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PLATFORM
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EVALUATION OF THE LIFESTYLE PROGRAM NUCHTERE FRIES

Channah Bellink
S2999080

Supervision

Fabian Schurink – GGD Fryslân
Marijke Teeuw – GGD Fryslân
Michiel Berger – University of Groningen
Bauke Buwalda – University of Groningen

Internship organisation

GGD Fryslân

Educational institution

University of Groningen, Faculty of Science and Engineering,
Science, Business & Policy

25 June 2021

Advise report

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Prologue

In front of you lies the advice report to GGD Fryslân about potential improvements and the continuation of the lifestyle program Nuchtere Fries. This is the end product of my internship project at GGD Fryslân on which I have worked with great pleasure and enthusiasm. It was a nice challenging and instructive project where I learned to use my biomedical science background within a policy context. At the same time, this internship was also unique and sometimes a bit more difficult as I had to do it all digitally and from home due to the corona pandemic. Nevertheless, I really enjoyed my internship at GGD Fryslân and hopefully with this project I have been able to contribute to improving the lifestyle and health of the Frisian residents.

I would like to thank GGD Fryslân for offering me this internship as well as the opportunity and space to gain new experiences. In particular, I want to thank Fabian Schurink for enabling this interesting project and also for the good guidance and support. Despite the digital work situation from home, he introduced me well to the organisation and invited me to many interesting meetings. This, together with the pleasant cooperation, contributed to a nice internship period. In addition, I also want to thank Marijke Teeuw for the pleasant contact and guidance which was extra useful and valuable since I had to work from home the entire internship. The good and sufficient support positively contributed to my internship period.

Furthermore, I would like to thank my supervisors of the University of Groningen, Michiel Berger and Bauke Buwalda, for the useful support in implementing my scientific knowledge in a policy context. The feedback and discussions helped me a lot during the evaluation of the program Nuchtere Fries.

Lastly, I want to thank my fellow students, Hilde Bruggen and Ninke van Hoogmoed, for the almost daily meetings we held during the internship period. It was nice to have some extra digital colleagues during the corona pandemic with whom I started every working day and could share my experiences and discuss any issues.

Executive Summary

This advice report is written on behalf of GGD Fryslân for the evaluation of the lifestyle program Nuchtere Fries. The program focuses on preventing and reducing problematic alcohol use among Frisian adolescents, and is part of the Frisian Prevention Approach (FPA). The FPA is a regional response to the National Prevention Agreement that aims to develop a healthier society, focusing on three main topics: smoking, problematic alcohol use and obesity. At the end of 2021, the current period for the program Nuchtere Fries expires. Therefore, Nuchtere Fries needs to be evaluated in order to indicate how the program should be improved and continued in a potential upcoming period.

Drinking alcohol is a major risk factor for public health and the burden of diseases. In 2019, 79.1% of the Dutch population aged 18 years and older consumed alcohol, with the highest percentage of alcohol users found for the age-groups of 18-29 and 50-64 years old. The toxic effects of alcohol cause damage to diverse organs and tissues in the human body which can lead to the development of non-communicable diseases, infectious diseases and brain damage. Especially younger and older adults are vulnerable to the effects of alcohol on health as respectively their brain is still in the developmental phase and their metabolism is changing.

The program Nuchtere Fries contains useful products focusing on policy and regulations, enforcement and education, which are effective elements for alcohol interventions. These products can be used by the Frisian municipalities in order to effectively prevent and reduce problematic alcohol use at local level. However, it is a major shortcoming that the program and its products only focus on young adults and not include older adults as target-group.

Multiple different actors contribute or influence the execution of the program Nuchtere Fries. The cooperation platform of Nuchtere Fries consists of the key players at provincial level. Here, all Frisian municipalities, GGD Fryslân, Verslavingszorg Noord Nederland, Koninklijke Horeca Nederland and the police share knowledge and join forces to decrease alcohol problems in Friesland. In addition, the Trimbos Institute provides relevant information concerning alcohol use and effective interventions. The local parties, such as schools, sports clubs and catering industry, have an important role in the implementation of alcohol policy and prevention.

GGD Fryslân is a suitable party to coordinate the program and platform Nuchtere Fries. They are a non-political health service for all Frisian municipalities and provide them with good support and advice. Their ultimate mission is to reduce the number of unhealthy life years for every Frisian resident. The organisation consists of a sufficient internal structure with useful resources and knowledge. Moreover, GGD Fryslân is expert in the field of public health and is provincially oriented with a good overview of the local situations of all Frisian municipalities. This is essential since health problems transcend municipal boundaries which also applies to problematic alcohol use.

To further improve Nuchtere Fries, the organisation of the program needs to change with GGD Fryslân providing more support to the Frisian municipalities for implementing alcohol policy and prevention. Both parties need to jointly and proactively work on reducing and preventing problematic alcohol use among the Frisian residents. GGD Fryslân should discuss the local situation regarding the implementation of the program Nuchtere Fries with each municipality several times a year and offer them suitable support if necessary. In addition, new and clear agreements needs to be made about the function and role of each party involved in the program Nuchtere Fries. In order to increase the effectiveness of program Nuchtere Fries in tackling alcohol problems, it should also include older adults as target-group.

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1. Introduction

1.1 Problematic alcohol use

In 2016, more than half of the European population consumed alcohol which was the highest amount of current drinkers worldwide according to the World Health Organisation (World Health Organization, 2018). In the Netherlands, 79.1% of the population aged 18 years and older consumed alcohol in 2019. The highest percentage of alcohol users was found in the age-groups of 18-29 and 50-64 years old, respectively 83.3% and 80% (RIVM, 2019). Moreover, excessive drinking and heavy episodic drinking patterns were the most common among young adults aged between 18-29 years old. The effects of alcohol consumption on health are not yet fully understood and there is an ongoing debate about the relationship between alcohol intake and mortality (Costanzo et al., 2019). Some studies, namely, suggest that light-to-moderate alcohol use has protective health effects and that it is related to reduced mortality compared to both abstainers and heavy drinkers (Rehm et al., 2017; World Health Organization, 2018). However, other studies have found neither this relationship nor the protective health effects of light-to-moderate alcohol use (Costanzo et al., 2019). In addition, many studies indicated clear detrimental effects on health for high levels of alcohol intake and some of them even stated that there is no safe level of alcohol (Rehm et al., 2017; World Health Organization, 2018). Despite this controversy, research showed that alcohol use is associated with more than 60 disease outcomes (Rehm et al., 2003). Drinking alcohol is a major risk for developing non-communicable diseases, infectious diseases and brain damage (World Health Organization, 2018). It is estimated that 5.3% of all deaths globally are attributable to harmful use of alcohol (Shield et al., 2020). The toxic effects of alcohol affect many organs including the cardiovascular system, gastrointestinal tract, the liver and the immune system. It may disrupt brain structures and functioning, as well as the development of the brains which continues till the age of 25 (Harreveld, Voogt, Planije, & Lemmers, 2019). Besides the health-related effects of alcohol, it has also negative consequences for society. A cost-benefits analysis of the National Institute for Health and Environment (RIVM) showed that the net costs related to alcohol consumption amounted to 2.3 to 4.2 billion euros for the Netherlands in 2013 (de Wit et al., 2018). These costs are a result of decreased school and work performance, deployment of police, healthcare and traffic accidents.

In 2018, the Dutch government established the National Prevention Agreement (NPA) which focuses on the development of a healthier society, with three main topics; smoking, alcohol abuse and obesity (Rijksoverheid, 2018). In order to realize the ambition of a healthier society, it is necessary to translate the goals of the NPA into policy measures and health programs at local level. The municipalities and municipal health service (GGD) have a key role in this, since the municipalities are responsible for the local public health and they usually assign this executive task to the GGD (Andersson Elffers Felix, 2017). This also applies to the province of Friesland, where all Frisian municipalities jointly assigned the task of protecting and improving the public health to GGD Fryslân. Hence, GGD Fryslân develops and implements various prevention approaches and health programs at provincial level.

1.2 GGD Fryslân and the program Nuchtere Fries

GGD Fryslân is part of the Safety Region Fryslân and contributes to the safety and health of Friesland (Veiligheidsregio Fryslân, n.d.). The organisation is an independent health service for all Frisian municipalities and focuses on the factors that influence public health and vitality. Their main four tasks are (Andersson Elffers Felix, 2017):

- Monitoring and signalling the public health and advising the Frisian municipalities.
- The executive task of promoting, preventing and protecting public health.
- Protecting the public health during disasters and crises.
- Supervising the hygiene and pedagogical quality at, for example, childcare and brothels.

In addition to these main tasks, GGD Fryslân performs several common tasks that consist of health promotion, youth healthcare, public mental healthcare/social care for vulnerable groups, and forensic medical care (Andersson Elffers Felix, 2017).

Based on the NPA, GGD Fryslân developed a Frisian version of the prevention agreement in order to improve the health and well-being of the Frisian residents. This Frisian prevention approach (FPA) focuses on different themes including lifestyle for which multiple prevention programs are developed (Friese Preventie Aanpak, 2020). One of these programs is the Nuchtere Fries program that focuses on reducing problematic alcohol and drug use (Platform Nuchtere Fries, n.d.). Problematic alcohol use is the drinking pattern that leads to physical complaints and/or psychological or social problems and that prevents existing problems from being tackled adequately (Boomsma et al., 2014). In order to effectively implement the alcohol prevention program, the Platform Nuchtere Fries is established. This partnership consists of all Frisian municipalities, GGD Fryslân, the police, Verslavingszorg Noord-Nederland (Addiction Care North of the Netherlands) (VNN) and the Koninklijke Horeca Nederland (Royal Catering Netherlands) (KHN) (Platform Nuchtere Fries, n.d.). They share knowledge and unite power to decrease alcohol and drug abuse in Friesland. The Platform Nuchtere Fries aims to create an alcohol-free and alcohol-conscious environment (Stuurgroep Nuchtere Fries, 2017). In addition, their goal is to raise awareness concerning the effects of alcohol use and eventually change the norm from consuming alcohol to not consuming alcohol. Both the program and the platform Nuchtere Fries are coordinated by GGD Fryslân. Moreover, GGD Fryslân also provides the program leader for Nuchtere Fries.

1.3 Evaluation of the program Nuchtere Fries

The current period for the program Nuchtere Fries expires at the end of 2021. In order to indicate whether and how GGD Fryslân should continue with Nuchtere Fries, it is necessary to evaluate the current program and its results. Furthermore, the FPA focuses on improving lifestyle and well-being of the citizens at all stages of life. However, the Nuchtere Fries program is now mainly focusing on reducing problematic alcohol and drug use among young people. The program has not yet taken into account any interventions or policies that specifically focus on reducing the alcohol consumption in elderly people. Research is needed to indicate whether the alcohol prevention program should also target older adults and to identify how the program Nuchtere Fries can be further improved. Therefore, on behalf of GGD Fryslân, I conduct research into alcohol use and its consequences, effective interventions and the current program Nuchtere Fries. Hereby, I only focus on problematic alcohol consumption and I do not include drug use. Based on my research, I provide an advice towards GGD Fryslân about the continuation of Nuchtere Fries. So, for this project the main research question is:

How can the health program Nuchtere Fries be improved in order to further reduce problematic alcohol use?

The evaluation of the program Nuchtere Fries will mainly focus on the current cooperation between all organisations involved. A process-analysis will be performed to identify the success factors concerning the cooperation as well as factors that need to be improved or eliminated. Regarding the alcohol use among elderly and the potential effects of interventions on health later in life, an extensive scientific analysis will be conducted. Eventually, GGD Fryslân will be advised about the organisation of the program Nuchtere Fries on the one hand, and on the content and target group of the program on the other hand. In order to achieve this, the following intermediate goals need to be reached:

Goals concerning the content of the program Nuchtere Fries

- Examine the alcohol consumption and its health-related effects in younger and older age-groups.
- Examine effective interventions in reducing alcohol use and their possible effects on health later in life.
- Analyse the health program Nuchtere Fries and the current alcohol policy.

Goals concerning the organisation of the program Nuchtere Fries

- Analyse the organisation structure of GGD Fryslân and its cooperation with the Frisian municipalities regarding the program Nuchtere Fries.
- Determine the main involved actors, their goal and mutual relationships.
- Identify the success and failure factors of the program Nuchtere Fries.
- Designing different options for the future of the program Nuchtere Fries.

1.4 Methodology

In order to obtain these intermediate goals, several different tools will be used. For the scientific analysis, literature research will be conducted on the health-related effects of alcohol consumption and effective interventions. In addition, the content of the program Nuchtere Fries will be examined as well as the alcohol policy that is now in place. By comparing the products of Nuchtere Fries with effective interventions or elements from literature to reduce problematic alcohol use, the content of the program Nuchtere Fries will be evaluated. Furthermore, an internal analysis of the GGD Fryslân will be performed to identify the strengths and weaknesses of the organisation. The McKinsey 7S tool will be used to examine the internal structure of the organisation, the resources of GGD Fryslân and their strategy. In addition, a clear overview will be made of the different actors involved in the program Nuchtere Fries. Therefore, an actor analysis will be used to gain insights about the role and function of each actor within the program and cooperation platform of Nuchtere Fries. In order to evaluate the organisation and execution of the program Nuchtere Fries, a process analysis will be performed. By conducting interviews with all Frisian municipalities, the current local alcohol policy and prevention approach will be examined as well as their opinion about the program and platform of Nuchtere Fries. With the program and process evaluation the success and failure factors of Nuchtere Fries will be identified. Eventually, various scenarios for the future of the program Nuchtere Fries will be designed and analysed with a multi criteria analysis.

1.5 Formal framework

This internship took place at GGD Fryslân and was conducted in the context of the Master's degree program Biomedical Sciences, specialization Science, Business & Policy, at the University of Groningen. The duration consisted of 25 weeks and the internship took place in the period from 4 January 2021 to 25 June 2021. The goal of the internship is integration of policy aspects with scientific based knowledge within the context of Biomedical Sciences. The final product is an advice/recommendation.

Various supervisors from the study program and the internship organisation have contributed to the internship project by providing guidance and substantive support. **Table 1** gives an overview of all supervisors with their function and role in supervision during the internship.

Table 1. Names, background and function of the supervisors during the internship

Name	Institute	Function	Role in supervision
Fabian Schurink	GGD Fryslân	Policy advisor Public Health; Program leader 'Alcohol & Drugs'	Daily supervisor
Marijke Teeuw	GGD Fryslân	Team coach & Epidemiologist	General supervisor
Dr. B. Buwalda	University of Groningen	Associate professor Biology, Neuroscience & Behavioural Sciences	Science supervisor
Drs. M.R. Berger	University of Groningen, Science Business and Policy Master's track	Senior lecturer	SBP supervisor

1.6 Reading guide

This report contains a total of 12 chapters and is divided into five main parts consisting of introduction and background, scientific context, policy context, integration and advice. Chapter 1 includes the introduction and background of the project, and chapter 2 and 3 contains the scientific context. In chapter 2 the alcohol consumption and its consequences on health and society are discussed as well as the drinking motives for young and older adults. Chapter 3 elaborates on the effective elements of interventions aiming to prevent and reduce problematic alcohol use, and describes the health changes after reducing or abstaining from alcohol. Chapter 4 to 6 contain the policy context. The alcohol policy that is now in place and the internal organisation of GGD Fryslân together with the cooperation between GGD Fryslân and the Frisian municipalities are discussed in respectively chapter 4 and 5. Chapter 6 elaborates on the program Nuchtere Fries and the cooperation between all organisations involved in Nuchtere Fries. Both the content and the organisation of the program Nuchtere Fries are evaluated in chapter 7. The integration part is incorporated in chapter 8, in which various scenarios for the future of the program Nuchtere Fries are designed and scored based on a number of criteria. This is followed by the conclusion and discussion in respectively chapter 9 and 10. The advice to GGD Fryslân about the continuation of the program Nuchtere Fries is given in chapter 11. Lastly, chapter 12 contains the proposed actions that should be taken to sufficiently implement the advice.

2. Alcohol consumption and its consequences

2.1 Levels of alcohol consumption

In 2016, 43% of the world population consumed alcohol which equates to approximately 2.35 billion people aged 15+ years (World Health Organization, 2018). The highest percentage of current drinkers among the total population (59.9% of the population aged 15+ years) as well as the highest alcohol per capita consumptions were found for the WHO European Region. Focusing on the Netherlands, 79.1% of the population aged 18 years and older used alcohol in 2019 (RIVM, 2019). This is a slight decrease compared to the alcohol consumption in 2018, however the percentage of drinkers has constantly fluctuated around 80% over the past five years. The highest percentage of alcohol users is found for the age-groups of 18-29 and 50-64 years old, respectively 83.3% and 80% (RIVM, 2019). In addition, 8.5% of the Dutch population aged 18+ years drank alcohol excessively in 2019, which means more than 21 glasses of alcohol per week for men or 14 glasses of alcohol per week for women (RIVM, 2019). The highest number of excessive drinkers (10.9%) is aged between 18 and 29 years old, and more men than women drink alcohol excessively. The age-group of 18-29 year olds had also the highest percentage of heavy episodic drinkers or binge drinkers, namely 14.9%. This drinking behaviour is defined as drinking at least six glasses (men) or four glasses (women) of alcohol in one day at least once a week (Laar et al., 2020). Both trends of excessive drinking and heavy episodic drinking among the total Dutch population seem to stagnate around 9%. Yet, there is a slight decrease in excessive alcohol consumption from 2014 to 2019 (RIVM, 2019). It is interesting to see that the young adults, who drink alcohol most often and are most likely to drink excessively or heavily episodic, are closely followed by the adults aged 50-64 years. In 2019, 80% of the older adults (50-64 years) drank alcohol and respectively 9.2% and 8.2% of this age-group were excessive drinkers or heavy episodic drinkers (RIVM, 2019). On the more positive side, in 2019, 41.5% of the population followed the Health Council's advice not to drink alcohol or to drink only one glass of alcohol per day (RIVM, 2019). This is an increase of 4% from 2014 to 2019. More than half of the people aged 65+ years (54.8%) have met this guideline which is considerably more compared to the other age groups (RIVM, 2019).

2.2 Health-related effects of alcohol use

Alcohol use has been identified as a major risk factor for public health and the global burden of diseases (GBD 2016 Alcohol Collaborators, 2018; World Health Organization, 2018). In 2016, approximately 3 million deaths were attributable to harmful use of alcohol which represents 5.3% of all deaths globally (Shield et al., 2020). The causes of these alcohol-attributable deaths includes injuries and various diseases. In the Netherlands, alcohol-attributable deaths were the highest in the age-group of 55-69 years old in 2019 (Laar et al., 2020). Research showed that the consumption of alcohol is related to more than 60 disease outcomes, both acute and chronic (Rehm et al., 2003). The toxic effects of alcohol cause damage to diverse organs and tissues in the human body which can lead to the development of non-communicable diseases, infectious diseases and brain damage (World Health Organization, 2018). In addition, alcohol intoxication can lead to acute health outcomes, like accidental or intentional injuries, due to the psychoactive effects of alcohol (Rehm et al., 2003). Drinking alcohol can also lead to development of alcohol dependence which is linked to both acute and chronic health harms.

2.2.1 Major alcohol-attributable diseases

Alcohol is a major contributor to the risk of developing non-communicable diseases (NCD), including cardiovascular diseases, liver diseases, and cancer (Shield et al., 2020). Multiple studies have indicated a complex relationship between alcohol use and cardiovascular diseases, as light-to-moderate drinking may have protective health effects whereas excessive or binge drinking has clear detrimental effects (Rehm et al., 2017; World Health Organization, 2018). Both volume and drinking patterns affect the cardiovascular outcomes. For instance, non-heavy alcohol use positively impacts the cardiovascular system by increasing high-density lipoprotein cholesterol levels and decreasing levels of fibrinogen

(Rehm & Roerecke, 2017). Conversely, chronic alcohol consumption can weaken the heart muscle, affect the vascular functions or increase the blood pressure (Rehm & Roerecke, 2017). In this way, alcohol increases the risk for hypertension, atrial fibrillation, ischaemic heart disease and stroke (Bell et al., 2017; Iranpour & Nakhaee, 2019; Rehm et al., 2017).

In contrast to the complex relationship between alcohol and cardiovascular diseases, there is a clear causal relationship between alcohol use and liver diseases (Gao & Bataller, 2011; Rehm, Samokhvalov, & Shield, 2013). Alcohol can cause damage to the liver cells and induce inflammatory responses resulting respectively in liver fibrosis and alcoholic hepatitis (Gao & Bataller, 2011). Liver fibrosis is characterized by the formation of scar tissue which leads to an impaired liver function, known as liver cirrhosis. In addition, alcohol use can disrupt the lipid metabolism leading to accumulation of lipids in the hepatocytes, called fatty liver (Rehm et al., 2013).

Next to the alcohol-attributable liver diseases, the role of alcohol in development of various cancers has been studied a lot in recent years. In 2016, 4.8% of all global cancer deaths was attributable to harmful alcohol use (Shield et al., 2020). Research has indicated a causal relationship between alcohol consumption and developing cancers of the oral cavity, pharynx, oesophagus, larynx, liver, intrahepatic bile duct, colon, rectum and female breast (IARC, 2020). Not only high intake of alcohol increases the risk for developing cancer, but even moderate alcohol consumption has been shown to increase the risk of developing female breast cancer (Bagnardi et al., 2015). In fact, there is no safe level of alcohol use for cancer and the more alcohol is consumed the higher the risk for developing cancers (WHO & IARC, 2020). The International Agency for Research on Cancer (IARC) has classified the consumption of alcohol as carcinogenic to humans (Group 1) with ethanol as the primary carcinogenic compound (IARC Working Group on the Evaluation of Carcinogenic Risks to Humans, 2010). There are four main biological pathways by which alcohol may contribute to cancer development. First, alcohol is metabolised into acetaldehyde which is a carcinogenic metabolite that disrupts DNA synthesis and repair (World Cancer Research Fund/America Institute for Cancer Research, 2018). Secondly, chronic or high intake of alcohol can induce oxidative stress through increased production of reactive oxygen species (World Cancer Research Fund/America Institute for Cancer Research, 2018). This is associated with DNA damage which can result in cancer development. Thirdly, alcohol can lead to folate deficiency which affects DNA methylation and thus may result in carcinogenesis (Boffetta & Hashibe, 2006). Lastly, alcohol consumption can also change the hormone levels including oestrogen, progesterone and human epidermal growth factor, which can cause dysregulated cell growth (World Cancer Research Fund/America Institute for Cancer Research, 2018).

Besides an increased risk for non-communicable diseases, drinking alcohol is associated with a higher risk for developing communicable diseases. Alcohol use affects the immune system as it impairs the functioning of different immune cells and suppresses the release of cytokines, responsible for cell signalling and regulating the immune response (Imtiaz et al., 2017; Szabo & Saha, 2015). This leads to a weakened immune system and therefore an increasing risk for infectious diseases, including tuberculosis and pneumonia. Moreover, drinking alcohol is associated with an increased risk of acquiring human immunodeficiency virus (HIV) infection (Rehm et al., 2017; World Health Organization, 2018). Multiple studies indicated a causal effect of acute alcohol use on sexual decision-making resulting in unprotected sex and sex with multiple partners (Scott-Sheldon, Carey, Cunningham, Johnson, & Carey, 2016). This increases the risk of HIV transmission as well as other sexually transmitted infections. Besides, harmful use of alcohol can affect HIV treatment via alcohol-drug interactions and less adherence to the treatment (Gross et al., 2017).

Drinking alcohol seems to have different effects on the brains. On one hand, research indicated a potential protective effect for light to moderate alcohol use, since it reduces the risk for cognitive impairment and types of dementia (Rehm, Hasan, Black, Shield, & Schwarzingler, 2019). However, there were also studies that did not find this association between alcohol consumption and lower risk

for cognitive decline (Topiwala & Ebmeier, 2018). On the other hand, high intake of alcohol has been shown to have harmful effects on brain development as it affects the structure and functioning of the brain (Jones, Lueras, & Nagel, 2018). Binge drinking during young adulthood leads to a decrease in cortical gray-matter thickness and atrophy of both gray and white-matter volume in different parts of the brain (Cservenka & Brumback, 2017; Jones et al., 2018). In addition, alcohol use among adolescents is associated with altered brain activity and a higher risk of developing alcohol use disorder (AUD) (Cservenka & Brumback, 2017). On the long-term chronic alcohol consumption results in an increased risk of developing cognitive impairment or dementia (Rehm et al., 2019; Topiwala & Ebmeier, 2018).

Young adults are extra vulnerable to the effects of alcohol as it causes damage to the cells and structures of the brain that are still in the developmental period (Harreveld et al., 2019). Research also indicated that early onset of alcohol use among adolescents is an important risk factor for developing alcohol dependence and abuse later in life (Kuntsche, Rossow, Engels, & Kuntsche, 2016). However, alcohol consumption causes greater damage in older adults compared to younger adults. Due to biological changes that are associated with ageing such as a decrease in body fluid, an increase in body fat and a changing metabolism, adults aged 65 and older are more vulnerable to the negative effects of alcohol (Kuerbis, Sacco, Blazer, & Moore, 2014; Sannen, Heijkants, & Veerbeek, 2018). Not only the body becomes more sensitive to the effects of alcohol, but also the breakdown and elimination of alcohol has slowed down. Moreover, many older adults use medication which, in combination with alcohol use, could result in reduced or enhanced drug effect (Kuerbis et al., 2014).

2.3 Social consequences of alcohol use

The consumption of alcohol has various negative consequences for society. A costs-benefits analysis of RIVM showed that the net costs related to alcohol use amounted 2.3 to 4.2 billion euros for the Netherlands in 2013 (de Wit et al., 2018). These costs are a result of absenteeism and reduced productivity at work, deteriorated school performance, study delay, health care and deployment of police for public order and safety (de Wit et al., 2018). Here, we will discuss each aspect in more detail and mention their share of total costs.

After drinking alcohol or developing alcohol-attributable diseases, employees may work with reduced productivity or be absent from work due to illness caused by alcohol (de Wit et al., 2018). In 2013, the costs related to absenteeism and less productivity were estimated at 1.3 billion euros. Not only at work alcohol can have negative effects, but also at school it can lead to less motivation, deteriorated school performance and leaving school early (Ter Bogt, van Lieshout, Doornwaard, & Eijkemans, 2009). Specific numbers about lower school performance and study delay due to alcohol consumption are incomplete or difficult to quantify. Based on the percentage of binge-drinkers among students and the number of students with study delay, RIVM estimated the related costs at 52 to 86 million euros in 2013 (de Wit et al., 2018).

Another consequence of alcohol consumption is that consumers, who drive under the influence of alcohol, can become involved in traffic accidents (de Wit et al., 2018). This is one of the main causes of road accidents and the related costs were estimated at 653 to 1425 million euros in 2013 (de Wit et al., 2018; Houwing, Bijleveld, Commandeur, & Vissers, 2014). These costs consist of material damage, traffic jam and follow-up costs of accidents. The healthcare costs related to traffic accidents for both drunk drivers and victims were estimated at 67 million euros for 2013 (de Wit et al., 2018). In addition to this, alcohol consumption is associated with many acute and chronic diseases, like cardiovascular diseases and cancer, which entails high healthcare costs. Moreover, alcohol addiction, intoxication and abuse also lead to direct (mental) healthcare costs. In 2017, the total costs for healthcare for alcohol and drug addiction were 820 million euros (Volksgezondheidzorg.info, n.d.).

Lastly, there are the costs of deployment of police for public order, safety and prevention (de Wit et al., 2018). In addition, municipalities incur annual costs for enforcing the Liquor and Catering law as well as employing policy officers and enforcers. Enforcers check compliance of the age limit when selling alcohol and inspect locations (de Wit et al., 2018). RIVM estimated these total costs at 7 to 10 million euros (de Wit et al., 2018).

2.4 Drinking motives

As aforementioned alcohol use is a major risk factor for public health and has several negative consequences for society. Nevertheless, alcohol is still widely consumed especially among young adults and older people. Health-promoting programmes and interventions are therefore needed to prevent and reduce problematic alcohol consumption. In order to determine what type of interventions work effectively, we first need to understand the reasons for drinking.

There are various intrinsic reasons why young people drink alcohol but also social and cultural environmental factors influence their alcohol consumption (Harreveld et al., 2019). In 1988, Cox and Klinger developed a Motivation Model which assumes that people’s decision to drink alcohol is based on the motivation to achieve expected effects through the use of alcohol (Cox & Klinger, 1988). These expected effects can be summarized in either enhancement of positive outcomes or avoidance of negative outcomes. The source of those expected effects can be internal (personal) or external (social environment). In total, four groups of drinking motives can be distinguished; social, enhancement, coping and conformity motives (**Table 2**) (Cooper, 1994; Cox & Klinger, 1988). As **table 2** shows, social motives are a result of positive expected outcomes and based on an external source, which can be summarized as drinking alcohol to be social. Another drinking motive that is a result of positive expected outcomes are enhancement motives. These are, however, based on an internal source and can be explained as drinking alcohol to emphasize positive feelings. Next to this, there are also two drinking motives that are a result of negative expected outcomes. These are coping motives and conformity motives which respectively are based on an internal resource and an external resource. Therefore, coping motives can be summarized as drinking alcohol to suppress negative emotions and the conformity motives can be explained as drinking alcohol to prevent social rejection.

Table 2. Drinking motives based on assumptions of the Motivation Model (Cooper, 1994; Cox & Klinger, 1988; Kuntsche, Knibbe, Gmel, & Engels, 2005).

	Positive outcome	Negative outcome
Internal	Enhancement	Coping
External	Social	Conformity

In general, most young people drink alcohol for social reasons such as to get in the party mood, to be social or to celebrate (Kuntsche et al., 2014; Kuntsche et al., 2005). Social drinking motives are not significantly associated with heavy drinking or alcohol problems, but are rather related to moderate alcohol use (Cooper, 1994; Kuntsche et al., 2005). Another common drinking motive for young adults is enhancement in the sense of enjoying the alcohol and reinforcing positive well-being. In contrast to social motives, enhancement motives are often associated with heavy alcohol consumption (Grant, Stewart, O’connor, Blackwell, & Conrod, 2007; Kuntsche et al., 2005). Similarly, coping motives to drink alcohol are also related to heavy drinking as well as to problematic drinking. These motives represent drinking alcohol to relieve negative emotional states or eliminate negative thoughts (Cooper, 1994; Grant et al., 2007; Lyvers et al., 2010). Drinking as a result of conformity motives is the least frequent motive among young adults and includes reasons such as to avoid social rejection and because of peer pressure (Cooper, 1994; Kuntsche et al., 2014; Kuntsche et al., 2005). Conformity motives have not been associated with heavy or problematic alcohol use (Lyvers et al., 2010).

Older adults (>55 years) have more diverse reasons for drinking alcohol but also their drinking motives differ more between younger and older age groups (Immonen, Valvanne, & Pitkälä, 2011). A study by Immonen et al. (2011) indicated that younger age groups (65-70 years) drink alcohol most common for social reasons whereas the older age group (>91 years) most often uses alcohol for medicinal purpose. Although there are differences in the proportions of drinking motives, social motives are still one of the main reasons why older adults use alcohol (Immonen et al., 2011; Kelly, Olanrewaju, Cowan, Brayne, & Lafortune, 2018a). For instance, they drink alcohol to celebrate or for having fun, but it is also part of spending time with family and friends. The social role of alcohol among older adults also increases due to retirement since they have plentiful spare time, less responsibilities and more social activities which are often related to alcohol use (Bareham, Kaner, Spencer, & Hanratty, 2019; Veerbeek, Heijkants, & Willemse, 2017). Older people associate alcohol consumption with social settings and having fun as well as they see alcohol as something to be enjoyed with friends (Kelly et al., 2018a). Drinking alcohol can also support relaxation during leisure time and add structure to the daily lives of elderly as it clearly distinguishes spare time and creates a daily routine (Kelly et al., 2018a; Veerbeek et al., 2017). In addition, older adults have less daily responsibilities, such as parenting or work, that could prevent them from drinking (Bareham et al., 2019). So, more social activities and more spare time could both lead to an increase in the frequency of alcohol consumption. At the same time, more spare time and less daily activities can lead to loneliness and boredom which are also common drinking motives for older adults (Immonen et al., 2011; Veerbeek et al., 2017). In addition, drinking alcohol for medicinal purpose is another important drinking motive for older people as they assume that alcohol has beneficial health effects (Bareham et al., 2019; Immonen et al., 2011).

2.5 Conclusion

In conclusion, the consequences of problematic alcohol use for both public health and society show the importance of effective alcohol policy and interventions. Alcohol use is, namely, a major risk factor for public health since it contributes to the development of non-communicable diseases, including cardiovascular diseases, liver diseases and cancer. Admittedly, some studies have demonstrated potential beneficial health effects of low-to-moderate alcohol use, but these findings are uncertain since multiple other studies have not found this association. Not only has alcohol consumption negative health effects, but it also involves direct and indirect high costs for society. The percentage of alcohol use is the highest among young adults aged between 18 and 29 years old, which is also the age-group with the highest number of excessive drinkers as well as binge drinkers. Yet, the young adults are closely followed by the older adults concerning the amount of alcohol consumption and drinking behaviour. This is interesting as both young and older adults are most vulnerable to the effects of alcohol use. Also, the highest percentage of alcohol-attributable deaths is found for the older adults aged between 55 and 69 years old. Therefore, young adults till the age of 29 and older adults aged 55 years and older are the main important target groups for alcohol prevention programs.

3. Effective elements for reducing problematic alcohol use

3.1 Effective intervention elements targeting young adults

In general, prevention is used to improve the health of the general population or of specific target groups. According to the RIVM, four different types of prevention can be distinguished, namely, universal, selective, indicated and health care-related prevention (RIVM, n.d.).

- Universal prevention focuses on protecting and improving the health of the general and healthy population.
- Selective prevention focuses on protecting the health of population groups with an increased risk and prevents people with one or more risk factors from developing a disorder or disease.
- Indicated prevention targets people with starting complaints and aims to prevent these complaints from aggravating into a disease.
- Healthcare-related prevention targets people with a certain disease or condition and prevents that an existing condition leads to complications, limitations, a lower quality of life or mortality.

Given the role and function of the program Nuchtere Fries, we focus in this chapter on intervention elements that contribute to universal alcohol prevention (RIVM, n.d.). Scientific literature has indicated several types of interventions and effective elements that contribute to preventing and reducing alcohol use among young adults. However, there is no clear overall approach that seems to be effective.

Regulating and limiting the physical availability of alcoholic beverages seems to be one effective way to reduce alcohol consumption (Babor, Caetano, Casswell, Edwards, & Giesbrecht, 2010; World Health Organization, 2018). In order to achieve this, the compliance with the age limit of 18 years must be improved when selling alcohol, as well as the compliance with not selling alcohol to drunk people (Babor et al., 2010; World Health Organization, 2009). Municipalities must, therefore, perform sufficient controls and enforce compliance of these measures. According to literature, the consumption of alcohol can also be reduced by limiting the number of licenses for the sale of alcohol and permitting them less easily (van Giessen et al., 2021; World Health Organization, 2012). In addition, the introduction of specific times at which alcohol may be sold is another effective policy measure. Studies also indicated that alcohol use must be restricted in public places such as school institutions, events, public transport and especially sports clubs (van Giessen et al., 2021; World Health Organization, 2018). Furthermore, research has shown the importance of policy measures concerning alcohol marketing and advertising since young adults are extra vulnerable for this. It increases the likelihood that adolescents start drinking before the age of 18 and it stimulates the consumption of alcohol (Anderson & Baumberg, 2006; Burton et al., 2017). In addition, alcohol advertising at sports clubs contributes to normalisation of alcohol and sport, and results in alcohol use among young adults (Brown, 2016; Burton et al., 2017). It is, therefore, necessary to stop alcohol advertising, especially at sports clubs, and perhaps start with 0.0% alcoholic beverages advertisement instead. Moreover, it would be effective to prohibit price promotions and discounts on alcoholic beverages as well (van Giessen et al., 2021; World Health Organization, 2010).

Campaigns and education are essential means to increase knowledge and awareness on the consequences of alcohol use among young adults (Harreveld et al., 2019; van Giessen et al., 2021). According to literature, these means do not effectively induce a change in drinking behaviour or alcohol consumption (Anderson & Baumberg, 2006). Nevertheless, it contributes positively to creating support for alcohol policy and changing the social norm concerning alcohol use. It is, therefore, relevant and important to use mass media campaigns, like NIX18, to raise awareness among young adults (Harreveld et al., 2019). In addition, these campaigns should support the norm that alcohol is not consumed under the age of 18 years as well as that alcohol is not essential for socializing (van Giessen et al., 2021). These are essential aspects to incorporate in the broader and integral alcohol approach.

Research also indicated that education and alcohol interventions at school are effective and useful in preventing and reducing the alcohol consumption among young adults (Harreveld et al., 2019; van Giessen et al., 2021). However, it is important to distinguish different age phases of adolescence with regard to the prevention strategy (Onrust et al., 2016). Certain alcohol interventions must be used with a specific age phase as it increases the effectiveness of the prevention approach (Onrust et al., 2016). For young adolescents, with the age of 11 to 13 years old, it is important to focus on aspects like self-control, problem solving skills and social skills within the prevention approach. In addition, it is essential to involve the parents, because adolescents of this age need to be corrected on behaviour by their parents (Lemmers et al., 2016; Onrust et al., 2016). The most difficult age phase regarding effective alcohol prevention is middle adolescence (14-15 years). In this developmental phase, adolescents are more sensitive to peer-pressure and they mainly act from emotion (Lemmers et al., 2016). Therefore, most interventions do not seem to work, except environment oriented interventions. In late adolescents, 16 years and older, it is necessary to focus on social norms, strengthen self-control, motivational interviewing and involving the parents (Lemmers et al., 2016; Onrust et al., 2016). The intervention Moti-4 is a good example of motivational interviewing and consists of an easy accessible and individual conversation process with an addiction prevention employee. This process includes four conversations which focus on providing knowledge about alcohol use, raising awareness on the effects of alcohol and enhancing resilience skills (Rijksinstituut voor Volksgezondheid en Milieu, n.d.). Other effective prevention approaches for young adults are Alcohol Youth consultation by VNN and 'Helder op School' program. The Alcohol Youth consultation by VNN consists of one or two conversations between a professional, the parents and the adolescent with risky alcohol consumption (Rijksinstituut voor Volksgezondheid en Milieu, n.d.). The 'Helder op School' school program is a series of lessons about the consequences of alcohol and drug use with the aim of increasing awareness among young adults (Rijksinstituut voor Volksgezondheid en Milieu, n.d.).

Lastly, the role and involvement of parents as well as environmental factors seem to influence the start and drinking behaviour of young adults. Different studies demonstrated the effectiveness of community interventions, aiming to change the environment of young adults, in preventing and reducing alcohol consumption (Bühler & Thurl, 2015; Jansen et al., 2016; Lemmers et al., 2016). The Icelandic approach is an interesting and promising example. This prevention model aims to create a positive environment in which young adults live healthy and do not use alcohol or drugs (Smeets, Monshouwer, & Greeff, 2019). It focuses on the implementation of local interventions that reduce risk factors for substance use and strengthen the protective factors from the environment (Smeets et al., 2019). The model does not consist of a standard package of interventions and measures. Instead, they identify the current local problems and analyse the opportunities to tackle this. Therefore, they mainly focus on four environmental domains consisting of the family, peer group, school and leisure time (Smeets et al., 2019). Yearly, the Icelandic prevention model proceeds a cycle of four steps consisting of monitoring, feedback, policy-making and implementation (Smeets et al., 2019). Local stakeholders use the results from the monitor to determine the risk and protective factors to focus on with interventions every year.

There are many different policy measures and interventions that contribute to the prevention and reduction of alcohol use among young adults. Yet, there is still uncertainty about the overall effective prevention approach for alcohol use. Voogt et al. (2020) examined the current knowledge gaps concerning alcohol use and prevention that are relevant to professionals in healthcare, policy and science. They provided an overview of the aspects that research should focus on in the upcoming years, including alcohol advertisement, campaigns and education, protective and risk factors and alcohol prevention in settings such as school, sport, work and neighbourhood.

3.2 Effective intervention elements targeting older adults

As mentioned before, older adults are more vulnerable to the detrimental effects of alcohol on health compared to younger people (Kuerbis et al., 2014). With an ageing population, it is, thus, increasingly important to focus on implementing effective alcohol prevention programs targeting older adults. However, knowledge is currently lacking on alcohol use later in life and on effective elements of alcohol interventions for the age group of 55+ year olds (Armstrong-Moore et al., 2018; Voogt et al., 2020). There are now no prevention approaches or policy measures that are specifically focusing on preventing and reducing alcohol use among older people (Sannen et al., 2018).

For the development of alcohol interventions, the different risk groups and their drinking motives must be taken into account as it influences the effectiveness of interventions (Veerbeek et al., 2017). For instance, older people who drink alcohol because of social motives need interventions that focus on increasing awareness on the negative consequences of alcohol use. Whereas, older adults who drink alcohol due to loneliness and meaningless time need interventions that aim to prevent loneliness and partially pay attention to drinking habits (Veerbeek et al., 2017). Alcohol use is closely related to social life and routines within this age group. Therefore, more research is needed to understand the context of alcohol consumption and the relationship between drinking motives and drinking patterns (Armstrong-Moore et al., 2018; Kelly et al., 2018). This is essential in order to provide good alternatives and effective interventions to reduce alcohol use among older adults.

As discussed in the prevention approach for young adults, campaigns and education on the effects of alcohol use is an essential component for effective alcohol prevention which also applies for older adults (Sannen et al., 2018; Veerbeek et al., 2017). Verslavingszorg Noord-Nederland (VNN) developed a documentary series in which people tell about how they overcame their alcohol consumption (Sannen et al., 2018). This series is relatable for older adults as it covers topics like retirement, influence of the environment, meaningful and leisure time. Another prevention program of VNN includes education to caregivers about the effects of alcohol use and training in motivational conversations with older adults about their drinking habits (Sannen et al., 2018). However, with this type of intervention only elderly people living in nursing homes were reached and not the elderly people who still live on their own. The awareness campaign IkPas could be also an effective intervention in which people are challenged to drink no alcohol for 30 or 40 days (IkPas, n.d.; Sannen et al., 2018). In this way, people experience by themselves the benefits of not drinking alcohol and gain insight into their drinking habits. This intervention is currently focusing on the general population, but at local level this campaign could be used to specifically target older adults (Sannen et al., 2018).

Besides the awareness campaigns, research indicated the effectiveness of e-health interventions and brief interventions for older adults (Armstrong-Moore et al., 2018; Veerbeek et al., 2017). These are easily accessible and aim to reduce alcohol consumption or to ease the switch to treatment (Sannen et al., 2018). Moti-55 is an effective brief intervention that consists of two to four conversations with an addiction prevention employee in order to motivate the older adult to proactively reduce their alcohol consumption (Rijksinstituut voor Volksgezondheid en Milieu, n.d.). In addition, there are some effective e-health interventions such as the Mirro Alcohol e-health module that provide online assistance in reducing alcohol consumption (Mirro, n.d.; Sannen et al., 2018). The main advantages of these online interventions are the high level of privacy and the possibility to follow it at your own pace (Noteborn, Sanderson, Zwanikken, Deckers, & Van Alphen, 2014). Moreover, general policy measures as discussed in the paragraphs about effective interventions for young adults, seems to be also effective for older adults in preventing and reducing alcohol use (Anderson, Scafato, & Galluzzo, 2012). This includes, among other things, measures concerning the limitation of the physical availability of alcoholic beverages and improvement of the enforcement.

Overall, more research needs to be conducted on effective elements for interventions to prevent and reduce alcohol use among older adults. Nonetheless, studies of Moy et al. (2011) and Bhatia et al. (2015) found interesting and promising results about the effects of interventions for older adults. They demonstrated that older people have the capacity to change and improve both their health and habits, as well as that they stay motivated to abstain from alcohol and have the perspective of long-term recovery (Bhatia, Nadkarni, Murthy, Rao, & Crome, 2015; Moy, Crome, Crome, & Fisher, 2011).

3.2.1 Health changes after reducing alcohol consumption

Alcohol use is an important risk factor for the public health since it contributes to the development of non-communicable diseases. Therefore, it is important to prevent and reduce alcohol consumption by using health programs and interventions. Several studies have examined the health-related effects of a reduction in alcohol consumption or even alcohol abstinence. According to evaluations of alcohol abstinence challenges, such as 'Dry January' and 'IkPas', participants reported that they had more energy and slept better after one month of non-alcohol use (Bovens, Mathijssen, & Mheen, n.d.; De Visser & Nicholls, 2020). Research also showed improvement of physical health, mental well-being and drink refusal self-efficacy after completing the alcohol abstinence challenge (De Visser, Robinson, & Bond, 2016). These short-term beneficial changes imply thus that quitting alcohol use results in some direct health improvement. A study by Mehta et al. (2018) examined the effect of alcohol abstinence on cardiovascular risk factors, liver function and cancer-related growth factors in moderate drinkers. After one month of abstinence, they found improvements in insulin resistance and reduced levels of the vascular endothelial growth factor and epidermal growth factor which are important cancer-related growth factors (Mehta et al., 2018). Short-term alcohol abstinence also led to a decrease in serum alanine aminotransferase and serum aspartate aminotransferase which are important enzymes in amino acids metabolism (Mehta et al., 2018). These enzymes are a biomarker for liver health, so, a reduction of these serum levels implies improvement of liver function. On the same note, gamma-glutamyl transferase also decreased after one month of no alcohol consumption, which probably reflects reduced oxidative stress and an improved liver function (Munsterman et al., 2018). Furthermore, research has shown that reduced alcohol consumption as well as alcohol abstinence both lead to a decrease in systolic and diastolic blood pressure (Mehta et al., 2018; Roerecke et al., 2017). All the mentioned health improvements were measured in groups of participants with a mean age between 45 years to 55 years old. There are no studies that specifically focus on the health effects of alcohol abstinence in people older than 55 years. However, a relevant and interesting aspect is the fall incidence involving alcohol use among elderly people. Due to aging-related physical changes, older adults metabolise and eliminate alcohol at a slower rate resulting in higher alcohol concentration in the blood (Kuerbis et al., 2014). This may contribute to impaired walking and reduced balance which increases the risk for a fall (Ambrose, Paul, & Hausdorff, 2013). Moreover, Shakya et al. (2020) examined the characteristics of fall-related emergency department (ED) visits that involved alcohol use. They found that, among older adults, 50.2% of alcohol-indicated fall ED visits were with a head injury whereas this was 24.5% for fall ED visits that did not involve alcohol use (Shakya, Bergen, Haddad, Kakara, & Moreland, 2020). Such head injuries can lead to traumatic brain injuries which is often related to high mortality and morbidity in older adults (Karibe et al., 2017; Peterson & Kegler, 2020). So a reduction in alcohol consumption or alcohol abstinence among elderly may possibly lead to a decrease in the number of fall-incidents, resulting in a decrease of mortality and morbidity. However, more research is needed to better understand the role of alcohol as a risk factor for falls and related injuries among elderly people (Shakya et al., 2020).

3.3 Conclusion

It can be concluded that there is not one intervention or program that is effective in preventing and reducing problematic alcohol use. Yet, policy measures, enforcement and information sessions can be effectively used to positively change alcohol use in different environments. It is, thus, relevant to regulate and limit alcohol availability as well as to stop alcohol advertisements in sports clubs and the

catering industry. In addition, campaigns and education are essential to increase awareness about the negative effects of alcohol use and to create support for alcohol policy. Also, the involvement and responsibility of parents is an essential aspect in order to prevent and reduce problematic alcohol use. Policy measures and interventions regarding these aspects seem to be effective for both young and older adults, but most of them are mainly targeting young adults. So, more research is needed to understand alcohol use later in life and to indicate the effective elements of interventions that specifically target older adults. Elderly are an important target-group since serious health improvement can still be achieved later in life, after reducing alcohol consumption or alcohol abstinence.

4. Alcohol policy

4.1 Current alcohol policy

The national government aims to prevent problematic alcohol use as it has negative consequences for public health and entails high costs for society (Rijksoverheid, n.d.). They have put various laws and policies in place that contribute to reducing problematic alcohol consumption in different ways. The most important law is the so-called Liquor and Catering law which regulates the commercial supply of alcohol (Rijksoverheid, n.d.). It includes, among other things, the regulations for sale of alcoholic beverages and the possession and granting of a license (STAP, n.d.-b). In addition, the law prohibits the provision of alcohol to people under the age of 18 and the possession of alcoholic beverages in public places by those younger than 18 years old. By the Liquor and Catering law, municipalities have various authorisations regarding alcohol regulations (STAP, n.d.-a). The mayor has the authority to grant licenses or refuse an application of exemption that is, for example, requested in order to legally sell alcoholic beverages during an event. In addition, municipalities can temporarily prohibit the sale of alcohol by supermarkets, but also prohibit extreme prices actions on alcoholic beverages in the catering or retail industry (STAP, n.d.-a). Since 2014, municipalities are obliged, according to the Liquor and Catering law, to compose a prevention and enforcement plan every four years (STAP, n.d.-a; Trimbos instituut, n.d.). This statutory duty has been established as municipalities are now the main executive party due to the decentralisation of supervising the Liquor and Catering law. The prevention and enforcement plan outlines the municipal policy for the prevention of alcohol consumption and enforcement of the Liquor and Catering law. It includes objectives, preventive and enforcement actions, and intended results (STAP, n.d.-a; Trimbos instituut, n.d.). Furthermore, there are also some other laws that contain regulations concerning alcohol consumption in traffic, public alcohol intoxication and disturbance of public order, and advertising for the sale of alcoholic beverages (STAP, n.d.-b). Besides the legislations regarding alcohol, there are also policies in place aimed at preventing and reducing problematic alcohol use.

In 2018, the national government came to an agreement with more than 70 parties, including civil society organisations, entrepreneurs, branches, municipalities, health insurers and healthcare providers, to improve the public health of the Netherlands (Rijksoverheid, 2018). This is the so-called National Prevention Agreement (NPA) and includes agreements and measures to reduce smoking, overweight and problematic alcohol use. These three main topics have been chosen since they are the greatest cause for the disease burden in the Netherlands (Rijksoverheid, 2018). If we look at the topic problematic alcohol use, the following objectives have been formulated:

- No alcohol use among people under the age of 18.
- No alcohol consumption during pregnancy.
- Reducing excessive and heavy episodic drinking to only 5% of people older than 18 years with a focus on the proportion of excessive drinkers among 50+-year olds.
- Increasing the awareness of people's own drinking behaviour and the related effects.

Furthermore, objectives and approaches have been formulated in the NPA concerning alcohol in the school/study environment, marketing of alcoholic beverages, awareness of early detection of alcohol abuse, healthy sports environment, and compliance with and enforcement of age limits and public alcohol intoxication (Rijksoverheid, 2018). These approaches also include already existing national campaigns and programs, like NIX18-campaign, IkPas-campaign and Healthy at School program, in order to raise awareness on the effects of alcohol and to prevent problematic alcohol use. Thus, the NPA explicitly focuses on the health aspects of alcohol use, whereas the Liquor and Catering law focuses on the supply of alcohol.

Subsequent to the NPA, there is a law in place that governs the duties and authorisations of the government concerning public health care (Drewes, 2017). It is called the Law Public Health and prescribes the implementation of the International Health Regulations adopted by the WHO in 2005.

This law regulates collective prevention, elderly health care and the implementation of infectious disease control and youth health care (Rijksinstituut voor Volksgezondheid en Milieu, n.d.-d). Municipalities are responsible for the local interpretation and implementation of collective prevention and the GGD has the main executive task. One of these tasks is to contribute in developing and implementing prevention programs which also focus on the improvement of public health (Drewes, 2017). Such prevention programs can, for example, consist of preventing and reducing problematic alcohol use among citizens.

4.2 Frisian Prevention Approach

According to the National Prevention Agreement, GGD Fryslân developed a Frisian version of the prevention agreement in order to improve the health and lifestyle of citizens at local level (Friese Preventie Aanpak, 2020). This Frisian Prevention Approach (FPA) includes the three topics of the NPA, overweight, smoking and problematic alcohol use, which are incorporated in respectively the lifestyle programs Nuchter op Gewicht, Rookvrije Generatie and Nuchtere Fries. Moreover, the FPA focuses not only on these main topics, but aims to prevent and improve lifestyle and well-being in a broader sense (Friese Preventie Aanpak, 2020). GGD Fryslân wants to develop a more integrated approach that focuses on healthy lifestyle and well-being in all phases of life with equal opportunities for everyone. The FPA makes a distinction between different life phases based on various settings in which Frisian inhabitants find themselves and the challenges that occur per life phase (Friese Preventie Aanpak, 2020). A total of eight themes have been developed that are associated with a certain phase of life, including nurture, lifestyle, finances, education/work, health literacy, psychosocial health, living environment and health care services (Friese Preventie Aanpak, 2020). Each individual theme influences lifestyle and well-being yet by connecting these underlying factors the maintenance and improvement of a healthy lifestyle can be further promoted. FPA uses a network collaboration in order to improve cooperation between public and private organisations and to increase involvement in health prevention and improvement (Friese Preventie Aanpak, 2020).

4.3 Conclusion

In conclusion, the national government has put several policies and laws in place in order to prevent and reduce problematic alcohol use. These laws oblige the municipalities to actually execute preventive and enforcement actions regarding alcohol use and to improve and protect public health. It also provides the municipalities the executive power to implement alcohol policy measures and interventions at local level. Furthermore, the Frisian version of the NPA, developed by GGD Fryslân, also effectively contributes in preventing and reducing problematic alcohol use among the Frisian residents. So, several products are in place to stimulate and even oblige different parties to develop and implement alcohol policy and interventions.

5. GGD Fryslân

In order to examine the organisation structure of GGD Fryslân and its cooperation with the Frisian municipalities regarding the program Nuchtere Fries, an internal analysis has been performed. Based on the McKinsey 7S tool, the internal structure as well as the role and function of GGD Fryslân has been analysed. Also, the mission of the GGD Fryslân and their employees and skills have been identified. The internal analysis is partly based on knowledge gained during my work as an intern within the organisation and from conversations and meetings with various employees. Next to this, information from literature about the tasks and organisation structure of GGD Fryslân has been used as well.

5.1 Organisation structure

As part of the Safety Region of Fryslân, GGD Fryslân is organisationally structured in a partnership with crisis management, operational management and the fire brigade (Veiligheidsregio Fryslân, n.d.). They are jointly committed to a safe and healthy Friesland. A total of 647 FTE currently works for the Safety Region Fryslân of which 318 FTE for the GGD Fryslân (Veiligheidsregio Fryslân, 2020). The entire Safety Region of Fryslân, including GGD Fryslân, works on behalf of the Frisian municipalities and, according to the common arrangements, they are mainly financed by each municipality based on their number of inhabitants (Andersson Elffers Felix, 2017; Veiligheidsregio Fryslân, 2020). Besides, GGD Fryslân can also apply for certain subsidies from the national government. The board of GGD Fryslân is formed by the Health Board Committee and consists of the aldermen of Public Health of all Frisian municipalities (Veiligheidsregio Fryslân, n.d.). They decide on all substantive issues related to public health. GGD Fryslân has the ultimate mission to reduce the number of unhealthy life years for every Frisian resident.

The organisation structure of GGD Fryslân is divided in five departments consisting of Central Service and Support, a Corona Team and the three regions of GGD Fryslân; region North, region South-East and region South-West (Fig. X). Each region of GGD Fryslân has their own manager and each of them has their own portfolio. The region manager of South-East is responsible for the portfolio lifestyle. All region managers and the manager of Central Service and Support, together with the management board secretary and the director of Public Health, form the management team of GGD. This management team makes decisions about the goals, approach and implementation of GGD Fryslân within the frameworks set by the Health Board Committee. Furthermore, GGD Fryslân provides a youth health care team (JGZ team) to every Frisian municipality which together form the YHC department within a region of GGD Fryslân. **Figure 1** shows all Frisian municipalities that are divided into the region South-East. The GGD region South-East has also a Policy & Advice team that provides advice and support to the municipalities and focuses on the subject lifestyle.

GGD Fryslân employs many different employees who cooperate closely with each other. The organisation has its own policy advisers, doctors, nurses, pedagogues, health promoters and youth healthcare workers employed who are knowledgeable and provide good advice and support. If specific skills or knowledge are needed for a certain project, employees know how to find each other internally and they are willing to help each other. The mutual cooperation of employees also stimulates a more integrated approach to public health policy and, for instance, strengthens the interconnection between the lifestyle programs of the FPA. Moreover, employees often have diverse work and sometimes they fulfil multiple functions. In this way, expertise is shared among several employees and more knowledge is obtained when fulfilling different functions. There are no clear guidelines for assigning functions, this depends on the availability and competences of employees. By offering to hold multiple functions, GGD Fryslân also tries to keep the work activities varied and challenging. As a result, employees experience more pleasure in their work.

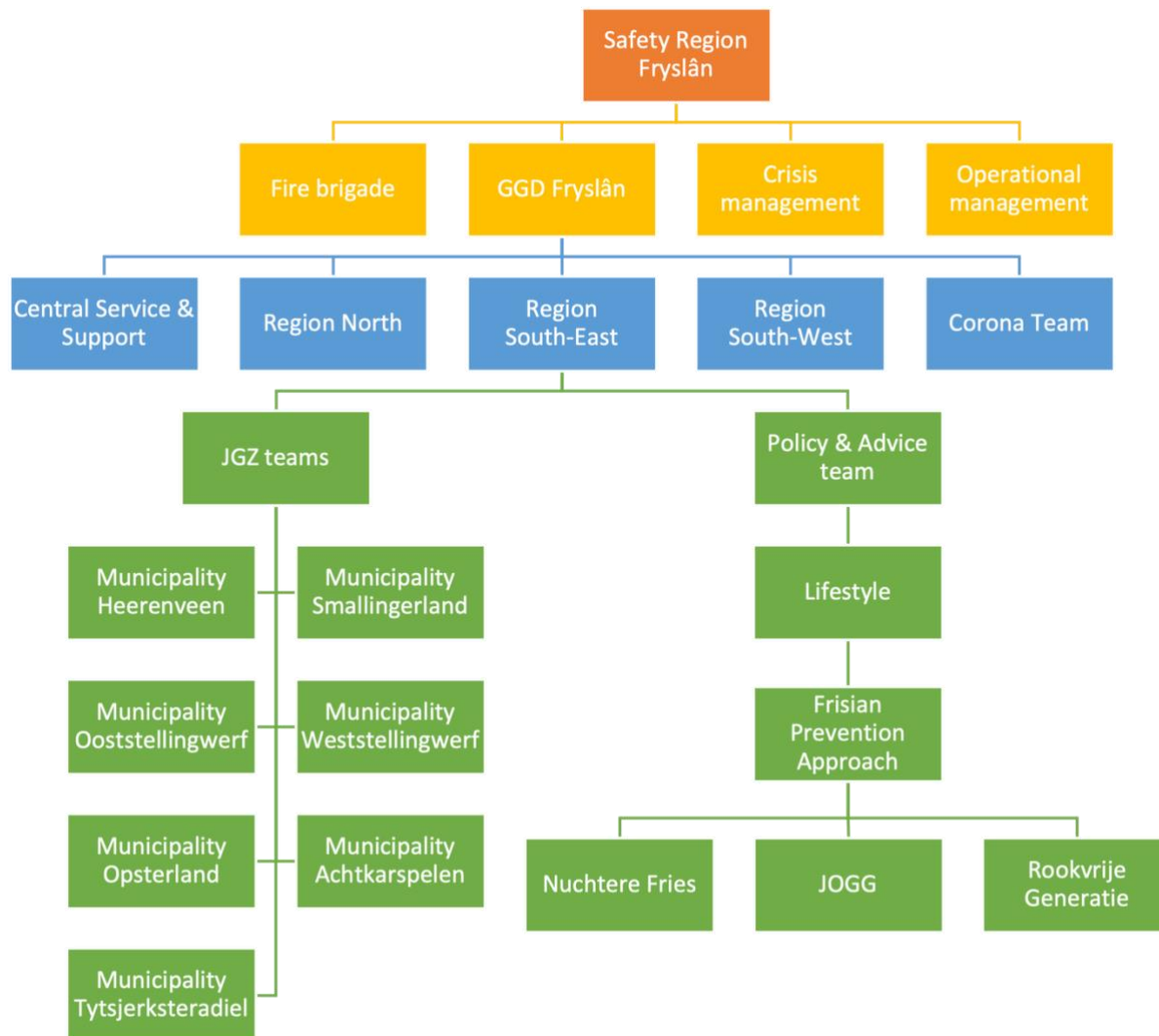


Figure 1. Schematic overview of the internal organisation of GGD Fryslân.

Concerning the implementation of alcohol policy and execution of certain interventions, several different employees of GGD Fryslân can make a relevant contribution to this. Firstly, the policy advisers of the Policy & Advice team. They are aware of how things are going within a municipality concerning health-related projects, such as the Frisian Prevention Approach and ‘Gezonde School’ program. So, GGD Fryslân operates at provincial level, but maintains hereby also an overview of the situations in all Frisian municipalities. This is an important property of GGD Fryslân, since many health problems transcend municipal boundaries. Furthermore, the policy advisers gauge the basic needs of the municipalities, check or ask what is needed and offer advice in order to maintain and improve their public health. Yet, they do not actively promote or market the products and projects that GGD Fryslân can offer to support the municipalities. As the GGD policy advisers focus on several different Frisian municipalities, the approach of each municipality regarding public health and lifestyle can be compared which is an relevant advantage. In this way, both GGD Fryslân and the Frisian municipalities can learn from each other about effective health programs and interventions. Next to the policy advisers, the health promoters can also play an important role for the program Nuchtere Fries. They aim to directly improve the health of the specific target group and are in close contact with the Frisian residents. They can be deployed by the GGD in one or more Frisian municipalities and they have a few hours available every week to tackle alcohol problems. In this way, relevant alcohol policy measures

and interventions can be effectively implemented or executed for the relevant target group at local level.

In order to stay up to date about alcohol-related knowledge for GGD Fryslân as well as to remain expert in alcohol prevention approaches, the Trimbos Institute provides the organisation useful and essential knowledge. The Trimbos Institute, namely, examines the alcohol consumption and its effects, and provides information about alcohol prevention and interventions. From all the information and programs available, GGD Fryslân determines what will be relevant and effective for the regional approach in Friesland and advises the municipalities on this. The important difference between information and advices of Trimbos Institute and GGD Fryslân is due to their area level at which they operate. The Trimbos Institute is a national organisation that is mainly aware of the national situation and has no knowledge about the specific situation in Friesland. This would be a major obstacle for the cooperation and implementation of policies at local level. In contrast, GGD Fryslân is well informed about the situation at provincial and local level and knows all parties within the network and maintains contact with them. They also have close contact with the Frisian municipalities and cooperate with them for the implementation of alcohol policy and interventions at local level. Moreover, GGD Fryslân not only supports national health programs, but also develops interventions and projects that better meet the local needs in Friesland. GGD Fryslân is, thus, both expert in the field of public health as well as provincially oriented with a good overview of the local situations of all Frisian municipalities.

5.2 The cooperation between GGD Fryslân and the Frisian municipalities

All Frisian municipalities have a policy officer Public Health and a policy officer Public Order and Safety. Together these policy officers have the statutory task to implement and execute policy aimed at preventing and reducing problematic alcohol use at local level. Each municipality can determine for itself whether and on which objectives it wants to work in the field of alcohol policy and prevention. After approval, the objectives are included in the four-year policy plan by the College of Mayor and Aldermen. As soon as these goals are actually included in the policy plan, policy officers are obliged to implement and execute it and the municipality makes money available for this. Besides, if the municipality decides to proactively work on reducing problematic alcohol use, this also acts as a signal to the rest of the region that it is important to devote time and attention on this subject. The municipality is, therefore, also a sort of role model to other parties.

At local level, the policy advisor of the GGD works together with the relevant policy officers of the municipality. The GGD policy advisor knows the policy officers involved and is aware of their plans regarding public health and prevention, when certain projects will start and with what kind of subsidy. In addition, the GGD policy advisor maintains contact and a good relationship with the policy officer(s) which promotes their collaboration and proactive implementation of projects that contribute to the improvement of public health. This is, namely, the task of both the municipality and the GGD. Therefore, up to date knowledge is necessary, but also a positive mindset and motivation to work proactively and cooperate.

In the cooperation between GGD Fryslân and the Frisian municipalities there is a kind of dual role for the GGD. On one hand, GGD Fryslân has an advisory role towards the municipalities, on the other hand it has an executive role. The decision-making is entirely the task of the municipalities. Moreover, the GGD has an important advantage regarding the implementation of alcohol policy and prevention, compared to the municipalities. The policy officers of the municipalities are, namely, dependent on the local political support. The Municipal Council and College of Mayor and Aldermen determines whether and to what extent the municipality pays attention to alcohol policy and prevention. In addition, they also determine which resources and manpower will be made available for this. Even though, the aldermen of Public Health of all Frisian municipalities form the board of GGD Fryslân, in which is decided to focus on alcohol prevention, the local political support is often lacking for this

subject. In contrast to the municipal policy officers, the policy advisers of GGD Fryslân are politically independent and only focuses on improving the public health of all Frisian resident. In addition, the GGD policy advisers can apply for subsidy for health programs and interventions from the ministry of Health, Welfare and Sport, since projects can often be used for several municipalities. It is, therefore, not always necessary to ask for financial support from municipalities.

5.3 Conclusion

In conclusion, as a non-political health service for all Frisian municipalities, GGD Fryslân is a suitable organisation to stimulate and coordinate the implementation of alcohol policy and alcohol prevention programs. The organisation, namely, has expertise in public health and effective lifestyle interventions and has relevant knowledge about the local situation in Friesland. In order to improve the lifestyle and well-being of the citizens, GGD Fryslân and the Frisian municipalities work closely together. Interestingly, GGD Fryslân not only provides advice and support for the implementation of health programs and policies but also develops and executes health programs for the municipalities. This is a strange dual role as it gives GGD Fryslân the opportunity to advise their own programs to the Frisian municipalities. In addition, the cooperation between both parties is remarkable and complex since the board of GGD Fryslân is formed by the aldermen of Public Health of all Frisian municipalities. They decide on the substantive issues related to public health including the goals of GGD Fryslân and the execution of the health programs. In practice, however, GGD Fryslân sometimes lacks the willingness and political support of municipalities to jointly implement the health programs and interventions. Besides, GGD Fryslân is financed by all Frisian municipalities which makes the GGD dependent on them. So, the cooperation between GGD Fryslân and the Frisian municipalities is very complicated but at the same time really important for improving the health and lifestyle of the Frisian residents.

6. The program Nuchtere Fries and its stakeholders

6.1 Program Nuchtere Fries

In 2008, the province of Friesland started the campaign Nuchtere Fries to raise awareness about alcohol consumption and its effects on younger people (Platform Nuchtere Fries, n.d.; Stuurgroep Nuchtere Fries, 2017). This campaign was created in response to the increase in alcohol consumption among young people and the fact that alcohol use started at an increasingly younger age. Over the years, the Nuchtere Fries campaign has further developed into one of the lifestyle programs of the FPA and contributes to protecting and improving public health in all phases of life.

The program Nuchtere Fries focuses on preventing and reducing problematic alcohol and drugs use among the Frisian inhabitants (Stuurgroep Nuchtere Fries, 2017). Their ambition is to create an alcohol-free and alcohol-conscious environment. Problematic alcohol use is caused by many different factors and is not limited to municipal boundaries. Therefore, an integrated approach is needed to tackle alcohol problems, together with a close cooperation between all parties involved at provincial level (Platform Nuchtere Fries, n.d.). Platform Nuchtere Fries is such a cooperation network for the program Nuchtere Fries and consists of all Frisian municipalities, GGD Fryslân, the police, Verslavingszorg Noord-Nederland (VNN), and the Koninklijke Horeca Nederland (KHN) (Platform Nuchtere Fries, n.d.). They join forces and share knowledge and experiences in preventing and reducing problematic alcohol use. The platform Nuchtere Fries aims to raise awareness concerning the effects of alcohol use and to eventually change the norm from consuming alcohol to not consuming alcohol (Stuurgroep Nuchtere Fries, 2017). Moreover, all partners made cooperation agreements together in order to jointly support and implement the program Nuchtere Fries. These agreements include that everyone contributes actively to the program, joint agreements are made on interventions which may be deployed, success experiences and knowledge are shared within the network and all parties involved work together under the name Nuchtere Fries (Stuurgroep Nuchtere Fries, 2017).

Currently, several products and interventions are developed within Nuchtere Fries which can be used by all Frisian municipalities. These products, shown in **figure 2**, focus on the different environments where alcohol is consumed, including events, catering industry, sport clubs and social settings with friends and family. Here, the aim is to reduce the availability of alcohol and to increase the awareness on the effects of alcohol among mainly young adults and parents. According to the last aspect, campaigns and information sessions at schools play an important role in this and contribute to changing the norm about alcohol use. Moreover, Platform Nuchtere Fries has made cooperation agreements with all their partners in order to jointly support and implement the program Nuchtere Fries. These agreements describe that everyone contributes actively to the program, joint agreements are made on interventions which may be deployed, success experiences and knowledge are shared within the network and all parties involved work together under the name Nuchtere Fries.

6.1.1 Nuchtere Fries period 2018 - 2021

At the end of 2021, the current period for the program Nuchtere Fries expires. Therefore, the program and the associated cooperation network Platform Nuchtere Fries is now evaluated in order to indicate whether and how Nuchtere Fries should continue in the future. The results of this evaluation will contribute in setting new goals for the lifestyle program and to determine the relevant factors to focus on for a potential upcoming period. During the evaluation of the first period of Nuchtere Fries (2014-2017), the Frisian municipalities were positive about the results achieved so far, but still a lot had to be done in order to achieve an alcohol-free and alcohol-conscious environment (Stuurgroep Nuchtere Fries, 2017). Examples of these positive results were the meetings to share knowledge and experiences, new interventions concerning parents and events, and the Frisian format for the prevention and enforcement plan. Aspects to focus on in the future for Nuchtere Fries included better feedback and interaction between all municipalities as well as more publicity campaigns from

Nuchtere Fries. The approach for the period of Nuchtere Fries 2018-2021 focuses on three main pillars including policy & regulations, enforcement, and public support & information (Stuurgroep Nuchtere Fries, 2017). By setting boundaries and guarding them as well as supporting and transferring these boundaries, Nuchtere Fries contributes to an effective prevention policy regarding alcohol use. With this approach, several different policy areas are involved in the prevention and alcohol policy, including public order and safety, public health, welfare and sport, youth, and education (Stuurgroep Nuchtere Fries, 2017).

Support for municipalities

- GGD monitor - hotspot compliance survey - fact sheet for event support
- Frisian format prevention and enforcement plan
- Step-by-step plan for improving compliance with the age limit for serving alcohol
- Meetings with the platform Nuchtere Fries

Supporting national campaigns

- NIXzonderID
- IkPas
- Zien drinken doet drinken (2021)

Parents

- Alcohol consultation by VNN
- Alcohol advisory group at primary school by Youth Health Care
- List of statements with myths about alcohol for information session for parents at primary school
- Podcast for parents about the impact of alcohol intoxication on the family

Events

- Wristbands with age for event organisers
- ID readers on loan for event organisers
- Breathalyzers for event organisers
- Guide to alcohol policy for organisers and to event policy

Sports clubs & Community centres

- Support offer Team:Fit for establishing responsible alcohol policy

Figure 2. Overview of all products offered by the program Nuchtere Fries

6.2 Cooperation of all organisations within Nuchtere Fries

Many different actors can directly or indirectly influence the prevention and reduction of problematic alcohol use among Frisian inhabitants. **Figure 3** provides an overview of all actors involved and their role in tackling alcohol problems within the province of Friesland.

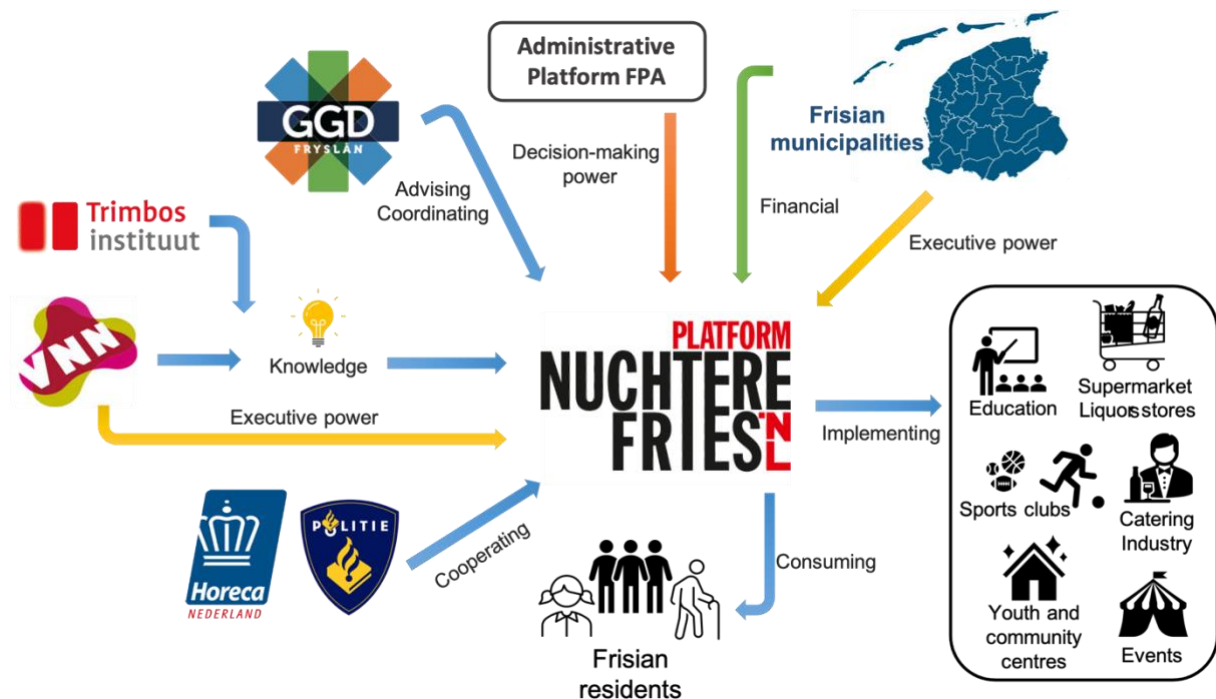


Figure 3. Schematic overview of all actors involved in the program Nuchtere Fries. Green arrow represents money flows. Orange arrow represents decision-making power. Yellow arrows represents executive power. Blue arrows represents other relations.

6.2.1 GGD Fryslân

GGD Fryslân coordinates the program Nuchtere Fries and has the expertise in alcohol prevention. The main interest in Nuchtere Fries for GGD Fryslân is to jointly achieve more healthy and vital years for all Frisian residents. GGD Fryslân provides the project leader for Nuchtere Fries and develops several products and interventions that contribute to preventing and reducing problematic alcohol use. In addition, they monitor the alcohol consumption among Frisian residents by collecting and analysing data of compliance and health studies. The GGD Fryslân uses this information to support and advise the Frisian municipalities on the implementation of alcohol policy and prevention.

6.2.2 The Frisian municipalities

The Frisian municipalities are the most important executive party in preventing and reducing problematic alcohol use. They implement the alcohol policy and determine which products or interventions will be used locally by, for example, schools, sports clubs and supermarkets. Their interest in Nuchtere Fries consist of sufficient advice and support in improving public health, especially for problematic alcohol consumption. Within the program Nuchtere Fries, the Frisian municipalities work closely together on the implementation of alcohol policy and prevention. GGD Fryslân, namely, has the knowledge about alcohol use and effective interventions, while the Frisian municipalities have the local contacts and knowledge about local problem. In addition, the Frisian municipalities have the executive power to implement the program Nuchtere Fries at local level. Therefore, the cooperation between GGD Fryslân and the Frisian municipalities is essential for effective execution of the program Nuchtere Fries. However, the Frisian municipalities seems to expect another role and function of GGD

Fryslân within Nuchtere Fries compared to expectation of GGD Fryslân. Most Frisian municipalities assume that GGD Fryslân has an advisory role and does not interfere with the execution of the program. In fact, GGD Fryslân develops and offers several products for preventing and reducing problematic alcohol use at local level. This difference in expectations of both parties in terms of role and function within the program leads to some friction in the collaboration. As a result, GGD Fryslân and the municipalities do now not use each other's strengths optimally which reduces the synergy.

6.2.3 The administrative platform FPA

The Frisian municipalities are also partly involved in the decision-making about the continuation of the program Nuchtere Fries. This is, namely, decided by the administrative platform FPA consisting of at least four aldermen of Public Health from different Frisian regions, the alderman of Lifestyle, the FPA program manager, GGD Fryslân, and several other major stakeholders among which Aletta Fryslân, Sport Fryslân and health insurer De Friesland. They decide on the goals of the Frisian Prevention Approach and, therefore, also on the continuation and goals of the Nuchtere Fries program. For the administrative platform FPA, the main importance of Nuchtere Fries is an effective program with useful resources that contribute to improving public health.

6.2.4 Verslavingszorg Noord Nederland (VNN)

Within the platform Nuchtere Fries, VNN provides knowledge about alcohol use in practice and executes a number of interventions, including parent counselling sessions and the 'Helder op School' program which is part of the Healthy School program. Their interest in Nuchtere Fries and its platform is to work on alcohol prevention together with stakeholders at provincial level and create broad support in this.

6.2.5 The police and Koninklijke Horeca Nederland (KHN)

KHN and the police are the least actively involved parties in the platform Nuchtere Fries. The police are responsible for the prevention of nuisance caused by alcohol use which is the repression aspect of the alcohol policy. KHN is the trade association of the catering industry and represents the catering industry within the platform Nuchtere Fries. They do not have a direct active contribution to Nuchtere Fries, but they think along and put themes related to alcohol use on the agenda. Yet, KHN is an important actor for Nuchtere Fries as they can influence the catering industry and, for example, improve the compliance with the sale of alcohol to adults (18+ years) only. In addition, they have a large network which could be very useful for Nuchtere Fries. KHN has, thus, great potential to cooperate more within the Platform Nuchtere Fries, but currently their contribution to preventing and reducing problematic alcohol use is insufficient in Friesland.

6.2.6 Trimbos Institute

An important actor but not involved in Platform Nuchtere Fries, is the Trimbos Institute. This knowledge institute provides relevant information about alcohol use and its negative effects, alcohol prevention and effective interventions to reduce alcohol consumption. They do not participate in the platform Nuchtere Fries as they operate at national level and have no knowledge of the local situation and needs in Friesland. Nevertheless, GGD Fryslân and also Frisian municipalities consult the Trimbos Institute for their knowledge and then check for themselves what is necessary or suitable at the provincial or local level.

6.2.7 Users and consumers

Lastly, there is a large group of users that execute the interventions or use the products of the program Nuchtere Fries. In addition, this group includes consumers who drink alcohol and make use of certain interventions or products to prevent and reduce their alcohol consumption. This group of users and consumers consists of:

- Supermarkets and liquor stores
- Catering industry, including pubs, bars and nightclubs
- Events and festivals
- Sports clubs
- Schools
- Youth and community centres
- Frisian residents

The first three groups mentioned above all sell alcoholic beverages and liquor. This gives them an important role in the prevention of alcohol consumption as it is illegal to sell alcohol to young people under 18 years. They all must comply with this policy which is controlled by enforcement of the municipality. If they do not comply with the policy measure, municipalities will first warn them about this. After that, if the compliance does not improve, the municipality can also provide a fine. This also applies for the youth centres and neighbourhood associations where people come together and may consume alcohol. Furthermore, sports clubs are another relevant actor in the group of users since they also sell alcoholic drinks in the canteen during and after sports competitions. Schools have an important role in prevention and increasing awareness among young adults by educating them about the effects of alcohol use. All the aforementioned parties are relevant actors for implementing and executing alcohol policy measures and interventions to prevent and reduce problematic alcohol use among citizens. They all have a key role in creating an alcohol-free and alcohol-conscious environment. Eventually, the Frisian residents are the most important actor as they determine their own drinking behaviour. They are the consumers of both the alcoholic drinks but also of interventions and products if they want to reduce their alcohol consumption.

6.3 Conclusion

In summary, the program Nuchtere Fries contains relevant information and products for the Frisian municipalities to use and to implement in order to effectively prevent and reduce problematic alcohol use. The different products clearly focus on different aspects and environmental factors that influence alcohol use among young adults. Therefore, the content of the program fits well with the ambition of Nuchtere Fries to create an alcohol-free and alcohol-conscious environment. In addition, Nuchtere Fries has a provincial cooperation platform with relevant stakeholders that can jointly contribute to achieve this ambition. However, this platform can be better utilized since GGD Fryslân is mainly cooperating with the Frisian municipalities and VNN but little with HKN and the police. Although all parties involved in the Platform Nuchtere Fries have jointly made cooperation agreements, not everyone provides equal input in the prevention and reduction of problematic alcohol use among citizens in Friesland. This should, therefore, be improved in order to effectively execute the program Nuchtere Fries.

7. Evaluation of Nuchtere Fries

7.1 Process evaluation

The current period of the program Nuchtere Fries expires at the end of 2021. Therefore, I have evaluated the content and organisation of the program in order to indicate whether and how GGD Fryslân should continue with Nuchtere Fries. A process evaluation has been conducted to map the success factors and to identify the aspects that need to be improved or eliminated. Almost all Frisian municipalities are interviewed to gain input for the advice on the continuation of the program and its cooperation platform. This process evaluation focuses only on the Frisian municipalities as they are the main executive power within the program Nuchtere Fries. The local parties that implement alcohol policy and interventions mainly work together with the municipalities and have no direct contact with GGD Fryslân and the program Nuchtere Fries. In addition, some parties at provincial level, including the HKN and the police, are only little involved in the Nuchtere Fries and have little influence on the implementation of the program. Together with the time constraints of this project, it was therefore decided to only interview the Frisian municipalities for the evaluation of Nuchtere Fries and not include these other parties. Eventually, fourteen of a total of eighteen Frisian municipalities were interviewed.

The approach for the interviews was based on the *appreciative inquiry* method which focuses on the strengths and possibilities instead of the weaknesses and problems (Whitney & Trosten-Bloom, 2010). Questions were asked from a more positive approach and attention was paid to aspects that are going well. The interview was split into three main parts consisting of the current situation, the ideal future and concrete goals for the near future of Nuchtere Fries. In the first part, I discussed with the municipality their current alcohol policy and prevention approach and looked back on their experience with Nuchtere Fries over the past four years. Here, we first focused on the activities at broader level and then zoomed in to the collaboration with Nuchtere Fries and their support at regional level. After that, we zoomed in further to the local level and discussed the local cooperation and execution of the program Nuchtere Fries. The second part of the intervention consisted more of a short brainstorm session in which we shared our ideas about the ideal future. We discussed the products and results that are necessary for a future in which young people under the age of 18 do not drink alcohol and adults drink alcohol according to the directive of the national health council. In the last part of the interview we concretized the products from the ideal future into relevant goals for the potential upcoming period of Nuchtere Fries. The municipalities identified three main goals on which Nuchtere Fries should focus in the near future and gave suggestions on how each goal should efficiently be achieved. In **Appendix I to V**, an overview is provided per section of all the results from the interviewed municipalities.

7.1.1 Current local alcohol policy and prevention

According to the Liquor and Catering law, every municipality is obliged to compose a prevention and enforcement plan. All Frisian municipalities have worked on such a plan, but there is a clear difference in its progress. Two municipalities explicitly mentioned that they're still writing the prevention and enforcement plan, whereas five municipalities are currently working on the implementation plan. Three municipalities are already finished and are now executing their preventive and enforcement actions. Worth mentioning, all municipalities indicated that alcohol policy and prevention is currently of low priority due to the COVID19-crisis. There is now not enough time to address and implement this. Normally, nine of the fourteen interviewed municipalities work within a local team of various stakeholders on the implementation of their prevention and alcohol policy. These local teams differ, between municipalities, in their approach and composition of the involved parties. Some municipalities meet with this team only several times a year to share knowledge and information, while other teams work together on specific goals to prevent and reduce problematic alcohol use. Two municipalities also have a coordinator for substance use who is responsible for the implementation plan and the cooperation with local stakeholders. Furthermore, all municipalities check the catering

industry and nightclubs for compliance with the policy measures concerning the Liquor and Catering law. Two municipalities also have a covenant with supermarkets for compliance checks on the sale of alcoholic beverages to people aged 18 years and older only. With regard to preventive actions, schools in all Frisian municipalities provide information to adolescents about alcohol consumption and its consequences. In three of the fourteen municipalities, schools make use of the so-called 'Helder op School' program which is part of the Healthy at School program and is provided by VNN. Besides educating adolescents, the parents are also informed on the effects of alcohol use among younger people by schools via information sessions and parent counselling. Not all municipalities have these information sessions for parents, only five of them explicitly mentioned this preventive action. Another relevant environment in which attention is given to the prevention and reduction of alcohol consumption are the sports clubs. Nine of the fourteen municipalities are promoting and starting with healthier sports canteens and two of them are already working on this topic within the program of Team:Fit. Moreover, only one municipality has specific times when alcohol drinks may be sold and closing times for para-commercial establishments, like sports clubs and community centres. Here, also no alcoholic drinks are sold during youth matches or youth activities. Lastly, there are a few municipalities that have their own local alcohol prevention program, such as the pilot of the Icelandic prevention model.

Overall, the Frisian municipalities are adequately equipped with knowledge, skills and information facilities in order to work effectively on alcohol prevention and policy.

There are clear differences in the implementation of alcohol policy and interventions between Frisian municipalities. Not only are municipalities focusing on different aspects, but there is also a difference in the amount of effort municipalities make to prevent and reduce problematic alcohol use. In summary, the results about the current local alcohol policy and interventions show that

- All municipalities have a **prevention and enforcement plan** which includes tasks and objectives regarding alcohol policy and prevention.
- The majority of the municipalities **check the catering industry** for compliance with alcohol policy measures.
- Most municipalities have a **local team** to jointly work on alcohol policy and prevention and they mainly focus interventions for **schools and sports clubs**.
- Only a few municipalities focus on **providing information to parents** about the effects of alcohol use.

7.1.2 Experience with the program Nuchtere Fries

The majority of the Frisian municipalities is positive about the Nuchtere Fries. However, there are different opinions about the effective approach and function of the program and its collaboration platform. Eight municipalities were satisfied with the study into the compliance with the age limit for selling alcoholic beverages. It is helpful that one party at provincial level executes this investigation for the municipalities, which provides a clear overview of the current situation at local level. However, it might be relevant to conduct the compliance study more broadly by checking more hotspots and possibly sports clubs. In addition, most municipalities pointed out that Nuchtere Fries is an useful platform to share knowledge and experiences with other Frisian municipalities, but it should be better utilized in the future. Remarkably, only a few municipalities emphasized the importance of Friesland-wide cooperation to share the responsibility for preventing and reducing problematic alcohol use. This is essential since problematic alcohol use transcends municipal boundaries. Furthermore, nine of fourteen municipalities were positive about the advice and support of the program leader and/or the products provided by Nuchtere Fries. Conversely, there were also three municipalities for whom the function and role of Nuchtere Fries was unclear. They were also not familiar with the products offered by Nuchtere Fries. Worth mentioning, the municipalities that are less involved and up-to-date about the Nuchtere Fries also consider more often alcohol policy and prevention as low priority and focus less on this subject. Only one municipality has explicitly mentioned that continuation of the program

and platform Nuchtere Fries is not necessary. Moreover, the cooperation within Nuchtere Fries was not of added value for a number of municipalities and two of them did not find the available products useful either. This last aspect may be due to insufficient guidance and support in the implementation of new products according to two municipalities.

In summary, the process evaluation provides the following results about the experience and opinion on Nuchtere Fries, according to the Frisian municipalities.

- Most of them are positive about the **study into the compliance** with the age limit for selling alcoholic beverages.
- Several municipalities are **satisfied with both the products and the advice and support** offered by Nuchtere Fries.
- A number of municipalities finds the platform Nuchtere Fries useful **to share knowledge and experiences** about interventions.
- A few municipalities find the program and platform of Nuchtere Fries **not of added value**.

7.1.3 Essential aspects for alcohol prevention in the ideal future

The most important result in an ideal future is a change in the norm of alcohol consumption. All municipalities unanimously agreed that it should not be normal to drink alcohol and certainly not in large quantities or under the age of 18 years. It is, therefore, important to involve the local society and work together from different environments on preventing and reducing alcohol use. Various products and results can contribute to changing this norm and reducing alcohol consumption according to the Frisian municipalities. A frequently mentioned result is offering positive alternatives that are more healthy and affordable in comparison to alcoholic drinks. One municipality gave even the example of so-called 'fris-café's' which are non-alcoholic clubs and pubs. It is also relevant to no longer advertise alcoholic beverages and instead promote alcohol-free alternatives in local environments such as sport canteens and pubs. Furthermore, alcohol policy and prevention should not only target the young adults, but must also sufficiently involve the parents. Almost all municipalities mentioned the importance of increasing the awareness about the negative effects of alcohol use on health among parents. Besides, parents must positively change their attitude towards drinking alcohol and need to learn to set clear rules about alcohol use for their children. These aspects together may increase the involvement and responsibility of parents in preventing and reducing problematic alcohol use. Moreover, relevant environments, such as schools, sports clubs and pubs, should pay more attention to reducing and preventing alcohol use. Schools are already paying close attention to alcohol consumption and its consequences, and they should continue to provide information about this to young adults. Ideally, sports clubs should no longer serve alcohol, but otherwise specific times should be introduced for selling alcoholic beverages. Several municipalities also indicated that the catering industry must better comply with the age-limit of 18 years for selling alcohol and that price promotions and happy hours should be banned. In addition, the catering industry must take their responsibility when they see an increase in problematic alcohol use, by informing the municipality and local community about this. Another relevant aspect listed by a number of municipalities is the commitment and responsibility of the local government concerning alcohol policy and prevention. The internal cooperation must be improved and alcohol policy must be a common topic for the Public Health policy officer and the Public Order and Enforcement policy officer. Besides, the municipalities must be aware of their position as role model and should no longer serve alcoholic beverages. For example, in one Frisian municipality, the College of Mayor and Aldermen jointly participated in the IkPas campaign. Other relevant results of an ideal future that were mentioned were a policy for not serving alcoholic drinks in work and school settings and less availability of alcoholic drinks for young people in social circles. Overall, our alcohol consumption is a deeply rooted problem in our society and it takes time to achieve such a societal change. Yet, all municipalities agree that they must continue to focus on preventing and reducing problematic alcohol use, since doing nothing is no option.

According to the Frisian municipalities, the following aspects are thus essential for an ideal future with no problematic alcohol use.

- The **norm needs to change** about alcohol consumption.
- **Raise awareness** about alcohol consumption and its effects.
- More **parental involvement** in preventing and reducing problematic alcohol use.
- Offering more **positive alternatives** for alcoholic-beverages.

7.1.4 Goals for Nuchtere Fries concerning alcohol policy and prevention

The Frisian municipalities suggested a number of different goals for Nuchtere Fries to focus on in the potential upcoming period. Several municipalities found it important to share more knowledge, experiences and best practices within the platform of Nuchtere Fries. Here, GGD Fryslân should take on a facilitating role by keeping the municipalities informed and by sharing products of successful interventions like the policy documents and action plans. In addition, GGD Fryslân should still organise meetings with the parties involved in Nuchtere Fries according to some municipalities. However, these meetings should be more easily accessible and informal, and that municipalities can share their experiences and discuss different approaches concerning alcohol policy and prevention. Moreover, GGD Fryslân could make an inventory of local and current alcohol problems in municipalities in order to determine whether and which municipalities can jointly work on a specific aspect. GGD Fryslân, namely, should not force all Frisian municipalities to cooperate with every aspect of alcohol policy and prevention. Yet, they must focus more on the enthusiastic and motivated municipalities and other parties in order to successfully develop and improve alcohol policy and interventions. Furthermore, there were only two municipalities that explicitly mentioned to maintain the cooperation platform of Nuchtere Fries with all parties involved. This is, according to them, a relevant contribution to jointly work on alcohol policy and prevention. Another important objective for Nuchtere Fries is the involvement and responsibility of parents in reducing and preventing problematic alcohol use. Some municipalities suggested to share knowledge within the platform Nuchtere Fries about effective elements of interventions targeting parents and pilot studies such as the Icelandic prevention model. Besides, several municipalities find it also essential to involve young adults in the development of interventions and prevention programs. In this way, better attention is paid to the perception and experience of young people which may contribute to developing more effective interventions. In addition, it would be effective to combine alcohol prevention with education about resilience skills and other competences for young adults. Three municipalities would like to better include the Nuchtere Fries in the FPA program in order to work on lifestyle improvement with a more integrated approach. Other municipalities pointed out the importance of good cooperation with local parties in order to effectively work on alcohol policy and prevention. In accordance with this, sufficient support and more responsibility is required from the local government. It would also be helpful if the national government makes more resources, like money, working hours and intervention programs, available to use. Lastly, it remains important to stay focused on preventing and reducing problematic alcohol consumption by using the current products and interventions according to most Frisian municipalities.

‘It is like an alcohol breathalyser, you just have to keep blowing’

So, several different objectives for the program Nuchtere Fries are suggested by the Frisian municipalities. This also indicates that there are some differences in the interests and needs of the municipalities regarding alcohol policy and prevention. Overall, the following goals emerged the most:

- **Keep paying attention** to preventing and reducing problematic alcohol use.
- **Share knowledge, experiences and best practices** within Nuchtere Fries.
- Focus more on **parental involvement** regarding alcohol prevention.

7.2 Program evaluation

The scientific literature prescribes a number of effective interventions or elements for the prevention and reduction of problematic alcohol use, as elaborated in chapter 3. In order to determine whether Nuchtere Fries is a sufficient and effective program, the content of the program is evaluated and compared with the recommendations from scientific literature.

Starting with the regulation and limitation of the physical availability, Nuchtere Fries provides an useful and effective product. They investigate the compliance of the age-limit of 18 years for selling alcohol in clubs and pubs in all Frisian municipalities. This is a relevant product for the enforcement of the alcohol policy since municipalities use the results to address the catering establishments with insufficient compliance or even penalise them. In addition, Nuchtere Fries provides a roadmap to improve the compliance with the age-limit for serving alcohol and offers several products to check and improve compliance of alcohol policy at events (**figure 2**). According to literature, it is also effective to introduce specific serving times for alcoholic beverages as well as closing times for pubs and clubs because this contributes to reducing the alcohol consumption. In line with this, various studies recommended to develop policy measures for the prohibition of serving alcohol in public places, such as schools, sports clubs and city halls. For all these effective elements, Nuchtere Fries has not yet developed specific products or formulated any advice towards municipalities. So, it would be interesting for Nuchtere Fries to examine the possibilities for this. Moreover, research also indicated the importance of prohibiting alcohol advertising, price promotions and happy hours. Nuchtere Fries is currently examining whether policy measures can be developed, together with municipalities, to counter this. The program 'Gezonde Sportkantine' of Team Fit already pays attention to this aspect, but no other concrete products or advice has been developed for this by Nuchtere Fries.

Effective means to increase knowledge and awareness about alcohol use and its consequences among citizens, are campaigns and education. Hence, Nuchtere Fries supports national campaigns like NIXzonderID and IkPas, and advises schools to implement the program 'Helder op school' (**figure 2**). This education program appears to be successful in preventing and reducing alcohol consumption among adolescents and it distinguishes different age-groups which increases its effectiveness. Furthermore, several studies showed that parents and different environmental factors are of main influence on drinking initiation and drinking behaviour among young adults. It seems to be important to focus on prevention and reduction of alcohol use in different environments of young adults, such as school, sports clubs, neighbourhoods and catering industry. This is equivalent to the ambition of Nuchtere Fries to create an alcohol-free and alcohol-conscious environment. In order to achieve this, Nuchtere Fries provides parent counselling sessions and webinars about the effects of alcohol use, in cooperation with VNN, schools, youth health care and the educational theatre group 'Theater Smoar' (**figure 2**). In addition, Nuchtere Fries offers advice and support, together with Team:Fit, for the development of responsible alcohol policy for sport canteens and community centres. Nuchtere Fries, thus, already pays close attention to the prevention and reduction of alcohol use in different environments of young people. Nevertheless, the program should focus more on the alcohol consumption in the catering industry. According to literature, the Icelandic prevention model is also a promising approach in creating an healthy environment and preventing alcohol use among young adults. There are currently a number of pilots running in several municipalities in the Netherlands among which the Frisian municipality Súdwest Fryslân. It could, thus, be interesting for Nuchtere Fries to examine the results of this pilot study and to identify the effective elements that may be implemented in other Frisian municipalities.

The program Nuchtere Fries is now mainly focusing on the prevention and reduction of problematic alcohol use among young adults. However, research indicated the importance of targeting older adults as well within interventions and prevention approaches. Alcohol consumption is not only relatively high among this age-group, but they are also extra vulnerable to the effects of alcohol on health.

Currently, there is still much unknown about alcohol use later in life and effective elements for interventions regarding older adults. Nonetheless, several studies already demonstrated that alcohol abstinence can have short-term health effects including improvement of sleep, physical health and mental well-being. It is, therefore, relevant for Nuchtere Fries to start focusing on older adults as well in preventing and reducing problematic alcohol use and to analyse the current alcohol problems among older adults in Friesland

7.3 Conclusion

In conclusion, the majority of the municipalities are positive about the program and platform Nuchtere Fries despite giving several suggestions for the role and goal of the program.

Locally, the municipalities are quite different in the efforts they make to effectively implement alcohol prevention and policy. It is for all Frisian municipalities most important to change together the norm of alcohol use. Therefore, Nuchtere Fries must continue with the compliance study executed by GGD Fryslân, provide positive alternatives for alcoholic beverages and stop with alcohol advertisements. Also, the involvement and responsibility of parents must increase and in various relevant environments attention must be paid to alcohol use and its consequences. Besides these products and results, municipalities also indicated the importance of local political support and efficient internal cooperation between policy officers.

So, the main goals for Nuchtere Fries to focus on in the potential upcoming period consist of sharing more knowledge, experiences and best practices within the platform. GGD Fryslân should facilitate this via newsletters and platform meetings. Currently, there is mainly demand for knowledge and experiences regarding parental involvement interventions and the Icelandic prevention model. Also, GGD Fryslân could focus more on providing local support to municipalities instead of developing and offering universal products regarding alcohol policy and prevention. But overall, it remains important to jointly focus on the prevention and reduction of problematic alcohol use among Frisian residents.

In conclusion, the content of the program Nuchtere Fries is in line with the recommendations from scientific literature. There are still some elements, such as serving and closing times, on which Nuchtere Fries is not yet focused, but in general the program contains relevant and effective means to prevent and reduce problematic alcohol use. However, it is a major shortcoming of the program that it is only targeting the younger adults whereas literature also indicates the importance of the elderly as target group. Therefore, Nuchtere Fries must also focus on alcohol consumption among older adults aged 55 years and older and explore the possibilities to tackle this locally.

8. Analysis of the potential alternatives for the program Nuchtere Fries

In order to provide sufficient advice to GGD Fryslân about the future of Nuchtere Fries, different scenarios have been designed for the continuation of the program. The findings from the scientific analysis, the internal and external analysis, and the process-evaluation have been used for this. In total four scenarios have been developed that are based on the different forms of program organisation according to Prevaas (2018). He distinguishes the **coordination**, **directing**, **realisation** and **independent** forms which differ in the level of power of the organisation in setting goals and in realising efforts. This power is divided between the permanent organisation, equivalent to the Frisian municipalities, and the organizer of the program, GGD Fryslân in this case. For instance in the coordinating form, the permanent organisation has both the power in goal setting and realisation of efforts whereas in the independent form this power lies entirely with the organizer of the program (Prevaas, 2018). Subsequently, the scenarios for the continuation of the program Nuchtere Fries have been scored according to a number of criteria which will be further explained later in this chapter. Eventually, one scenario emerged as the best option for the future of Nuchtere Fries based on its total score.

8.1 Scenario 1 – Business as usual

In the **business as usual** case, the program Nuchtere Fries continues as it is now organized and running which corresponds to the **realisation** form of program organisation (Prevaas, 2018). GGD Fryslân has mainly influence on the realization of the program implementation as they develop several products and interventions for preventing and reducing problematic alcohol use among young adults. In addition, they monitor the current situation of alcohol consumption in Friesland and provide advice and support towards the Frisian municipalities. The municipalities eventually use the relevant knowledge, advice and products to execute alcohol policy and prevention at local level. Furthermore, GGD Fryslân coordinates the cooperation between parties involved in the program Nuchtere Fries at provincial level. This is sufficiently established with joint agreements, clear objectives and several meetings per year. However, the effectiveness of this partnership depends on the willingness of all parties to participate actively. The content of the program Nuchtere Fries only focuses on young adults and not on elderly despite the fact that is also an important and relevant target-group. In addition, the program includes various useful and efficient products and interventions and consists of an effective approach to prevent and reduce problematic alcohol use.

8.2 Scenario 2 – Program Nuchtere Fries organised in coordinating form

In the second scenario, the program Nuchtere Fries is organised in a **coordinating form** (Prevaas, 2018). Here, GGD Fryslân facilitates the program and monitors the progress of Nuchtere Fries by using progress reports. Decisions about the objectives and the implementation of interventions and alcohol-related policy measures are all made independently by the Frisian municipalities. They are, therefore, responsible for good end results and effective execution of alcohol policy and the alcohol prevention approach. All Frisian municipalities implement their own version of the program Nuchtere Fries based on their knowledge and available resources. The execution of the program Nuchtere Fries is now more locally focused which leads to an increase in tasks and responsibilities for the Frisian municipalities. Therefore, more manpower and working hours are needed as well as local political support and efficient internal cooperation between policy officers. The municipalities have in this coordinating form of the program Nuchtere Fries the main power in setting goals and realising efforts and are thus less dependent on GGD Fryslân. This results in less time and effort required from GGD Fryslân for the execution of the program Nuchtere Fries which leads to a decrease in working hours of the program leader. The more independent and locally focused approach of the municipalities regarding alcohol policy and prevention also reduces the cooperation with other parties at provincial level. Moreover, the municipalities no longer sufficiently use the expertise and knowledge of GGD Fryslân resulting in a less effective local alcohol prevention approach.

8.3 Scenario 3 – Program Nuchtere Fries organised in directing form

Here, the program Nuchtere Fries is organized in a **directing form** where GGD Fryslân monitors whether and which efforts are made by the Frisian municipalities to achieve the set goals (Prevaas, 2018). In addition, they inform the municipalities about current knowledge and effective interventions and provides advice and support for the local implementation of the program Nuchtere Fries. The actual execution of the program is the responsibility of the Frisian municipalities and they decide on the implementation of relevant policy measures and interventions. In order to stay up to date on the local situations, GGD Fryslân discusses the progress of the program Nuchtere Fries with each municipality several times a year. GGD Fryslân mainly motivates and stimulates the Frisian municipalities and focuses primarily on supporting them in the implementation of the program Nuchtere Fries. The effort and time for GGD Fryslân to execute their tasks within the program Nuchtere Fries remains the same in comparison with the business as usual case. The role and tasks of GGD Fryslân only switches from developing products and giving advice towards supporting municipalities in the implementation, which is quite similar in terms of workload. This supporting role of GGD Fryslân also improves the cooperation with the Frisian municipalities and contributes to better synergy. GGD Fryslân now mainly focuses on the local implementation of Nuchtere Fries in each municipality separately and no longer on a more universal approach at provincial level. This, however, reduces the cooperation with other parties involved at provincial level. Although, at the same time, the attention for preventing and reducing problematic alcohol use increases at municipal level which may cause a greater need to share knowledge and experiences between municipalities at provincial level. In order to effectively execute the program Nuchtere Fries, the municipalities still dependent on sufficient manpower, efficient internal cooperation and political support. Nevertheless, the support of GGD Fryslân contributes to efficient implementation of the program which saves time and effort for the Frisian municipalities.

8.4 Scenario 4 – Program Nuchtere Fries organised in an independent form

In the fourth and last scenario, the program Nuchtere Fries is organised in an **independent form** (Prevaas, 2018). Both the goals and the realisation of the program are determined by GGD Fryslân. GGD Fryslân implements effective alcohol policy measures and interventions that aim to prevent and reduce problematic alcohol use. The Frisian municipalities are the client and only helps with the goal setting. Moreover, GGD Fryslân is responsible for good end results and an effective alcohol prevention approach. As the program is independently executed by GGD Fryslân, the workload for GGD Fryslân increases as more time and effort is needed to sufficiently implement the program Nuchtere Fries. Therefore, one to three new employees are hired who work in a team on the implementation of the program, which increases the costs for GGD Fryslân. In addition, the cooperation with the Frisian municipalities is less intensive, which makes it more complicated to maintain local contacts to collaborate on the implementation of alcohol policy and prevention. Furthermore, as provincial organisation GGD Fryslân has not the authority to implement alcohol policy and interventions at local level which limits the execution of the program Nuchtere Fries. An important advantage, however, is that the implementation is no longer dependent on political support within the municipalities. GGD Fryslân is, namely, politically independent and aims to improve the health and lifestyle of all Frisian inhabitants. The organisation has sufficient knowledge and expertise to effectively prevent and reduce problematic alcohol use. However, the effectiveness of the program Nuchtere Fries also depends on sufficient knowledge about the local situation and problems. This is lacking by GGD Fryslân which means that the alcohol prevention approach is less effective and insufficiently targets the relevant groups. Concerning the role of the Frisian municipalities within Nuchtere Fries, they do not have to actively contribute in the program nor are they responsible for the end results.

8.5 Criteria

The four scenarios for the continuation of the program Nuchtere Fries are discussed and scored based on seven different criteria. These criteria consists of reaching the target-group, financial consequences, provincial cooperation, synergy, internal feasibility, external feasibility, and in line with the mission and vision. A scoring method was used that consisted of five different impact levels; strongly negative (--), negative (-), neutral (+/-), positive (+) and strongly positive (+). **Table 3** provides an overview of all the scores for each scenario.

8.5.1 Reaching the target group

The program Nuchtere Fries must contain effective interventions and elements that connect with the relevant target group in order to sufficiently prevent and reduce problematic alcohol use. Currently, the program of Nuchtere Fries contains various useful products and interventions and consists of an effective approach to tackle alcohol problems. However, the program only focuses on young adults and not on older adults which is also an important and relevant target-group. Therefore the **business as usual** scenario scores negative on reaching the target-group. This is also the case for the **coordinating form**, as the Frisian municipalities mainly use their own knowledge and resources and do not benefit from the expertise and products of GGD Fryslân. This leads to a less effective alcohol prevention approach that does not reach the target groups sufficiently. By contrast, the knowledge of both GGD Fryslân and the Frisian municipalities is better used in the **directing form** due to improved cooperation between both parties. The expertise of GGD Fryslân is used more optimally as well as the knowledge about local alcohol problems and the local contacts of the municipalities. This contributes to a more effective approach for preventing and reducing problematic alcohol use among the target groups. In the **independent form**, GGD Fryslân only uses their own knowledge and expertise to effectively implement the program Nuchtere Fries. However, the effectiveness of the program also depends on sufficient knowledge about the local alcohol problems. This is lacking by GGD Fryslân leading to a less effective alcohol prevention approach that insufficiently targets the relevant target groups.

8.5.2 Financial consequences

Another relevant criteria is the financial consequences of Nuchtere Fries for GGD Fryslân since employing staff, the products and interventions cost money. The GGD Fryslân is mainly financed by all Frisian municipalities and depending on that amount of money, a certain amount is available for the program Nuchtere Fries. So, if the costs of the program Nuchtere Fries for GGD Fryslân increase, the GGD must either receive more money from the Frisian municipalities or seek additional funding in another way. However, this is difficult to arrange.

In the **business as usual** scenario, GGD Fryslân only needs to pay the costs for the employment of the program leader of Nuchtere Fries which is feasible with the current financing. In the **coordinating form** of the program organisation, most of the work is carried out by the municipalities and less time and effort is required from GGD Fryslân for the execution of the program Nuchtere Fries. This means a decrease in working hours for the program leader which is financially advantageous for GGD Fryslân. The financial impact of the **directing form** is equivalent to the business as usual case. Here, the role and tasks of GGD Fryslân only switches from developing products and providing advice towards supporting municipalities in the implementation, which is quite similar in terms of workload. The cost for the implementation of the program Nuchtere Fries mainly increase in the **independent form** as workload significantly increases for GGD Fryslân. Therefore, new employees need to be hired for Nuchtere Fries which entails high costs.

8.5.3 Provincial cooperation

Close cooperation between all actors involved at provincial level is essential since problematic alcohol use is not limited to the municipal boundaries. Sufficient provincial cooperation improves the effectiveness of the program Nuchtere Fries and is, therefore, included as criteria. Currently, the

cooperation at provincial level is sufficiently established with joint agreements, clear objectives and several meetings per year. However, the effectiveness of this partnership depends on the willingness of all parties to participate actively. Therefore, the **business as usual** scenario scores neutral on this criteria. The independence of the Frisian municipalities and their focus on local needs, in the **coordinating form**, leads to less interest and need in cooperating at provincial level. This is also the case for the **directing form**, as GGD Fryslân and the Frisian municipalities jointly focus on the local implementation of Nuchtere Fries and no longer on a more universal approach at provincial level. This reduces the cooperation with other provincial parties. Conversely, the provincial cooperation increases in the **independent form**, because GGD Fryslân mainly cooperates the program Nuchtere Fries in this scenario. They are a network organisation that normally operates at provincial level and thus has relevant contacts to cooperate with in preventing and reducing problematic alcohol use.

8.5.4 Synergy

The synergy between GGD Fryslân and the Frisian municipalities is also an important criteria. Both parties have essential knowledge and power for the implementation of the program Nuchtere Fries, and by working together and joining forces, better and more effective results can be achieved. GGD Fryslân, namely, has the scientific knowledge on alcohol consumption and its consequences as well as knowledge about effective interventions or elements to prevent and reduce problematic alcohol use. By contrast, the Frisian municipalities have up to date knowledge about the local situation and problems, contacts with local key players and the power to implement alcohol policies and interventions locally. According to this last aspect, the executive power of the Frisian municipalities can be assigned to the GGD Fryslân. However, this costs a lot of time and effort as it involves a change in the joint arrangement between GGD Fryslân and the Frisian municipalities.

In the **realisation form**, which is the business as usual scenario, the synergy between GGD Fryslân and the Frisian municipalities is sufficient. However, GGD Fryslân only provides here advice and support and does not actively stimulates and motivates the municipalities to implement the Nuchtere Fries program. The cooperation and synergy can thus be further improved. This is, in fact, the case in the **directing form** where GGD Fryslân provides local support to each municipality and motivates them to execute the program Nuchtere Fries. Here, both parties improved their cooperation and joined forces which contributes to better synergy. For both the **coordinating** and **independent form**, the synergy scores strongly negative as in each scenarios respectively the Frisian municipalities and GGD Fryslân organise and execute the program on their own.

8.5.5 Internal feasibility

The effectiveness of the program Nuchtere Fries also depends on its feasibility for GGD Fryslân. Namely, the internal organisation, competences and resources must align with their role and function within the program. The execution of the program Nuchtere Fries in both the **business as usual** scenario and the **directing form**, is feasible for GGD Fryslân in terms of internal organisation and resources. Their organisation structure fits well with their role and function within Nuchtere Fries and they have the right expertise, resources and network. Also, for the **coordinating form** the role and tasks for GGD Fryslân within the program Nuchtere Fries are feasible and even somewhat abundant. Conversely, the internal feasibility for GGD Fryslân regarding the execution of the program Nuchtere Fries is really complicated in the **independent form**. GGD Fryslân has no local contacts within Frisian municipalities to cooperate with and has also not the authority to implement alcohol policy and interventions at local level.

8.5.6 External feasibility

Another important criteria is the feasibility for the Frisian municipalities as the right competences, resources and internal organisation are needed to effectively execute the program Nuchtere Fries. This also includes sufficient local political support and effective internal cooperation between policy officers of Public Health and of Public Order and Enforcement. Currently, various municipalities lack

sufficient manpower, financial resources, political support and knowledge about effective interventions. Conversely, the municipalities are well informed about local alcohol problems and have relevant local contacts for implementing alcohol policy and interventions. Therefore, the **business as usual** scenario scored neutral on this criteria. In the **coordinating form**, the tasks and responsibilities for the Frisian municipalities increase regarding the implementation of the program Nuchtere Fries. However, the municipalities are now more focused on their local approach and execution as they do not depend on GGD Fryslân. So, this scenario also scores neutral on the external feasibility. Both the scenarios of the **directing** and **independent form** scored positive on this criteria, as respectively the municipalities are better supported or they no longer have to actively contribute to executing the program Nuchtere Fries. This saves time and effort for the Frisian municipalities.

8.5.7 In line with the mission and vision

As last criteria it is essential that the program Nuchtere Fries and the role of GGD Fryslân is in line with their mission and vision. The goal of the program Nuchtere Fries in the **business as usual** scenario suits well with the mission and vision of GGD Fryslân. However, this can still be improved as the program only focuses on young adults and not on elderly which is also an important target-group. Concerning the **coordinating form**, the program fits less with the mission and vision of GGD Fryslân as they cannot actively contribute to improving the health and lifestyle of all Frisian residents. The **directing form** has both a positive and negative aspect regarding this criteria and therefore scores neutral. On one hand, the more supportive and locally focused approach effectively contributes to improving the health and lifestyle of the Frisian residents. On the other hand, GGD Fryslân is an network organisation that operates at provincial level which is in contrast with the current locally focused approach. Lastly, the **independent form** fits strongly with the mission and vision of GGD Fryslân. In this scenario, GGD Fryslân is politically independent and aims to improve the health and lifestyle of all Frisian inhabitants.

Table 3. Overview of the scores per criteria for each scenario, according to the multi criteria analysis.

Criteria	Scenarios			
	<i>Business as usual</i>	<i>Coordinating</i>	<i>Directing</i>	<i>Independent</i>
<i>Reaching the target-group</i>	-	-	+	+ / -
<i>Financial consequences</i>	+ / -	++	+ / -	--
<i>Provincial cooperation</i>	+ / -	-	-	+
<i>Synergy</i>	+	--	++	--
<i>Internal feasibility GGD Fryslân</i>	+	+	+	-
<i>External feasibility Frisian municipalities</i>	+/-	+/-	+	+
<i>In line with the mission and vision</i>	+	-	+ / -	++
Total	++	--	++++	-

8.6 Conclusion

The Multi Criteria Analysis shows that the program Nuchtere Fries will be most effective if it is organised in a directional form. Remarkable here is the improved synergy between GGD Fryslân and the Frisian municipalities which is an essential aspect to increase the effectiveness of the program. It is, therefore, important that GGD Fryslân switches from a more executing role, as in the business as usual case, towards a more supporting role. GGD Fryslân must be more focused on sharing knowledge and experiences as well as providing sufficient support to the Frisian municipalities for the implementation of alcohol prevention programs and policy measures. Instead of developing universal products and providing advice, GGD Fryslân should now mainly stimulate and motivate Frisian municipalities to jointly execute the program Nuchtere Fries.

9. Conclusion

Based on the results of the research and analyses performed within this project, a number of conclusions can be drawn. First of all, the scientific analysis shows that the majority of the Dutch population consumes alcohol which is the highest among young adults aged between 18 and 29 years old. Alcohol consumption is a major risk factor for public health as it contributes to the development of both communicable and non-communicable diseases. Especially younger and older adults are vulnerable for the negative health-related effects of alcohol use. Yet, there is still a lot unknown about the health effects of alcohol use and effective elements for alcohol interventions. The analysis, however, shows that it remains important to focus on alcohol policy and regulations, enforcement and education for an effective alcohol prevention program. Furthermore, it is also essential to target the older adults within alcohol prevention programs as serious health improvement can still be achieved later in life after reducing or abstaining from alcohol consumption.

Secondly, it can be concluded that the current program Nuchtere Fries is already a useful program to prevent and reduce problematic alcohol consumption among the Frisian inhabitants. The program Nuchtere Fries itself contains relevant and sufficient products that can be used by the municipalities, but these are mainly focusing on the target group of young adults. It is, in fact, also essential to focus on the older adults and their alcohol consumption in order to effectively prevent and reduce problematic alcohol use among Frisian residents. Furthermore, the effectiveness of the program can also be further improved by changing and optimizing the organisation form. If the program is organised concerning a directing form, GGD Fryslân takes on a motivating and supporting role towards all Frisian municipalities. The GGD supports the municipalities with the implementation of effective alcohol policy measures and local interventions, and also provides relevant knowledge and experiences regarding alcohol use and interventions. In this way, the Frisian municipalities are better guided and stimulated to actually execute the program Nuchtere Fries at local level.

As a third conclusion, GGD Fryslân is a suitable party to support the municipalities within the program Nuchtere Fries. The organisation has the expertise and up to date knowledge about the effects of alcohol use and effective interventions or policy means. However, all Frisian municipalities together also have the decision-making power over GGD Fryslân and finances the organisation which complicates the cooperation between both parties. In addition, the local implementation of the program Nuchtere Fries depends on political support within the municipalities and, thus, also influences the effectiveness and actual execution of the program.

Fourthly, it can be concluded that the cooperation platform of Nuchtere Fries consists of relevant stakeholders that jointly contribute to preventing and reducing problematic alcohol use among Frisian residents. However, this partnership can be improved as both HKN and the police are only slightly involved while they have potential for a more relevant contribution. Therefore, the cooperation within Nuchtere Fries can be further improved.

As a final conclusion, the majority of the municipalities are positive about the program and platform Nuchtere Fries and they find it important to jointly focus on the prevention and reduction of problematic alcohol use. However, there are also some suggestions, concerning the role and goal of the program, to improve for Nuchtere Fries in a potential upcoming period. To summarize, more knowledge, experiences and best practices should be shared within the platform Nuchtere Fries. Also, most municipalities request more knowledge regarding parental involvement interventions and the Icelandic prevention model. Most importantly, GGD Fryslân should focus more on providing local support to the municipalities for effective implementation of alcohol policy and prevention.

10. Discussion

This project has also several uncertainties and limitations that are worth mentioning as it may have influenced the study results. First of all, some relevant policy officers of the Frisian municipalities were difficult to reach or not available for the interview since they were already busy due to the COVID-19 crisis. Next to this, my own study had also some time restrictions which allowed me to interview only fourteen municipalities of the total of eighteen Frisian municipalities. Ideally, I would have spoken to both the policy officers of Public Health and of Public Order and Safety. In this way, I could get a clear picture of the current alcohol policy and prevention from both the public health and safety point of view. Yet, because of the extra workload as a consequences of the COVID-19 crisis several Public Order and Safety policy officers had to reject or cancel the interview for the evaluation of Nuchtere Fries. As a result, I have received limited information concerning alcohol policy measures and enforcement of some Frisian municipalities. Furthermore, a few municipalities had a recent change of policy officer which meant that the current policy officers had no or only little experience with the program and platform of Nuchtere Fries. So, this also limited the results of the process evaluation of Nuchtere Fries.

Secondly, the process-evaluation only focused on the Frisian municipalities due to limited time available for the entire project. However, it would be interesting to also interview the other parties involved in Nuchtere Fries as well as some local parties who implement or use the products of Nuchtere Fries. This will provide relevant information for further improvement of the program and platform.

Thirdly, the interview format was quite broad in terms of questions which had its advantages and disadvantages. The main disadvantage was that first question about the current alcohol policy and prevention within the municipality may have resulted in more general and not too detailed answers. This is partly due to the limited time for the interview, which was approximately 60 minutes, and therefore I was not able to go into too much detail. In addition, the specificity in answers also differed between the municipalities. As a consequences, the results of the process evaluation may not provide a fully representative overview of the current alcohol policy and prevention approach. However, the results of this part of the interview have only been used to get an idea of the current efforts municipalities make concerning the prevention and reduction of problematic alcohol use.

Fourthly, there is still a lot of uncertainty in the scientific literature about the specific health effects of alcohol consumption as well as effective means and interventions to prevent and reduce alcohol use. Most research has now mainly focused on alcohol use among young adults, but even for this age-group more research need to be conducted in order to develop effective interventions. Slowly, more insights are now also being obtained about drinking behaviour and habits among older adults, health effects of alcohol use later in life and potential effective interventions for this target-group. These limitations and uncertainties in literature have also limited my advice towards GGD Fryslân about specific and concrete recommendations for the program Nuchtere Fries. Nevertheless, my scientific analysis clearly shows the importance of preventing and reducing problematic alcohol use and which means should be used for this.

Lastly, the internal analysis shows that the collaboration between GGD Fryslân and the Frisian municipalities is quite complex. Not only because of the dual role of the GGD as both consultative and executive party, but also because of the decision-making power of the Frisian municipalities over GGD Fryslân. This seems to have a strong influence on the work of GGD Fryslân and the effectiveness of various health programs. However, further research into this type of collaboration in order to provide some recommendations for improving the execution and cooperation, was not feasible due to time constraints and the expected size of this study. Nonetheless, it would be relevant for GGD Fryslân and the Frisian municipalities to take a critical look at this cooperation form and the joint arrangements. There may be some interesting possibilities to organise this partnership more efficiently and effectively.

11. Advice

Based on my research analysis, I can conclude that the program Nuchtere Fries is an useful program to prevent and reduce problematic alcohol use among Frisian residents. In order to improve the effectiveness of the program, I advise GGD Fryslân **to provide efficient support** to the Frisian municipalities for the execution of the program Nuchtere Fries. Therefore, the organisation of the program should change to a form in which **GGD Fryslân and all Frisian municipalities jointly and proactively work** on alcohol policy and prevention. Only together and with good motivation, alcohol problems will be effectively tackled. Concerning the content of the program, I advise to **include the older adults as an important target group** within the program Nuchtere Fries. In support of this advice, I made the following recommendations to achieve a more effective Nuchtere Fries program.

For the continuation of the program Nuchtere Fries it is important to not only focus on the young adults but also **to target the older adults** in reducing their alcohol consumption. It is, therefore, essential to take into account the different drinking motives for both target-groups. Next to this, data about drinking behaviour and habits of younger and older adults in specifically Friesland needs to be collected and analysed. This is, namely, essential information for the development of an effective alcohol prevention approach at local level.

There is still a lot unknown about alcohol use and effective prevention programs, so it is essential for GGD Fryslân **to stay up to date with the latest knowledge**. In addition, relevant knowledge as well as best practices or results of pilot studies should be shared with other parties involved in Nuchtere Fries. This also contributes to keep everyone motivated in preventing and reducing problematic alcohol use among the Frisian residents.

Also, the current products of the program Nuchtere Fries should continue to be used at local level as it effectively prevents and reduces problematic alcohol use. The local alcohol prevention approach should contain several **effective means targeting policy and regulations, enforcement and education**. If multiple enthusiastic Frisian municipalities encounter the same type of alcohol-related problem, GGD Fryslân should make them work together in solving this problem. In addition, GGD Fryslân could provide them support with relevant knowledge and advice.

In order to change the norm concerning alcohol use and to achieve an alcohol-free and alcohol-conscious environment, it is important **to jointly work on preventing and reducing problematic alcohol**. As the problem of alcohol consumption transcends the municipal boundaries, a partnership at provincial level is necessary for the effective implementation of alcohol policy and interventions. Therefore, the cooperation platform of Nuchtere Fries needs to be maintained. Yet, its function and role should better match with the needs of the parties involved, in particular those of the Frisian municipalities that have the executive power.

As the program Nuchtere Fries should be organised in a directing form, the role and function of GGD Fryslân within the program needs to change. **GGD Fryslân should focus on supporting the Frisian municipalities** with the implementation of alcohol policy and the alcohol prevention program. Several times a year, the GGD discusses the local progress of the program Nuchtere Fries with each Frisian municipality individually. In this way, GGD Fryslân can provide suitable advice and support to the municipalities and encourage them to get started or continue with executing the program Nuchtere Fries.

12. Implementation outline

For the implementation of my advice, I established the following outline with several activities that should be carried out. I set a timescale of two years for the execution of this implementation outline. The potential upcoming period for Nuchtere Fries consists of four years. Therefore, after the two years of implementation there will be still enough time to sufficiently work with the new organisational form of the program Nuchtere Fries and to evaluate this. The proposed implementation plan consists of five different actions.

11.1 Include older adults as target group within Nuchtere Fries

To better tackle problematic alcohol use among Frisian residents, Nuchtere Fries should also target the older adults within their program. Therefore, GGD Fryslân should analyse the current drinking behaviour and habits of older adults in specifically Friesland. These data contribute to getting an overview of the local alcohol problem among this age-group and to indicate which aspects should be focused on with the alcohol prevention approach at local level. In addition, the program leader of Nuchtere Fries should examine the possibilities of cooperating with the elderly care department within GGD Fryslân. Perhaps existing interventions that, for example, combat loneliness among elderly, could also pay attention to their alcohol consumption and how to reduce this. Furthermore, it could be also relevant to inquire at nursing homes about alcohol problems among their older residents, what they currently do about this, and what they need to tackle the potential problem. After the inventory of possible approaches to reduce alcohol use among elderly, it is important to actually include interventions for this target group in the program Nuchtere Fries and to execute them locally.

11.2 Make clear agreements concerning the organisation of Nuchtere Fries

For the new organisation of the program Nuchtere Fries according to a directing form, new and clear agreements needs to be made about the tasks and role of each party involved in the program. GGD Fryslân and all Frisian municipalities should discuss their expectations about the goals and approach of the prevention program as well as about their own tasks and function within Nuchtere Fries. This should also be discussed and made clear to the aldermen of Public Health who together form the board of GGD Fryslân. Potentially, this can contribute to improving the local political support. Furthermore, it is especially important to have good and clear agreements with the Frisian municipalities since they are the local executive party within the program. In this way, wrong expectations of GGD Fryslân and the municipalities are prevented and, thus, also friction in the cooperation between both parties.

11.3 Provide sufficient support to the Frisian municipalities

According to the recommended directing organisation form of the program Nuchtere Fries, GGD Fryslân need to provide sufficient support for the local implementation of alcohol policy and interventions in all Frisian municipalities. Therefore, GGD Fryslân should discuss the local situation regarding the implementation of the program Nuchtere Fries with each municipality several times a year and offer them suitable support if necessary. This requires trust, sufficient cooperation and motivation from both parties. To promote this, a kick-off event can be organized that is easy accessible and informal. Furthermore, in case multiple municipalities face the same type of challenge concerning the prevention and reduction of problematic alcohol use, GGD Fryslân can support and motivate them to develop and implement a certain intervention or project together. In this way, Frisian municipalities can cooperate and execute regional pilot studies. If such a pilot study proves to be effective, it can be optimized and shared with the other Frisian municipalities.

11.3 Update the cooperation platform Nuchtere Fries

As alcohol problems are not limited to the municipal boundaries, it is important to have a partnership at provincial level. The current cooperation platform Nuchtere Fries is a useful partnership to maintain, although its function and role should better meet the needs of the parties involved. In addition, the role and function of the platform also changes due to the new organisation of the program Nuchtere Fries. So, GGD Fryslân should jointly discuss with all parties involved the function and goal of the platform as well as the role and contribution of every party in it. These agreements need also be recorded in the program description of Nuchtere Fries.

On the one hand, the platform Nuchtere Fries could mainly be used for sharing knowledge and updating about new developments. Therefore, the platform meetings should be easily accessible and informal in order to stimulate discussions about current knowledge and experiences between involved parties and in particular the Frisian municipalities. On the other hand, the partnership of Nuchtere Fries can also be accommodated at FPA, from which alcohol-related theme meetings can be organised. This can also contribute to a more integrated approach with all three FPA topics, namely smoking, overweight and alcohol use, at provincial level. However, the effectiveness of the cooperation platform Nuchtere Fries strongly depends on the involvement and willingness of all different parties. That is why the organisation of the platform should sufficiently match their needs.

11.4 Outline the working details for the program leader

GGD Fryslân needs to make an inventory of the specific amount of work for the program leader within the new organisation form of the program Nuchtere Fries. This partly depends on the expectations and agreements with the municipalities about the implementation of the program. In addition, the structure and function of the cooperation platform may also have consequences for the workload of the program leader. In case the workload increases considerably, GGD Fryslân should investigate whether there are financial possibilities to hire an extra employee. This would be preferable instead of giving more hours to the current program leader, since this way the program leader has a colleague to spar with.

11.5 Share knowledge and experiences

As GGD Fryslân has the expertise and knowledge about alcohol use and effective interventions or pilot studies, it is essential that they keep the other parties within Nuchtere Fries informed about this. Especially the Frisian municipalities have interest in this. In order to effectively provide this knowledge, GGD Fryslân should frequently share new knowledge and developments within Nuchtere Fries by using the Nuchtere Fries website. Here, a specific page can be established for developments, reports, and new scientific knowledge. In addition, it is also useful to share local updates about projects or updates of certain Frisian municipalities by e-mail. However, resources as e-mail and a web-page will only be useful for municipalities that are already actively involved in Nuchtere Fries. Therefore, a symposium can be organised twice a year in which new knowledge and ideas can be shared. It would also be interesting to invite a guest speaker who shares his ideas and experiences from practice.

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Appendix I: Summarized results of the interviews with the Frisian municipalities – Current local alcohol prevention

Number of municipalities	Current local alcohol prevention
14	Education at school about alcohol use and its effects including 'Helder op School' program
9	Promoting and starting up healthier sport canteens and with attention for alcohol consumption including Team:Fit program
5	Information sessions and parent counselling about alcohol use
1	Developed their own local prevention program to reduce substance use
1	Pilot of the Icelandic prevention model
1	College of Mayor and Aldermen participated in the IkPas campaign
1	Instruction for responsible serving of alcohol for sports clubs and community centres

Appendix II: Summarized results of the interviews with the Frisian municipalities – Current local alcohol policy

Number of municipalities	Local alcohol policy measures now in place
14	Prevention and enforcement plan including tasks and objectives regarding alcohol policy and prevention
9	Local team of various stakeholders that are involved in implementing alcohol policy and interventions
8	Checking the catering industry and nightclubs for compliance with the policy measures concerning the Liquor and Catering law
2	Coordinator within the municipality that focuses on substance use
2	Developing so-called 'Hokken & Keten' policy
1	Closing and serving times for para-commercial institutions such as sports clubs and community centres

Appendix III: Summarized results of the interviews with the Frisian municipalities – Experience and opinion on the program Nuchtere Fries

Number of municipalities	Experience and opinion on Nuchtere Fries
9	Good execution of the study into the compliance with the age limit for selling alcoholic beverages
5	Useful platform of Nuchtere Fries to share knowledge and best practices about alcohol use and effective interventions
2	The platform of Nuchtere Fries can be better utilized to share knowledge
2	Useful platform meetings with Nuchtere Fries to share knowledge
4	Important to have a Friesland-wide cooperation platform to share the responsibility for preventing and reducing problematic alcohol use
5	Sufficient advice and support provided by the program leader of Nuchtere Fries
4	Useful products offered by Nuchtere Fries
3	No clear function and role of Nuchtere Fries
3	Not familiar with the products offered by Nuchtere Fries
4	The cooperation with all parties involved within Nuchtere Fries has no added value
2	Knowledge and products offered by Nuchtere Fries are not of added value
1	Both the program and platform Nuchtere Fries have no added value and should not be continued
2	Insufficient guidance and context for the implementation of new products that are offered by Nuchtere Fries

Appendix IV: Summarized results of the interviews with the Frisian municipalities – Products for alcohol prevention in an ideal future

Number of municipalities	Products for alcohol prevention in an ideal future
14	The norm needs to change; it should not be normal to drink alcohol, especially not in large quantities
11	Increase awareness among both young adults and parents about the effects of alcohol use by using education and information sessions
10	Alcohol policy and prevention should focus more on the parents; increase parental involvement
9	Attention should be paid to alcohol consumption in many different environments, including sports clubs, schools, work, catering industry etc.
8	Offering positive alternatives that are healthier and affordable
7	Parents should positively change their attitude towards alcohol consumption and learn to set rules for their children
5	The local government should take responsibility and be involved concerning alcohol policy and prevention
4	Catering must comply with the age limit for alcohol sales and take their responsibility in this
3	Schools must continue to provide information about substance use
3	Sports clubs should not serve alcoholic beverages
2	More attention should be paid on the availability of alcoholic drinks for adolescents in social circles
1	Do not allow happy hours or price discounts on alcoholic beverages in the catering industry
1	No advertisements for alcoholic beverages and instead promote alcohol-free alternatives
1	Schools should have policy for not serving alcohol in any setting
2	Develop so-called 'Hokken & Keten' policy

Appendix V: Summarized results of the interviews with the Frisian municipalities – Goals for Nuchtere Fries to focus on

Number of municipalities	Products for alcohol prevention in an ideal future
14	The norm needs to change; it should not be normal to drink alcohol, especially not in large quantities
11	Increase awareness among both young adults and parents about the effects of alcohol use by using education and information sessions
10	Alcohol policy and prevention should focus more on the parents; increase parental involvement
9	Attention should be paid to alcohol consumption in many different environments, including sports clubs, schools, work, catering industry etc.
8	Offering positive alternatives that are healthier and affordable
7	Parents should positively change their attitude towards alcohol consumption and learn to set rules for their children
5	The local government should take responsibility and be involved concerning alcohol policy and prevention
4	Catering must comply with the age limit for alcohol sales and take their responsibility in this
3	Schools must continue to provide information about substance use
3	Sports clubs should not serve alcoholic beverages
2	More attention should be paid on the availability of alcoholic drinks for adolescents in social circles
1	Do not allow happy hours or price discounts on alcoholic beverages in the catering industry
1	No advertisements for alcoholic beverages and instead promote alcohol-free alternatives
1	Schools should have policy for not serving alcohol in any setting
2	Develop so-called 'Hokken & Keten' policy