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Tobacco and alcohol policies and measures. Closing remarks from the 2nd World Calisia Conference on Family Health

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ABSTRACT

During the 2nd World Calisia Conference on Family Health in Poland, a number of presentations focussed on smoking and use of alcohol. In this text, some of the presentations on smoking are discussed within the "Diffusion of innovations" theoretical framework. A selection of the presentations on alcohol use are referred to and changes in alcohol use are examined in the context of national alcohol control programmes. Finally, new evidence of inequalities between and within countries are examined. Comprehensive action to reduce burden of disease and health inequalities caused by tobacco and alcohol as documented during this conference is urgently needed.

KEY WORDS: tobacco, alcohol, policy, mortality, inequalities, burden of disease.

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INTRODUCTION

During this conference, the presenters have pointed at the need for more and better data to describe changes in tobacco and alcohol use in Poland and in Baltic countries. In spite of the shortcomings of existing data, the presenters have been able to give us an interesting and, in many ways, coherent picture of the current situation in Poland, the Baltic states, and beyond. Coherent if seen in the context of a specific and comprehensive theoretical framework.

We will not be able to do full justice to all the scientific work on tobacco and alcohol consumption that has been presented. We have chosen to focus on a set of papers which combined are particularly enlightening from a behaviour science perspective.

In 1962, Everett Rogers published a book which described how innovations, such a consumption pattern, spread in a population. The model they suggested has become known as the "Diffusion of innovations" theory [1]. This book has been revised and published in a series of editions, the last one from 2003 [2]. In spite of being 'old', their model has considerable relevance and interest in the 2020s.

According to the Diffusion of innovations model, consumption patterns or "innovations" spread in a population along certain patterns. Populations can be divided into five groups, dependent on where in the process of change they are located. First come the innovators, sometimes called pioneers. They are the few who take the lead and change first. Then we have the early adopters, the early majority, the late majority, and finally, the laggards. Not only introduction of new products follows particular patterns, but to some extent also de-marketing. In most, perhaps all countries, cigarette smoking started among men and among well-educated segments of populations. De-marketing of cigarette

smoking seems to follow a similar pattern, with high status groups reducing first, but with women in many countries starting quitting at a level of prevalence of daily smokers lower than that of men. Diffusion processes can also be used to describe changes at country level. Some countries started first, other countries followed, both during introduction and during reductions in cigarette smoking.

CHANGES IN TOBACCO USE

In their conference presentation and in their corresponding paper, Gobina, Kojalo and Pildava have shown that in Latvia, during the period 2000 to 2020, lung cancer mortality decreased among men, but increased among women [3]. Changes in lung cancer mortality are closely related to changes in prevalence of cigarettes smokers. Their findings therefore illustrate well how a reduction in the prevalence of smokers started first among men, and only later among women in Latvia.

Liutkutè-Gumarov has shown that in Lithuania, during the period 2005 to 2019, the prevalence of daily smokers decreased from 42% to 30% in men and remained stable at a remarkably low level in women (10%) [4]. These results illustrate well how the process seems to be similar across countries. The diffusion of innovations perspective sometimes makes apparently contradictory findings from studies falling into coherent patterns and thereby easier to understand.

According to Janik-Koncewicz and associates, in 2019, the most important factors shaping smoking prevalence in Poland was education. Among men, the prevalence of smokers among those with only primary education was as high as 49%. Among men with higher education, the proportion was 8% only [5].

Among women, however, there is a surprisingly low proportion of smokers among those who have only primary education (12.4%) [5]. The low proportion of smokers among women with only primary education is possible to explain if we apply the "Diffusion of innovations" perspective. The explanation is probably not that they belong to the "Innovators" or the "Early adopters", but rather the opposite. They may have been lagging so far behind in the process of taking up the habit of smoking that they never have reached the levels of their sisters in the groups of more well educated women.

With regard to the situation among the other groups (other than women with primary education only) it is interesting and important to note that when smoking prevalence among the well-educated reach bottom (closer to zero), and when reduction among the "Late majority" and among the "Laggards" continues, there will also be a reduction in differences between groups defined by level of education. The diffusion processes during de-marketing of smoking first produces strong inequalities, but as the process continues, there will gradually be a reduction of inequalities.

In order to speed up the diffusion process and reduce smoking in less well educated groups as effectively as possible, it is important to identify control measures which has a strong impact among these groups. Thomas and associates carried out a systematic review of tobacco control interventions and their effects on social inequalities in smoking. They found that use of taxation of tobacco products has stronger impact among those who have low income and those in manual occupations. They also found some evidence to suggest that adults with higher levels of education may be more price-sensitive than those with less high levels of education [6].

The processes of change become more complicated when there are new, competing, or supplementary products introduced, such as e-cigarettes or, more broadly, the use of Electronic Nicotine Delivery Systems (ENDS). It is interesting to note that in 2016 already, among boys in Poland, the prevalence of current users of e-cigarettes was higher than the prevalence of current cigarette-users. Furthermore, that among Polish girls, the percentages were approximately equally high. It is also interesting to note that dual use was widespread [7].

In another study it was shown that the prevalence of ENDS use among adults in Poland is low. This is in contrast to the widespread use among school students. Continuous monitoring to see how the development will be during the years to come, particularly among young adults, is important [8].

CHANGES IN ALCOHOL CONSUMPTION

While use of the diffusion of innovation model is straightforward in the field of cigarette smoking, it seems more demanding to apply on changes in alcohol consumption. Shortly after year 2000 there was an increase in consumption of alcohol in Poland. The contrast between changes in tobacco sales with strong reductions after 1990 and alcohol consumption, with its increase after 1990, is striking. The increase in alcohol consumption is so large, that is seems to have reduced the increase and even led to a slight decrease in overall life expectancy in the Polish population [9–11].

The increase in alcohol use in the Polish population probably has to do with the weakening of alcohol control measures and increased marketing of alcohol products. In 2001 advertisements for beer were re-introduced, and in 2002, taxes on strong alcohol were reduced by 30%. In addition, from 2010, there were strong campaigns for sales of small vodka bottles [9, 10].

Lithuania used to be the country with one of the highest per capita consumption of alcohol in the EU with 14.7 litres of pure alcohol per capita (15+) per year (in 2011 and 2012). An impressive set of control measures were introduced during two periods. In 2008–2009 there was an increase in excise taxation of alcohol products, there were restrictions on alcohol advertising during daytime, a ban on off premise sales of alcohol was introduced, the legislation related to

drunk driving legislation was strengthened. In 2014–2018, excise taxation increased on several occasions, a ban on alcohol sales in petrol stations was introduced, the legal age for purchasing alcohol was changed from 18 years to 20 years. And finally there was a near complete advertising ban in all social and media outlets [12].

Lithuania is no longer number one with regard to per capita alcohol consumption in EU. The per capita alcohol consumption in Lithuania was down to 11.1 litres in 2019 and alcohol-related mortality declined substantially in Lithuania [12].

Jürgen Rehm and associates have distinguished between three groups of alcohol control measures using Lithuania as their study ground. 'Tier 1' consists of general population interventions where we can expect immediate impact. Three of the interventions in Lithuania were classified as Tier 1 interventions: penalties for drunk driving, bans of marketing and advertising on TV, radio, and internet, increases in excise taxation, and reduced availability of alcohol [13].

Observational studies have their limitations, and it is always possible to point at competing explanations for changes in consumption patterns. Štelemekas, with his familiarity with the policies and changes taking place in Lithuania has, however, come to a rather clear conclusion [12]: Lithuania sets an example in the field of public health showing how strong alcohol control policies may significantly contribute to improving multiple public health indicators in a relatively short period of time.

We have briefly touched upon the situation in Poland and Lithuania. What about Latvia? According to Isajeva, Springe and Gobina (2021) [14], in 2019 Latvia had the highest recorded alcohol consumption among OECD countries (12.9 litres per capita). Latvia also had the highest share of alcohol-dependent drinkers in 2016 – largely among men. Isajeva and associates concluded that there is an urgent need for broad and more effective alcohol use prevention strategies in Latvia, including gender-specific programmes.

The experiences from Poland, Lithuania and Latvia provides a consistent pattern. Comprehensive alcohol control policies contribute to reducing the consumption of alcohol and the burden of alcohol-related diseases. When control measures are not introduced, the consumption remain high. When control measures are removed, decreases in alcohol consumption are replaced by increases leading to immediate rise in alcohol-related mortality.

In this context, the presentation of Malvezzi and associates [15] represents an interesting and challenging contrast. When we go 40–50 years back in time, countries in Southern Europe used to have very high levels of alcohol consumption, as much as around 20 litres per adult per day in Italy and 24 litres in France. Italy is now down to 5 litres and France is down to 10. According to Malvezzi and associates, the strong decline in alcohol consumption has taken place despite absence of systematic new regulations. In order to explain the strong decrease in alcohol consumption in these Mediterranean countries, they point at factors like avoidance of drinking at lunch – due to social and working life changes, and new generations starting drinking at an older age and drinking less regularly.

The drinking cultures of countries by the Mediterranean used to be different from the drinking cultures in Poland and the Baltic states (and probably still is), with less binge drinking and wine drinking during meals being typical. To what extent the alcohol cultures in the north and east of Europe are more resistant to reductions than the Mediterranean alcohol cultures is difficult to decide. All we can conclude is that there obviously is more than one road that leads to Rome, at least from locations in the Mediterranean area.

FROM ACTION TO BETTER HEALTH

The causal paths from public health action to statistics on morbidity and mortality are often hard to document. Some of the studies that were presented during the 2nd Calisia Conference on Family Health are remarkable in the sense that effects on morbidity and mortality appear to be explained rather directly by control measures and policies. How can we explain that Poland has had an increase in the incidence of liver cirrhosis which is so different from neighbouring countries? A weakening of alcohol control measures, that was specific to Poland, is a plausible explanation. How can we explain that Lithuania has had a remarkable decrease in alcohol-attributable mortality? The strong alcohol control policies and measures during the period 2008–2018 offer an obvious explanation.

Although single observational studies may offer limited evidence, multiple studies showing consistent patterns of associations may offer stronger evidence. In an ideal world we would expect Latvia to introduce the strongest set of alcohol control policies and measures available. This in order for us to be able to observe a strong decline in alcohol consumption and alcohol-related morbidity and mortality. This would have added another piece of evidence to the large public health puzzle.

INEQUALITIES IN HEALTH

In the presentation by Janik-Koncewicz and her team on health inequalities in Poland, several dimensions of inequalities are addressed, for instance inequalities related to education, income, employment, residential area, age, gender, ethnicity, disability, sexual orientation, migration status, belonging to vulnerable groups and the urban-rural dimension.

A related domain is inequalities between countries and regions. Some of you are familiar with the "Closing the Health Gap in the European Union" research project which was coordinated by Witold Zatoński, sponsored by the European Commission and by the Polish Minis-

try of Science and Higher Education [16]. Serious and consistent inequalities in health between old (EU15) and new (EU10) member countries in the European Union were documented. To a large extent the inequalities were related to use of tobacco and alcohol consumption.

At this conference, new documentation has been presented by Zatoński and his team. Janik-Koncewicz has documented that life expectancies at birth are generally lower in the newest EU member countries (EU10) and that gender differences in life expectancy at birth are generally larger in EU10 countries. Furthermore she has found that in Poland, there is an eight year difference between genders in life expectancy at birth, there are systematic regional differences, largest among men, and there are pronounced urban-rural differences [17].

A number of inequalities in tobacco smoking related to gender, age, and education are documented [5]. As far as alcohol consumption (alcohol intake within the last 12 months) is concerned, the association with level of education tends to be the opposite of what we have seen for smoking of cigarettes. The higher level of education, the higher the proportion reporting to have used alcohol during the last 12 months [18]. Death rates due to alcoholic liver disease in men are, however, highest among those with the lowest level of education (lower secondary or less), and the death rates increases strongly in all educational groups as well as in both genders between 2002 and 2011, and even more so among women than among men [19].

This apparent discrepancy between behavioural studies, showing that consumption is high among well educated, and that alcohol-related health effects still are worse among those with the lowest level of education, is known also from studies in other countries. Somehow, the consumption patterns seem to be more harmful or at least have stronger negative health effects among the less well educated [20].

This new documentation of differences between EU member countries and in the Polish population translates into an urgent need for action. We will therefore refer to a potentially important document from the First World Conference on Family Health which took place in Kalisz in 2019 – Calisia declaration [21]. The conclusion in the declaration is as follows:

Participants at the Calisia conference call on international organizations, governments, NGOs and all stakeholders to promote strong governance for public health and comprehensive action across sectors in all countries in order to prevent disease, promote health, and reduce inequalities.

Health must be for all, irrespective of location, gender, age, position, and circumstances.

CONCLUSIONS

At this conference, some important progress in tobacco and alcohol policies in Poland and the Baltic states has been documented, but also serious challenges and setbacks. The serious challenges in Poland and the Baltic states that have been documented at this conference require immediate and strong action.

DISCLOSURE

The authors report no conflict of interest.

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AUTHORS' CONTRIBUTIONS

LEA and WAZ prepared the concept of the article. LEA prepared the first draft. All authors took part in preparing the final version of the publication.