in addition to Dubai being one of the most luxurious tourist attractions in the world. Therefore, it contains different ethnic groups and less than 20% of its population is Emirate citizens [68].

The UAE is made up of seven Emirates, and it is a confederal state with federal laws applying to all Emirates and state-laws regulating specific matters, as long as these do not conflict with federal laws. The judiciary system is federal and in two Emirates (Abu Dhabi and Dubai) an independent system exists, applying both federal and state laws [69]. In regard to alcohol policy, despite not having alcohol consumption as a social norm, UAE has developed policies that prohibit its Muslim citizens from drinking but allow for its foreign work-force and visiting tourists to have access to alcohol in many Emirates [70]. Non-Muslims may consume alcohol but are not permitted to be under the influence of alcohol publicly, nor while driving [71].

Countries with a regulatory approach are described as any country that has alcohol consumption, trade and production legal for all, except with some regulatory policies such as an age limit and drink driving laws. For example, Turkey with 98.6% Muslims, is one of these MMCs [72]. After the end of the Ottoman Empire (1926), in which Islamic laws were strictly implemented, the secular laws have completely been separated from the Islamic rulings [73]. Turkey is part of the European region [74] in alcohol policy development. But still there are some policies implemented in Turkey as an MMC that are not detectable using the global policy definitions. For example, in approximately 100 meters radius around mosques there can be no alcohol sales [35].

According to the WHO country profile, Iraq's alcohol policy has been recorded in a way that fits it into a regulatory approach [75]. However, Iraq, as with many MMCs, is an unstable country and there is a frequent change of approaches including alcohol policies [76]. Such change introduces challenges in that many policies are not necessarily implemented or even implementable. For example, many cities in Iraq consist of highly religious societies where no alcohol is permitted [77]. In other cities, where alcohol is sold many bottle shops are targeted for bombing, due to the presence of extremist Islamists and civil war [78].

Surprisingly only five MMCs, that is 10% of such countries, have total civil prohibition. Prohibition with concessions (e.g. for non-Muslims) is adopted by 10 MMCs. In addition, 17 and 11 MMCs have restriction and regulatory policies, respectively. The overall policy approach of seven countries was not able to be identified due to unavailability of conclusive information.

The diversity of approaches toward alcohol policies among neighbouring MMCs can introduce challenges. For example, it is observed that people from Saudi Arabia, where there is a total ban on alcohol, travel to Bahrain, a MMC with restriction policies on alcohol, to consume alcohol [79, 80]. This challenge is in addition to the illegal trade and import of illegal alcohol across borders. For MMCs, there is a need for a conversation in regard to alcohol policies on the regional and global level.

**Civil prohibition and the WHO Global Strategy to Reduce the Harmful Use of Alcohol**

The WHO Global Strategy to Reduce the Harmful Use of Alcohol, sets out 10 recommended policy areas for countries to adapt based on their need. The first WHO global recommendation focusses on written national alcohol strategies, monitoring and evaluation. Only 12 out of 50 MMCs were identified to have a written national policy on alcohol. This leaves more than 75% of MMCs with no written alcohol-specific national policy document [81]. This is a direct indicator of the weak or scarce attention to development of alcohol-specific policies in MMCs.

Using Iran as a case study, this country's alcohol policies were examined in Chapter 5. This was done by comparing them to the ten WHO recommended global strategies aimed to decrease the harm associated with alcohol [3]. Each recommended area has been designed to contain several interventions. For this analysis, to highlight the unique aspects of alcohol

policies in an MMC, a health policy analysis framework was used to explore content, context and actors of the policies around alcohol.

Since 2011 the Iranian government has developed a written national plan on the limitation, prevention and treatment of unhealthy alcohol use. This includes the concession that permits non-Muslims to make, sell and drink alcohol, but not in public. Nevertheless, this approach has not been detected so far in the WHO's description of countries' alcohol policies, and instead a 'total ban' is recorded [81]. Iran's policy might have not been identified because it does not match the standard Western world definitions used in the global alcohol policies on national strategies. One reason for this might be the absence of prices and taxes on alcohol in the country, particularly for non-Muslims.

In addition, in the WHO report on Iran's country profile in all subsections, as well as the overall description of policies "total ban" is written [46]. However, the current analysis has shown that most of the 10 recommended policy areas by the WHO Global Strategy to Reduce the Harmful Use of Alcohol (2010) [3] have indeed been implemented in Iran. However, there was a distinctive definition of each. The cultural context of alcohol in Iran, as in many other MMCs, means that these policies require adaptation to be implemented. Accordingly, WHO and other global authorities need to be alert to the fact that these advances have been made in Iran and may have been made in other MMCs.

In Iran, prior to 2011, alcohol was included as part of policies governing any psychoactive substance [82]. However, after 2011 alcohol has been given extra attention by the government due to increased incidence of methanol poisoning and alcohol-related harms. This has resulted in development of a national alcohol action plan. It is evident that the recent vision in Iran is shifting toward presenting alcohol as a public health issue rather than as a criminal act.

However, a fine and unclear line remains between the two perspectives. At the same time, Iranian authorities emphasise that any consumption of alcohol is hazardous and eventually could lead to associated harms, for example, intoxication, injuries, violence, dependence or methanol poisoning. This draws some parallels to government approaches to illicit drugs in countries such as Australia, where policies relating to treatment, harm minimisation, and criminalisation are all implemented simultaneously [83]. Many Western health professionals have pointed out that alcohol causes more harms than substances defined as illegal in their countries [84, 85].

In MMCs such as Malaysia, because non-Muslim minorities are localised and the government and health supervision are centralised, there is less stigma around communicating about alcohol's harms in districts where there is no prohibition. For example, parts of West Malaysia, such as Sabah, consist of approximately 30 various ethnic groups [86]. These areas mostly have alcohol consumption as part of their traditional practice [87, 88], and alcohol consumption, production and trade are not prohibited. Accordingly, this has led to a higher prevalence of risky drinking among Bumiputera Sabah [89]. Overall, the health response toward reducing alcohol-related harm was planned through the formation of an Intervention Group for Alcohol Misuse (IGAM). This is designed to use evidence-based alcohol health promotion strategies to empower communities to help in reducing alcohol-related harm through a sensitive, culturally appropriate pathway [88]. However, In Iran, as there are exemption policies for a subpopulation (non-Muslim) rather than for geographic areas, this approach cannot readily be implemented.

**Health service response**

Health service response is the second recommended area of the Global Strategy to Reduce Harmful Use of Alcohol [3]. To explore this approach in MMCs, this thesis has presented a policy analysis on treatment policies in Iran.

This study highlights several contextual factors in regard to the alcohol treatment policy development, implementation and treatment seeking in MMCs. These include the challenge of the dual policy towards alcohol consumption for Muslims versus non-Muslims in MMCs with either restriction or concession approaches. In addition, the tension between alcohol consumption as a criminal act versus alcohol consumption as a public health risk poses challenges. Furthermore, regardless of their alcohol policy type, stigma is likely to be barrier to treatment seeking and provision in all MMCs. In several MMCs resources provided by either private or public sectors are also relevant.

Since 2011, Iran has seen its national plan shift from a focus on alcohol poisoning as a public health issue in Iran. The focus has now shifted to include prevention, reduction of harms and treatment of all unhealthy drinking and related harms. The initial focus solely on methanol poisoning perhaps points to the sensitivity around alcohol in the country and a way of slowly overcoming this.

Iran's national alcohol policy has been designed to implement a multi-sectoral approach toward prevention, reduction and treatment of alcohol's harms. The target to reduce alcohol's harm by 2025, was initially 50% [90]. That goal was then reduced to 10% in 2015 [91]. This reflects the challenges Iran is facing in implementing alcohol policies. Iran may still be discovering the best approaches to implementing alcohol-treatment in the context of prohibition. Following the best practices designed for countries with different policy contexts, such as European countries, is not always directly applicable.

The overall approach towards alcohol treatment in Iran has been designed, as recommended by the WHO global strategies, to involve several sectors in prevention programs, screening, referral and treatment. For example, prevention programmes on alcohol have been planned

through interventions at CHCs, educational interventions through the Islamic Propaganda Organization and through introducing prevention services into community-based organisations.

In addition, Iran is initiating public education and awareness campaigns on alcohol, through newspapers, radio and TV programs ([92-95]; consultation). Iran has used these lines of communication to try to reduce stigma and encourage treatment seeking. This is particularly important as alcohol consumption has legal and social consequences for Muslims in Iran. For example, newspapers are used to advocate for the religious concession MOHME has obtained in the form of a "fatwa" to legally permit Muslims to seek treatment for alcohol. Also, phone lines are advocated for people to start seeking advice and so treatment for unhealthy alcohol use. Such approaches appear to have been effective in that, according to a head of an Iranian addiction treatment unit, the number of calls to seek alcohol-related advice have increased unexpectedly, in a way that exceeds the speed of establishing the pilot outpatient treatment services across the country.

Apart from several community-based services such as INCAS, which have already started alcohol treatment in Iran, efforts to establish 150 alcohol-specific treatment units at existing drug treatment centres as a pilot study are still continuing. These new outpatient alcohol treatment units were planned to be integrated into the already existing drug treatment facilities because of the likely stigma around separate alcohol treatment services, limited resources and budget constraints. This reflects the fact that overall drug use has less sensitivity attached than alcohol in many parts of Iran and in many other MMCs [10]. This is mainly because drugs were not specifically named by the Quran and the Prophet, while alcohol was [1].

Whether in prevention or in early intervention, it is important to communicate a "safe" level of alcohol consumption as well as advice on associated health-issues. This is challenging, in MMCs when dual alcohol policies exist or when they have zero tolerance to alcohol. The analysis in Chapter 6 has shown that communicating a "safer level of consumption" as health education to the population appears to be difficult to implement in countries with prohibition for the majority of the population, such as Iran. While the only safe level of drinking is defined as zero by the government of Iran, the MOHME in Iran has adapted "low risk guidelines for the purpose of medical definitions" [96]. This difficulty in defining "safe levels" of consumption poses a significant challenge for secondary and tertiary prevention in Iran. This leaves a gap in advocating for a recommended drinking limit as a preventive measure in the non-Muslim minority population who can consume alcohol legally. This issue needs to be addressed in MMCs where dual policies for Muslims and non-Muslims are implemented.

MMCs have various approaches toward alcohol policies; and various attitudes in different socioeconomic and cultural practices. However, to normalise the health messages and advocacy on alcohol harms and to dilute the sensitivity in discussing alcohol as a health issue, involving the religious scholars is crucial. This recommendation is in line with past attempts to involve these scholars to reduce tobacco harm in the WHOEMRO [62, 63].

Iran initially attempted to implement alcohol screening, brief intervention, and referral to treatment (SBIRT) in primary health care (PHC), however due to factors such as the legal and religious sensitivity of alcohol and the low prevalence of AUDs, only screening has been implemented in PHC and not brief intervention (BI). So in PHC in Iran, primary alcohol screening is provided in health houses (rural areas), health posts (urban areas) and CHCs. However if any, hazardous or unhealthy alcohol consumption is identified, the patients are then referred to the outpatient specialised drug and alcohol treatment centres.

In non-MMCs with a higher prevalence of alcohol consumption such as Australia, integrating SBIRT into any level of care such as emergency department or PHC is a well-accepted approach. Such an approach aims to provide less stigmatised and more accessible care than a standalone specialised alcohol treatment unit [97-101]. However extra encouragement and training are still required to increase the confidence of GPs to offer BI for unhealthy alcohol use [102]. However for illicit drugs such as heroin or cocaine that have a relatively low prevalence in such countries, training GPs to be confident in providing BI or treatment is more difficult [103]. This in partly because the GPs do not see enough cases to become confident and also because of stigma, fear and reluctance to work with such patients. As alcohol consumption is illegal and uncommon in MMCs, similarly, it is very challenging to implement SBIRT in PHC [104]. In Iran the proposed solution to this was to implement screening and referral in PHC rather than including onsite BI in PHC. In contrast, despite the low prevalence of alcohol consumption in UAE, SBIRT is integrated into PHC. However, even though GPs were positive about this, a lack of patient attendance at follow up after BI was of concern [104]. It appears that the patient's fear of legal consequences and stigma has limited the success of such approach in MMCs [105].

As shown in Chapter 6, not all WHO global alcohol policy recommendations are suitable for MMCs. One of the recommendations is to integrate traditional healing practices into PHC. Due to the religious context of alcohol in Iran, there has not been any well-known traditional practice to treat AUDs in that country. This may be similar in many other MMCs where AUD prevalence is low and alcohol consumption is not a normal practice.

Other recommendations, such as day treatment facilities, have not been implemented in Iran because all alcohol treatment services rely on the already available drug treatment facilities. Day treatment facilities are not part of the drug treatment services implemented in Iran. It is

likely that both resource constraints and stigma would make the creation of alcohol-specific day treatment facilities very difficult.

*Alcohol policy types and treatment policy*

In Iran, in contrast to some other MMCs like UAE and Malaysia, the minority non-Muslims who are permitted to consume alcohol are distributed throughout the country with varying proportions. This introduces further challenges to measure the demand for treatment and the needed service availability. Also, the policies around alcohol consumption are the same across the country.

In contrast in UAE, drinkers are more concentrated into certain areas. Similarly to Malaysia, UAE has restriction policies in which there are different policies on alcohol consumption in different districts (i.e. different Emirates in UAE). Prior to 2002 some hospitals in Abu Dhabi and Dubai had established small specialised treatment units for patients with substance use disorders [106]. Consequently, in response to increased prevalence of substance use disorders, Sheikh Zayed Bin Sultan Al Nahyan issued a directive to establish the National Rehabilitation Centre (NRC) [70]. Regarding alcohol treatment in UAE. Non-Muslims who consume alcohol must obtain a certificate to access treatment from each Emirate. This makes it more feasible to estimate the demand for treatment. Though non-Muslims who are also non-citizens, due to the complicated legal process present themselves less often to treatment in these centres [70]. Because of high social stigma around alcohol in UAE, even though citizens can seek treatment in the NRC, many still prefer overseas treatment facilities [107].

In contrast, in MMCs with a total alcohol prohibition approach like Saudi Arabia, alcohol treatment is very limited. Even though drug treatment units such as Al-Amal (established in 1992 after an intensive campaign on increased drug issues in the country) treat unhealthy

alcohol consumption [12, 37, 108]. Due to extreme social stigma and risk of legal consequences, many Saudi citizens seek overseas health services for treatment and rehabilitation of AUD [109]. Non-Muslims, who are also forbidden to drink, cannot access treatment inside the country [109]. However, the opportunity to seek treatment overseas is not feasible for many MMCs, such as Iran. This can be due to many factors, including the cost [110, 111] and visa restrictions [112].

In contrast, in MMCs with a regulatory approach such as Turkey, alcohol treatment has a totally different shape. The health service response is designed like those in the European region, with a multisectoral approach [113]. In this case, it seems that Turkey has chosen to overlook a person's Muslim status as a differentiating factor and to implement policies around treatment similar to those countries with a much higher prevalence of alcohol consumption and of alcohol-related harms.

**Reflections on methodology**

This project covers a sensitive and an overlooked topic in MMCs. Because of the dearth of literature on alcohol policy in MMCs, the methodologies had to be tailored. This was necessary to allow access to every possible information sources including through collaboration.

For the first study where the extent of prohibition in civil alcohol policies in MMCs was examined, we faced several limitations. For example, many MMCs do not present a clear or public definition of their existing policies around alcohol. Many MMCs are low- or middle-income countries where electronic databases are limited or non-existing. Also, many MMCs, such as those from EMR (facing the Arab Spring), have unstable governments, and policies around alcohol are changing frequently. Global alcohol policy assessment tools, such as these of WHO, appear to be unable to detect many of the existing types of alcohol policies that are

unique to MMCs. This difficulty accessing information may contribute to the fact that WHO has not identified these approaches, and also has no tools that are selected to purpose.

The newspaper review was done for three different time periods, and the pre-revolution period relied on a hard copy search. This was limited in extent based on the constraints of the time that could be spent inside the country in this unfunded study, and the time required to peruse these hard copies in person. Similarly, many (more recent) electronic newspapers and governmental websites could not be accessed from outside Iran. An estimate of the total number of newspaper articles checked/discovered was recorded rather than an exact number; as this study was designed to be qualitative rather than quantitative.

In regard to alcohol policy analysis, the sensitivity around alcohol is the biggest barrier to openly discussing this topic in MMCs. Therefore, for Chapter 5 and 6 a range of data sources were sought. Only publicly available documents were searched and so it is possible that we have missed less accessible sources. Because of the sensitivity of the topic, only consultations were performed to check our understanding rather than formal interviews. This limited the ability of the study to obtain a broader range of professionals' opinion and to more formally assess the extent of policy implementation. There was not a structured consultation guide. Rather the nature of the consultation was adapted to the role of the expert being consulted.

Conducting consultations by email or phone from outside the country was not possible. Therefore, we were limited to conducting these, while on a field trip to Iran. This has also limited the feasibility of extending our consultations further. In that short time, we needed to search the local literature, policy documents and local newspapers; understand the content and context of the alcohol policies in Iran; identify the consultees; arrange the consultations; and prepare the consultation materials based on our understanding. The extent of policy

implementation was not always clear. This is due firstly to the policies being in their early stages and secondly to the lack of data availability and publicly accessible policy evaluation reports.

**Recommendations for policy and research**

This thesis identified three key areas for strengthening policy development and research in MMCs, including 1) an increased focus on public health in alcohol policy, 2) more detailed policy analysis across MMCs, and 3) increased attention to the actions of the alcohol industry in MMCs.

Alcohol needs to be discussed as a public health issue by governments of MMCs rather than concentrating on its religious prohibition. MMCs have a need for improved alcohol policy research and development. This includes improved infrastructure for research overall, in addition to that of health policy research. This can help in identifying the existing policies around alcohol in MMCs and with examining the effectiveness of each. Data collection and monitoring is needed to help understand the effects of policies and the gaps which policies need to focus on. MMCs also need to work to detect and monitor all channels for alcohol promotion such as the social media. Also, special attention needs to be given to the globally known ways in which the alcohol industry may interfere with policy development or increase access to alcohol.

These tasks are challenging in countries where alcohol is such a sensitive topic, and where economic resources may be stretched. This cannot be done without global support in health policy research and development. Global alcohol policy tools need to be improved to detect the unique alcohol policy approaches in MMCs. This would allow better identification of the existing policies and then to examine the range of feasible, evidence-based approaches that

work the best for the MMCs' context. It is essential for global, regional and local experts to support the development of religiously and culturally sensitive alcohol policies to prevent, reduce and treat unhealthy alcohol use and related harms in MMCs.

In order to strengthen alcohol treatment policies in MMCs, it is essential to examine the feasibility of evidence-based approaches that can work for their settings. For example, in Iran, the existing dual policy approach around alcohol prohibition needs to be considered when distributing treatment services around the country. For example, areas with large non-Muslim population may need greater treatment availability. Engaging the private sector, which is estimated to provide approximately 95% of substance abuse treatment in Iran, into alcohol treatment might help in increasing treatment availability and so access to treatment in Iran.

Integration of alcohol treatment into existing drug treatment outpatient units can be an approach that other MMCs can consider implementing. This approach can ease and hasten the establishment of those units and help in reducing the sensitivity around alcohol treatment. This approach will also decrease the cost of establishing such facilities in countries which mostly are developing economies.

In addition, MMCs where minority non-Muslims are allowed to drink, should consider introduction of laws in relation to age limit, drink-driving and on not serving alcohol to intoxicated persons. Even if drinking is mainly among non-Muslim minorities, providing guidance and cautions on the quality of alcohol production could be useful, even if it is communicated by an agency staffed by non-Muslims. This is particularly important in MMCs where there is no legal alcohol import for the minorities who are allowed to consume alcohol

Stakeholder analysis would add great value to research on alcohol policies in MMCs. This could identify all the influential bodies on alcohol policy development in MMCs, including the political bodies, religious scholars and alcohol industry. For example, the extent of alcohol industry's influence on alcohol availability and marketing in MMCs has not been examined. This is particularly important because alcohol production is banned in many MMCs and the illegal cross-border trade is evident. MMCs are relatively new to alcohol policy development and the alcohol industry has been known to interfere with policy development to their benefit rather than to the public health's.

Overall, to implement global action on controlling or reducing health-related risk from alcohol, it is essential to analyse all possible stakeholders, including at a political, industrial, national and international levels. We have seen that the (previously underestimated) influence of the sugar industry on the development of the Global Strategy on Diet, Physical Activity and Health in 2004, has shifted the strategy from a compulsory global strategy to a recommended strategy [114].

Similarly, with the Tobacco Control Framework, the effort of health professionals and researchers has not been enough to result in the global implementation of evidence-based findings [114-117]. The alcohol industry might even have more experience and control over policies than does the tobacco industry [118]. This includes their focus on "reasonable drinking", rather than on production and trade control policies [51, 118, 119]. Therefore, understanding the influence of stakeholders such as the alcohol industry on the development of the new and understudied civil alcohol policy in MMCs is vital.

## Conclusion

This thesis has explored and applied a variety of ways to analyse alcohol policy in MMCs. A perception of universal total civil prohibition of alcohol consumption in MMCs has excluded MMCs from the global conversation around alcohol policies. This research has shown that despite the presence of civil alcohol prohibition in most MMCs, policy makers are often striving to maintain a range of effective alcohol policies and to insure a prevention, treatment and harm reduction approach toward unhealthy alcohol use. This work has also identified challenges that MMCs may face in regard to possible future increase in alcohol consumption as a result of globalisation and other factors. In addition, the challenges MMCs face in regard to alcohol policy development, including on treatment policy, were highlighted.

Due to the unique historical, cultural and religious contextual factors in every MMC, including Iran, many policies have their unique definitions and applications. This has contributed to an inability of global researchers to detect the existing policies around alcohol in these countries. Once the existence of the alcohol policy details in MMCs starts to be acknowledged on the global agenda, this can be a step forward to measuring the policies' effectiveness. At the same time considering these differences is important for implementation of effective and relevant policies within MMCs.

Regional partnerships and assistance are also needed to better understand alcohol policies and alcohol treatment services in each country. This can also help to identify the gaps and the possible cooperative ways to overcome them. Overall, there is a need for global agencies such as WHO to assist MMCs in developing suitable policy approaches and services that are feasible for their unique alcohol policy and cultural environment. This is an important goal as MMCs make up approximately a quarter of the world's countries.

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# Appendices

## Appendix 1

The following table was published by the journal, Addiction, as online supplementary material, linked to the following paper:

Al-Ansari B, Thow AM, Day CA and Conigrave KM (2015). Extent of alcohol prohibition in civil policy in Muslim majority countries: the impact of globalization. Addiction 111: 1703-1713.

**Table: A broad overview of policy approaches in 50 MMCs and the source of this information**

| Country | Policy type | | | | Comment | Sources of this information | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Initial | | Additional** | | | |
| | Total Prohibition* | Prohibition with concessions* | Restriction* | Regulation* | | Government | WHO | Pub-Med | Industry | Travel guide | Other |
| **Afghanistan** | ✓ | | | | [1] | | ✓ | | | | |
| **Albania** | | | | ✓ | [2]; [3]; [4] | | ✓ | ✓ | | | |
| **Algeria** | | | ✓ | | [5]; [6]; [7]; [8] | | ✓ | | | | ✓ |
| **Azerbaijan** | | | ✓ | | WHO 2014 [9]: unclear if restriction or regulation; WHO 2010 [10]; WHO, 2004 [11]: public drinking banned | | ✓ | | | | |
| **Bahrain** | | | ✓ | | WHO, 2014 [12]: policy section has 'NA' for all the policies described.<br>WHO 2004 [13]<br>[14]; [15] | ✓ | ✓ | | | | ✓ |
| **Bangladesh** | | | ✓ | | WHO, 2014 [16]: Policies on alcohol taxes and sale; [17]; WHO | | ✓ | | | ✓ | ✓ |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2004 [18]; [19]: total ban | | | | | | |
| **Brunei** | | ✓ | | | WHO, 2014 [20]; [21] | | ✓ | | | | ✓ |
| **Burkina Faso** | | | | ✓ | WHO 2014 [22]: No alcohol policies but on taxes; [23] | | ✓ | | | | |
| **Chad** | | | | ✓ | [24]; [25] | | ✓ | | | | ✓ |
| **Comoros** | | ✓ | | | WHO 2014 [26]; [27]: prohibition with concessions; WHO, 2004 [28]: prohibition applies in the country. | | ✓ | | | | ✓ |
| **Djibouti** | NI | NI | NI | NI | WHO, 2014 [29]: no information | | ✓ | | | | |
| **Egypt** | | | ✓ | | WHO, 2014 [30]; Due to changes of government, alcohol policy has been changing frequently [31]; [32]; [33]; [34] | | ✓ | | ✓ | | ✓ |
| **Gambia** | | | ✓ | | [35] | | ✓ | | | | |
| **Guinea*** ** | | | | ✓ | [36]; WHO, 2014 [37]: policies only on alcohol advertisement and sponsorships and Minimum legal drinking age of 18. | | ✓ | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indonesia***** | | | ✓ | | WHO, 2004 [38]: restriction policy; public drinking banned; [39]; [40]; [41]; [42]. | | ✓ | ✓ | ✓ | ✓ | |
| **Iran***** | | ✓ | | | WHO, 2011 [43]; total prohibition; non-Muslims can drink alcohol but not in public [44]; [45]; | ✓ | ✓ | | ✓ | | |
| **Iraq***** | | | | ✓ | Unstable country ; [46]; [47] | | ✓ | | | ✓ | |
| **Jordan** | | | ✓ | | WHO, 2004 [48]; [49]. | | ✓ | | | | ✓ |
| **Kazakhstan** | | | | ✓ | [50]; [51]; [52] | | ✓ | ✓ | | | ✓ |
| **Kosovo** | | | | ✓ | [53]; Kosovo is under political and economic transition [54]; [55]. | | ✓ | ✓ | | | ✓ |
| **Kuwait***** | | ✓ | | | WHO, 2014 [56]: no information; [57]. | | ✓ | ✓ | | | |
| **Kyrgyzstan** | . | | | ✓ | WHO, 2009 [58]; WHO, 2004 [59] | | ✓ | | | | |
| **Lebanon** | NA | NA | NA | NA | WHO, 2011[60]; [61]; [62] | | ✓ | | | | |
| **Libya***** | ✓ | | | | [63]; New revolution [64] | | ✓ | ✓ | | | |
| **Malaysia***** | | | ✓ | | [65]; [66]; [67]; [68] | | ✓ | ✓ | ✓ | | ✓ |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Maldives** | | ✓ | | | WHO, 2011 [69] and WHO, 2004 [70]: ban on alcohol consumption in the country, except for non-Muslims with licence it is allowed.<br><br>(WHO, 2014 [71]: total ban,) | | ✓ | | | | |
| **Mali** | NAP | NAP | NAP | NAP | WHO, 2014 [72]: no alcohol policy; [73] | | ✓ | | | | ✓ |
| **Mauritania** | | ✓ | | | WHO, 2014 [74]: total ban; [75]; However, there is a sign of license for some restaurants to sell alcohol for foreigners [76]. | | ✓ | | ✓ | ✓ | |
| **Mayotte** | NI | NI | NI | NI | [77]: Alcohol can be imported in any amount from the European Union countries; [78] Signs of issues related to drinking in pregnancy. | | | | | ✓ | ✓ |
| **Morocco** | | | ✓ | | WHO, 2014: No Information [79]; Non-stable policies, [80]; [81]; [82]; [83]; [84]. | ✓ | ✓ | | ✓ | ✓ | |
| **Niger** | | | ✓ | | .<br><br>WHO, 2004 [85]; [86]. | | ✓ | | | ✓ | |
| **Nigeria** | | | ✓ | | [87]; [88]; [89]; [90] | | ✓ | ✓ | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Oman*** | | | ✓ | | [91]; [92]; [93] Non-Muslims are allowed , hotels and bars | ✓ | ✓ | | | ✓ | |
| **Pakistan** | | ✓ | | | [94]; non-Muslims from other sources [95]; [96] | ✓ | ✓ | ✓ | | ✓ | |
| **Palestine** | | ✓ | | | non-member observer State [97]; [98]; [99] | | | | ✓ | | ✓ |
| **Qatar** | | | ✓ | | [100]; WHO, 2014 [101]:no information; [102] | | ✓ | ✓ | ✓ | | ✓ |
| **Saudi Arabia*** | ✓ | | | | [103]; [104] | | ✓ | | | | |
| **Senegal** | | | ✓ | | [105]There are signs of prohibition in some areas [106] | | ✓ | | | | ✓ |
| **Sierra Leone** | NAP | NAP | NAP | NAP | WHO, 2011 [107]: no alcohol policy present in the country; [108]; [109]. | | ✓ | | | | ✓ |
| **Somalia** | ✓ | | | | [110] | | ✓ | | | | |
| **Sudan** | ✓ | | | | [111] ;[112] ;[113]. | | ✓ | | | ✓ | |
| **Syria** | | ✓ | | | WHO, 2011 [114]: Total ban; Under War [115] ;[116]. | | ✓ | | | | ✓ |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Tajikistan** | NI | NI | NI | NI | WHO, 2009: no information [117]; WHO, 2011: No information available. | | ✓ | | | | |
| **Tunisia*** ** | | | ✓ | | Policies vary according to times of the year, days and hours [118]; Frequent change in legislation; New revolution in 2012 [119]; [120]; [121] ;[122]. | | ✓ | | ✓ | | ✓ |
| **Turkey*** ** | | | | ✓ | [123]; [124]; [125]; [126]; [127] | ✓ | ✓ | ✓ | ✓ | | |
| **Turkmenistan** | | | | ✓ | WHO, 2004 [66]; WHO, 2014 [128] | | ✓ | | | | |
| **United Arab Emirates*** ** | | | ✓ | | WHO, 2014 [129]: no information; [130]; [131]; [132]; [133] | ✓ | ✓ | | ✓ | ✓ | |
| **Uzbekistan** | | | | ✓ | WHO, 2001 [134]; WHO, 2009 [135]; WHO, 2011 [136]; [137] | | ✓ | | ✓ | | |
| **Western Sahara** | | | | | Non-Self-Governing Territory [138]; Limited numbers of hotels serve alcohol [139]. | | | | | | |
| **Yemen** | | ✓ | | | WHO, 2014 [140]; total ban [141]. | | ✓ | | | ✓ | |

To ensure a comprehensive assessment, English, Arabic and Persian language sources were reviewed, including government websites for each country; WHO and PubMed. If information was unavailable or inconclusive from these sources, alcohol industry, tourism and some non-governmental organisational websites were searched, using Google and Google scholar. Searches were conducted in additional depth for countries that were chosen to illustrate key policies and issues. The key words used for searches are; policy, Muslim, Islam, alcohol, Sharia, law, substance, society, social, population, prevalence, alcohol industry, "Big Alcohol".

**NI:** no information available/ no enough evidence**; NA:** not applicable according to this source**, NAP:** no alcohol policy according to this source

* **Used definitions; Prohibition:** Where total prohibition of alcohol consumption and trade is applied in the country. **Prohibition with concession:** Where prohibition is present in the country but only minority groups are excluded. **Restriction:** Where some sub regions or suburbs have prohibition of consumption and trade while others do not, and usually licence is required for purchasing and consuming alcohol. **Regulation:** Where alcohol is available and consumption is permitted for all with some regulatory policies such as age limit.

** Additional sources of information were accessed for some, but not all countries. The symbol '-' indicates that no search was conducted for that country

*** These countries were further researched in this paper to illustrate the challenges.

MMCs were selected via; Pew Forum, (2011). The Future of the Global Muslim Population. Retrieved May 5th, 2013, from http://www.pewforum.org/future-of-the-global-muslim-population-muslim-majority.aspx

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**Appendices 2-4**

These three appendices are the invited commentaries written by other authors as a response to the main publication presented in Chapter 4. These three commentaries were published in the journal, Addiction.

- Appendix 2: Sawitri Assanangkornchai, Muhammadfahmee Talek, J. Guy Edwards, Influence of Islam and the globalized alcohol industry on drinking in Muslim countries, Addiction, 2016, 111, 7
- Appendix 3: David Kalema, Wouter Vanderplasschen, Sofie Vindevogel, Ilse Derluyn, The role of religion in alcohol consumption and demand reduction in Muslim majority countries (MMC), Addiction, 2016, 111, 7
- Appendix 4: Raed Bahelah, What should national alcohol majority countries focus on?, Addiction, 2016, 111, 7

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COMMENTARY

# Influence of Islam and the globalized alcohol industry on drinking in Muslim countries

*The alcohol industry influences drinking world-wide. Islamic faith and advertising bans partially offset this, but continuing dialogue between governments, religious leaders and health advisers is required, with attention paid to health and religion as well as economic development. Intensified efforts are needed to increase research into the health consequences of drinking.*

So subtle and powerful is the influence of global alcohol marketing, referred to in the excellent review by Al-Ansari and colleagues [1], we think it pertinent to elaborate on the subject.

## GLOBAL ALCOHOL MARKET

The alcohol industry, through heavily financed, extremely sophisticated marketing techniques, exerts an extremely potent influence internationally. It can change people's attitude towards alcohol, reasons for drinking, choice of beverage and pattern of drinking, including when and where to drink [2]. Alcohol advertisements normalize drinking and encourage consumption in populations—mainly in developing countries—where the prevalence of drinking is historically low. Most worrying is the increased likelihood of drinking by youngsters [3,4].

The industry's operational base may be in its country of origin or an international outlet, a choice often determined by tax advantages. Its target populations extend world-wide, even to the most remote areas and especially in emerging markets such as Muslim majority countries (MMCs) [5]. As discussed in Al-Ansari *et al.*'s paper, indirect strategies have been used to circumvent the ban of alcohol promotion in MMCs. These include exposure of products in magazines, movies, webpages, sporting and musical events and on TV and clothing—all of which change regularly with fashion to help create and maintain brand awareness and loyalty. This is especially difficult to control when the sources of the advertisements are outside the country.

The platforms on which major advertisers promote products extend from social networks to immersive, virtual communities. The global generation of internet-savvy users, the capability of accessing online content at any hour, the number of digital platforms and the sophistication of online advertising have all increased greatly during recent years [6]. Unfortunately, the young, including those in MMCs, are the main targets [7].

Much use is also made of online content created by the website users themselves (user-generated content). This gained popularity among youngsters because of instant access to the opinions of their peers and the variety of platforms accessible, especially large platforms such as Facebook, Twitter and YouTube [6,8].

With the objective of reducing trade barriers between contracting parties in free trade agreements to their lowest level, alcoholic beverages may be treated like any other commodity and tariffs reduced to 0%. This, and trade disputes, often result in national or subnational controls on alcohol being weakened. Alcohol production is prohibited in most MMCs, so it has to be imported. Also, because of high competition, imported alcoholic drinks become cheaper [9,10]. This, in turn, may increase drinking in MMCs, especially those that encourage tourism.

## ISLAM, GLOBALIZED MARKETING AND PUBLIC HEALTH

Devout believers in Islam are faced with a painful dilemma. The Qur'an and Sunnah say they should adhere strictly to the words of Muhammad, while at the same time they want to benefit from the economic advantages of the 21st century.

Before the teaching of Muhammad, drinking among Arabs was common. Alcohol was then forbidden in several verses of the Qur'an because, although drinking was accepted as doing some good, the evil it caused was declared greater. In later verses, followers of Islam were forbidden to attend prayer while intoxicated, and finally drinking was declared to be a Satanic act and was thus totally forbidden [11].

Currently, in some MMCs where Islamic law is practised, people abstain from alcohol, not only because it is illegal but also because of the guilt they experience if they do drink. This is not so apparent in other MMCs where Islamic law has not been adopted. Thus, Islamic faith in forbidding drinking appears to prevent much of the harm that globalization by the alcohol industry generates [12].

## THE FUTURE

The World Health Organization (WHO) supports the total ban on alcohol advertising [13], but more education of the public and others into the subtle influence of advertising on drinking (in spite of its being illegal) is required.

Marketing is global, and therefore measures to reduce the harm caused by alcohol should be global, with attention paid to the areas of trading and marketing we have summarized. Further attention should be paid to the issues by public health physicians, academics, religious leaders, governments and political party leaders. Alcohol policies should respect Sharia teaching and, at the same time, take into account the culture of immigrant workers and visitors to Muslim countries, as well as 21st-century economic development.

Research into the extent of alcohol consumption is necessary. However, because of their illegal status most sales and consumption of alcohol are unrecorded. Intensified efforts towards collecting data should be made, with the indirect methods used in research into illicit drug-taking among hard-to-reach populations [14] applied.

### Declaration of interests

None.

**Keywords** alcohol policy, free trade agreement, Globalisation, Islam, Muslim Majority Country, marketing strategy, social network, user-generated content.

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ADDICTION
SSA SOCIETY FOR THE STUDY OF ADDICTION
COMMENTARY

# The role of religion in alcohol consumption and demand reduction in Muslim majority countries (MMC)

*Religion inspires civil alcohol policies and limits alcohol use in Muslim majority countries, but its protective role should be explored further, as consumption rates and enforcement practices vary between countries with similar prohibition policies. Also, religion (e.g. Islam) is far from a univocal concept, and may even prevent problem users from seeking help.*

Al-Ansari and colleagues [1] provide a comprehensive overview of alcohol policy regulations in 50 Muslim majority countries (MMC) world-wide, based on an analysis of official and informal documents regarding the degree of alcohol prohibition. While they identify globalization, the alcohol industry and political and economic instability as the main causes for relaxing civil alcohol policies, law enforcement, actual consumption rates and the specific role of religion and religious heterogeneity are left unaddressed.

Although extensive and well documented, the authors' findings are limited to officially reported data and information from the alcohol industry and tourist guides. These data sources fail to incorporate actual enforcement of civil alcohol policies as perceived by inhabitants and visitors. Information provided by influential stakeholders or travel guides may be biased further by a lack of objectivity and accuracy. Enforcement practices may differ from official regulations depending on the discretionary power of police and prosecuting authorities [2]. Also, the strictness of penalization of alcohol policy violations is likely to affect drinking behaviour [3].

The authors assessed national alcohol policies irrespective of per-capita alcohol consumption levels, although these tend to differ substantially between MMC. For example, Nigeria (10.1 litres of pure alcohol/person > 15 years) and Chad (4.4 litres) have high alcohol consumption levels, but most MMC, such as Malaysia (1.3 litres), Guinea (0.7 litres) and Indonesia (0.6 litres), report low drinking levels [4]. Despite a common denominator (Islam) that is discouraging alcohol use there are substantial differences, in particular among MMC with 'restricted' and 'regulated' policies. Explanations for these variations remain unexplored in the paper, but have been attributed elsewhere [5,6] to the degree of development, influence of the alcohol industry and informal alcohol, alcohol regulations and their enforcement, political and economic instability and cultural and religious traditions.

The authors argue convincingly that religion is a distinctive factor in alcohol consumption and civil alcohol policies in MMC, but the question of how religion is associated with alcohol use is not addressed. The association between religion and substance use has often been debated in the literature [7–9]. There is increasing evidence that religion and spirituality are highly resourceful, not only for addiction recovery but also for alcohol and drug prevention [10,11]. In fact, most religions, not solely Islam, prohibit the use of alcohol and illicit drugs. Religion, including its institutions, beliefs and practices, offers moral guidance and, consequently, influences moral behaviour, such as attitudes towards substance use which in turn affect drinking patterns [12]. Individuals who subscribe to a religion that prohibits the use of alcohol and drugs have demonstrated lower rates of substance abuse and dependence [13]. However, some religious traditions are assumed to promote alcohol consumption [14,15] and religion may be a barrier in searching support for alcohol-related problems, as addiction is highly stigmatized and addicts are regarded as outcasts by some religious communities [16]. As such, religion can cut as a double-edged sword in alcohol demand reduction.

Religion is presented in the paper as a monolithic and binary concept (Muslim majority versus other countries), suggesting religious homogeneity inside these countries. However, several MMC, such as Indonesia, Nigeria and Iran, consist of various ethnic (Muslim) groups and religions. Also, Islam is characterized by various movements which differ in their interpretation of the Quran or Sunnah and are spread unequally geographically, leading to substantial heterogeneity between and within countries [17]. Due to globalization and encounters of religions, myriad regional differences develop in attitudes and practices towards alcohol. Consequently, the idea of 'the' Islamic religion is increasingly challenged and its influence on alcohol prohibition and consumption becomes less straightforward. As mentioned by the authors [1], considerable variations exist in the extent to which the Islamic view on alcohol use is represented in alcohol policies in MMC and in their enforcement for all or selective groups of (non-Muslim) residents. Therefore, polarization and divisive civil policy approaches that induce or reinforce segegration between citizens with different religious denominations should be avoided [18]. Instead, civil alcohol policies need to be inclusive and represent all citizens, respecting religious majority and minority groups.

In sum, while the paper by Al-Ansari and colleagues illustrates the impact of globalization on alcohol policies in Muslim majority countries, important features and determinants, such as intranational differences, actual enforcement practices and drinking levels and the role of religion, are to be explored further.

**Declaration of interests**

D.K. is Chairperson of the Uganda Alcohol Policy Alliance (UAPA). W.V., S. V. and I.D. report no competing interests.

**Keywords** Alcohol, globalization, Islam, policy, religion, treatment.

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# What should national alcohol control policies in Muslim majority countries focus on?

*To control alcohol-related harm in Muslim majority countries (MMCs), alcohol civil policies should be context-specific, acknowledge the heterogeneity among MMCs and incorporate mental health services. Two policy areas are of priority: unrecorded alcohol and youth alcohol consumption. Global leadership is needed from government and non-government organizations alike.*

Al-Ansari and colleagues should be commended for their unique review of alcohol civil policies in Muslim majority countries (MMCs) [1], in which they discussed the existing alcohol civil policies and the challenges facing the development of alcohol policies in MMCs. Although most MMCs have the lowest prevalence of recorded alcohol consumption world-wide [1], Al-Ansari and colleagues have discussed the importance of establishing national alcohol policies in MMCs. In this commentary, I will discuss the components of successful alcohol control policies in MMCs and what priority areas such policies need to focus upon.

Before delving into the components of a successful national control program in MMCs, I would like to briefly discuss the dearth in research publications on alcohol use and harm from MMCs. A recent systematic review highlighted the lack of national harm reduction policies against alcohol consumption in the Arab world (all are MMCs) and the low number of studies on alcohol consumption and harm in these countries [2]. According to this review, having an alcohol ban was not the main factor influencing the availability of alcohol-related research in the Arab world. Other factors, such as the level of research infrastructure, seem to play important roles in the availability of alcohol-related research in MMCs. For example, several studies on alcohol use and harm have been published in Saudi Arabia, a country with total ban on alcohol. Conversely, in Indonesia, where alcohol is not banned, few alcohol-related research papers have been published [2]. I would argue that regardless of the dearth in research on alcohol in MMCs, several issues need to be considered to put into place effective alcohol control policies in MMCs. First, any attempt to set alcohol policies in MMCs should recognize the vast heterogeneity across these countries. Although all these countries share Islamic principles and laws, other factors such as cultural values, historical background and population make-up are different from one MMC to another. For this reason, it is impractical to adopt one policy in these countries. Secondly, MMCs can benefit from adopting religion-based and culture-sensitive policies. For example, setting a minimum legal age for drinking is out of context in countries with a total ban on alcohol. Thirdly, mental health and substance use treatment and prevention services should be integrated into any alcohol-focused policies in MMCs. Fourthly, given the unprecedented political and cultural transitions in many MMCs, the World Health Organization (WHO) and other local stakeholders [e.g. local non-governmental organizations (NGOs), faith-based institutions] can play a critical role in raising awareness among youth, and provide expertise for the development of effective alcohol control policies in these countries. This is extremely important, given the current fragile situation of some MMCs with failing States and collapsing or near-collapsing health systems [3].

Whether or not alcohol consumption is banned, there is a need for civil alcohol policies in all MMCs. Specifically, two policy areas are of high priority: alcohol consumption among youth and control of unrecorded alcohol consumption. Youth are at increased risk of substance use and alcohol, especially in the era of globalization and wide use of the internet [4]. In developed countries, alcohol advertisements are faced with fewer restrictions than tobacco [4] while in many developing countries, including MMCs, such restrictions may not even exist. In addition, alcohol use was linked to psychological distress and depression among adolescents in many developing countries [5]. Undoubtedly, the current political transitions and armed conflicts in many MMCs represent an added risk for substance use, including alcohol among youth. Therefore, it is necessary to increase awareness related to alcohol harm among youth using the internet. Initiatives that utilize the internet and Islamic faith to prevent disease exist [6] (see http://www.pitt.edu/~super1/ighn.htm), but seem to be underutilized. School-based programs to educate youth about alcohol consumption and its harmful effects should be implemented and evaluated. The second priority area is the control of unrecorded alcohol consumption. Civil policies in MMCs should target homemade alcohol and illegal alcohol trafficking across the borders [7]. Leadership in these two priority areas is needed desperately to help countries develop their context-specific and culturally tailored policies.

**Declaration of interests**

None.

**Keywords** Alcohol policy, arab, civil laws, mental health, muslim majority countries, substance use, unrecorded alcohol, youth.

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**Appendix 5**

This appendix contains a document which has been accepted for publication as supplementary material for the following paper (the paper itself is contained in Chapter 6):

> Al-Ansari B., Noorozi A., Thow A. M., Day C. A., Mirzaie M. and Conigrave K. M. (in press - accepted 3/4/20). Alcohol treatment systems in Muslim Majority Countries: case study of alcohol treatment policy in Iran. International Journal of Drug Policy.

*Supplementary materials*

1. *Clinical settings and treatment approach*

Recommendations for assessment and treatment of AUD are similar in outpatient and inpatient settings in Iran. These include recommendations on: assessment and care planning; withdrawal management, pharmaceutical relapse prevention; psychosocial services and thiamine treatment to prevent Wernicke–Korsakoff syndrome ((Kheradmand, 2018); consultations). However, withdrawal treatment differs between settings, with (symptom-triggered benzodiazepine regimens are used in inpatient units and fixed schedule regimens in outpatient settings (Noroozi A, 2016).

The inpatient wards for alcohol treatment are located within psychiatric hospitals. They deal with anticipated severe alcohol withdrawal syndromes. and have similar recommendations for assessment and treatment of AUD with outpatient settings assessed based on current drinking patterns, past withdrawal experience, concomitant substance use and concomitant medical or psychiatric conditions (Kheradmand, 2018).

2. *Treatment approaches*

Medicines are available to treat alcohol withdrawal and prevent relapse in Iran (Table 1). There are national clinical guidelines on the use of these medicines that are in line with global recommendations (Brathen et al., 2005; el-Guebaly, Carrà, & Galanter, 2015; World Health Organization, 2012). For example, all below-mentioned medications are available. Only disulfiram is limitedly available.

- Medicines to prevent relapse
    - 1st line:
        - Naltrexone
        - Acamprosate
    - 2nd line:

- Disulfiram

- Other medications
  - Topiramate
  - Gabapentin
  - Baclofen

There are national clinical guidelines on when, to whom and how to administer diazepam or chlordiazepoxide in an alcohol withdrawal regimen, which include separate protocols for patients with and without a withdrawal seizure history (Kheradmand, 2018). All withdrawal regimes are according to globally acknowledged evidence-based guidelines (consultation).

The first line relapse prevention medicines are oral naltrexone (an opioid receptor antagonist) or acamprosate (which modulates activity at the NMDA receptors) (Miller, Book, & Stewart, 2011). Disulfiram, which causes an aversive reaction to alcohol (due to acetaldehyde accumulation), is second line. Other medications considered in alcohol relapse prevention include topiramate, gabapentin and baclofen ((Kheradmand, 2018); consultation). All such medications are available in the country, although disulfiram availability is limited (consultation). Apart from a detailed plan outlining medical treatments, 'Supportive counselling' is given a significant role (Ali Kheradmand, 2018).

*3. Training professionals in treatment of unhealthy alcohol use (including AUDs)*

Training on alcohol treatment is not currently integrated into medical education in Iran (Table 1). However, training in diagnosis and treatment of AUDs is provided for any drug treatment centre that wishes to participate in the pilot study of alcohol treatment ((Farhoudian, 2018); consultation).

To take participate in the pilot, the centre must meet criteria including having no history of regulations violations, having clinical psychologist(s) who passed basic and advanced courses on psychosocial intervention for drug use disorders ((Farhoudian, 2018); consultation), which involves 4-days of intensive alcohol-specific treatment training (Farhoudian, 2018). These two training courses including a basic course on drug education, drug counselling skills, motivational interviewing and cognitive, behavioural treatments and other course on psychosocial interventions for stimulant use disorders. MOHME have developed by these courses in order to strengthen national capacity to provide psychosocial services for people with opioids and or stimulants use disorders.

*Educational resources*: Additionally, several educational resources have been developed on alcohol-related treatment in Iran. For example, the "National Guideline on Treatment of Harmful Use and Alcohol Dependence" (Noroozi A, 2016) covers the following:

- principles of alcohol dependence;
- different types of alcoholic beverages;
- harms of alcohol use;
- assessment and advice;
- treatment planning;
- alcohol withdrawal syndrome; including monitoring with CIWA-Ar;
- criteria for referral;
- harm reduction; and
- co-morbidities (Farhoudian, 2018).

Guidelines are also available for psychosocial approaches. These include the "National Guideline on Psychological Interventions for alcohol Use Disorders" (for psychologists) (Farhoudian A, 2017). The contents focus on the following:

- alcohol and its effects;
- why people drink;
- hazardous use; harmful use and dependence;
- client assessment;
- family education;
- follow-up,
- blood tests; and their role;
- brief intervention;
- acceptance and commitment therapy (ACT);
- guides for consultations sessions in motivational enhancement therapy (MET);
- mindfulness exercises;
- social work; and
- specific issues (Farhoudian, 2018; Farhoudian A, 2017).

*4. Certification of alcohol treatment units*

The overall establishment process of pilot study was designed to take place in several stages.

*Training:* The availability of training for pre-existing drug treatment centres that wished to be included as one these pilot centres was widely advertised to service providers across the country. Interested services could apply to receive alcohol treatment unit certification. For the unit to be selected, quality criteria must be met involving:

- more than two years of experience in drug treatment provision;

- successful completion of the Matrix training course (an intensive outpatient cognitive behavioural treatment for addiction based on the Matrix or modified Matrix models) (Mokri A, 2015; Rawson et al., 2004);
- internet connection; and
- alcohol measuring tools (breathalyser, drug urine or saliva rapid tests).

Then, if these criteria are met, a conditional certificate is provided and so that the pilot alcohol treatment program can be initiated in the unit.

Usually all the outpatient drug treatment centres in Iran are certified, accredited and monitored by medical universities and so an inquiry from MOHME to the medical university responsible is necessary. This enquiry includes the details of the training courses previously provided to this service and whether there had been any known infringements, breaches or violations of law.

Once the Centre is approved for initial consideration as an alcohol treatment unit, one of the centre's general physicians or psychiatrists are required to participate in a four-day training course on alcohol treatment focusing on medical and psychosocial interventions.

*5. Low risk drinking guidelines*

These guidelines define a 'minimal risk level' for men and women (MOHME, 2018). This is routinely not more than two standard drinks (i.e. 20 grams of ethanol) per day; and not more than five days a week; and never six or more standard drinks in one occasion. Any amount is considered risky in special circumstances including pregnancy, breastfeeding, using some medications, driving, and having a history of losing control over use ((MOHME, 2018); consultation).

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