SOCIAL WILL FOR TOBACCO CONTROL AMONG THE HUNGARIAN PUBLIC HEALTH WORKFORCE

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SUMMARY

Background: More than 1 in 5 deaths in Hungary can be attributed to tobacco smoking. The role of the public health agency in responding to and ameliorating the tobacco epidemic in Hungary has been, until now, unexplored. This paper explores the social will of the public health agency workers to adopt tobacco control measures.

Methods: 269 Hungarian public health workers throughout Hungary completed an electronic survey on the types of programs offered by the public health agency, the perceived level of responsibility to reduce tobacco use, and the social will of the agencies to curb tobacco use. Multivariate analyses were performed to estimate factors which contribute to the social will to curb tobacco use.

Results: 48% of public health workers in Hungary report that it is absolutely important for local public health agencies to offer tobacco prevention and cessation programs, but only 3% indicate that they have earmarked funds to support anti-tobacco programs. Most workers favor more programs and policies to curb tobacco use in Hungary, such as taxation (67%) and banning smoking in restaurants (81%) and confined sporting events (93%). Factors positively associated with a stronger social will for tobacco control included being a former or never smoker (versus a current smoker) ($p<0.001$) and being middle age (40–49, $p=0.04$ and 50–59, $p=0.01$) (versus being under the age of 30).

Conclusion: Based on a SWOT (strengths, weaknesses, opportunities and threats) analyses, we argue that public health workers have the potential to play an important role in disseminating health promotion programs and advocating for broader statewide policies that could reduce tobacco use and exposure to environmental tobacco smoke. However, such an opportunity is missed with neither designated funding nor a nationally-dedicated office to tobacco control in Hungary.

Key words: public health worker, tobacco use, environmental tobacco smoke, tobacco policy, Hungary, Central Europe

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INTRODUCTION

Hungary has one of the highest percentages of smoking-related deaths in the European Union (EU) (21%) (1). An estimated 34% of adults in Hungary smoke, including 40.5% of men and 28% of women. In addition, the Global Youth Tobacco Survey has demonstrated very high rates of tobacco use among adolescents in grades 7–10 (39%) (2). Recent data from Szeged (southern Hungary) shows rates around 24% among schoolchildren aged 14–18 (3).

To date, there has been only one major, countrywide initiative to curb tobacco consumption in Hungary. The "Tobacco and Alcohol Policy Development Project" was launched in 1997 within the frame of the Public Health Subcomponent of the Hungarian Health Sector Modernization. The project, funded by the World Bank, resulted in improved awareness of policy makers of the need for regulatory measures to reduce tobacco use and to improve coordination among non-governmental organizations and health advocacy organizations working in tobacco control. Two very important Acts were enacted in the late1990s in response to this project. The first of them regulates the advertising of tobacco products and the second governs protection from environmental tobacco smoke.

- 1997: Act LVIII on Business Advertising Activity (restrictions on advertising of tobacco products). This Act was amended in 2001 (Act I with further restrictions on tobacco advertising and later in 2006 (Act CV) with prohibition of sponsoring tobacco products on cross-border programs of EU countries.
- 1999: Act XLII on the Protection of Non-smokers and Certain Regulations on the Consumption and Distribution of Tobacco Products. Act XLII was amended in 2005 (CLXXXI) which prohibits smoking in common public areas (e.g., mass transportation stations, public events held within confined spaces, and workplaces, if regulated by the employer) and in other population-specific areas (e.g., hospitals, social service facilities, educational facilities, confined spaces in which sporting events take place). Several years later, Hungary became one of the first Central and Eastern European Countries to adopt the Framework Convention on Tobacco (2003). At the same time, the Ministry of Health action plan highlighted tobacco cessation as a priority area (4).

In the 2003, the *National Programme for the Decade of Health* report highlighted that the overall goal was "to cut back cigarette smoking by 8% a year until 2005, and to reduce the prevalence

of regular smoking by 6% (to about 35% among males) by 2010" (pg. 44) (4). Some of the additional goals include a 20% reduction of exposure to secondhand smoke, a reduction in the uptake of smoking among children and youth, enforcement of regulations on tobacco products and adopting EU and WHO recommendations to curb tobacco, and elimination of the social acceptability of smoking such that non-smoking becomes normative.

The *"Decade of Health"*, the primary state document pertaining to anti-tobacco activities, is a resolution of the Hungarian Parliament. Unfortunately, it is mandatory only for the House as a legislative body; it is neither an Act nor an executive regulation. Consequently, it lacks a regular budgetary support from government. The National Public Health Medical Officers Service (NPHMOS), regulated by 1991: Act XI is one of the main governmental agencies in Hungary responsible for health promotion and disease prevention and implementation of the "Decade of Health".

Until the second half of 2006, the NPHMOS was also responsible for food, and until the end of 2006 for occupational safety. When the controlling power of the NPHMOS over food and labor was dissolved, the NPHMOS experienced budgetary cuts and manpower restrictions. Today, NPHMOS remains responsible for health promotion and disease prevention, but under the post-2006 regulatory structure, is not known the extent to which resource limitations have affected its ability to implement programs and policies that support the ideas conceived in the "Decade of Health" document.

It is a generally held opinion (although not publicly documented) that NPHMOS is underfunded and without long-term NGO partners in tobacco control activities. While some universities, individual scientists, and advocates participate in the tobacco control movement, specific resources to reduce tobacco use in Hungary are very limited primarily due to limited general national resources. Limited resources create fiscal and personnel challenges to establishing the scientific evidence needed to create an effective, nationwide network and evidence-based policies to reduce tobacco use.

The purpose of this paper is to explore the social will of the Hungarian public health workforce to engage in tobacco prevention and control efforts. While the Public Health Agency remains predominately a classic authority with regulatory functions, we explore whether the Agency has the will and capacity to influence population-level tobacco use. Based on the authors' understanding of the Public Health system and the results of this research study, the authors conclude with several ways in which the Public Health Agency may implement tobacco prevention programming and reduce tobacco use in Hungary using its existing structure and limited resources.

METHODS

Sample

In the spring 2007, the Central Agency of Public Health distributed an electronic survey to all public health employees throughout Hungary on behalf of the research team. There were 4,208 employees in the Agency in the first half of 2007. Using a stratified sampling procedure, we proposed to contact approximately 10% of all employees proportionally within the following regions: Hungary's Central region (located in Budapest and location of the Central Agency), the further 6 regions with a local public health center, and 5 urban agencies each in all 6 regions. Of approximately 400 individuals contacted via email, 269 participated (estimated response rate of 67%). Public health employees in Western Transdanubia, which serves approximately 10% of the Hungarian population, did not have an opportunity to participate due to a technical misinterpretation of the sampling frame.

The respondents completed the surveys within six weeks and returned them to the Central Agency. The surveys were de-identified and provided to the research team for data entry and analysis. Participation in this research study was voluntary and no compensation was provided to the participants. A total of 269 public health employees from Hungary responded. Approximately half of the respondents were from the Central agency. Among the remaining 5 regions, the representation of respondents is consistent with the proportion of the population in these units.

Measures

The survey included questions about the general activities of the public health agency and level of involvement in those activities. The survey also included questions about the types of tobacco programs offered by the public health agency, the perceived level of responsibility to reduce tobacco use, and support for various programs and policies that would curb tobacco use. The Social Will for Tobacco Control Index, with modest modifications reflecting cultural differences in Hungary, was used to create a measure of 'social will' to enhance tobacco control (5). In addition, basic demographic and employment characteristics were obtained (gender, age, years working for the public health agency, region of public health service, and smoking status).

Analysis

Descriptive statistics were used to analyze the data. Cronbach's α and factor analysis with Varimax rotation were used to determine the reliability and factor structure of the Social Will Index. In addition, a multivariate regression model was used to determine the association of demographic and employment characteristics on social will for tobacco control. All analyses were conducted using Stata 7.0 statistical software (6).

RESULTS

Demographic and Employment Characteristics

The majority of respondents were women and between the ages of 30–59 (Table 1). They had varying years of experience at the agency. Only a small percentage of the respondents had worked at the agency for under a year. The majority of the respondents were non-smokers including 28% former smokers and 51% never smokers. Twenty percent reported to be current smokers. About 48% of respondents feel that it is "absolutely important" for local public health agencies to offer tobacco prevention and cessation activities, while another 45% indicate that it is somewhat important (preferred). Differences were observed between smokers and non-smokers with only 31% of smokers indicating that is absolutely important compared to 52% of non-smokers ($p=0.01$). Overall, only 7% of all respondents indicate that tobacco preven-

Table 1. *Description of the public health workers in Hungary who responded to the survey (n=269)*

	%
Female	90.0
Age	
<30	13.5
30–39	20.8
40–49	30.1
50–59	33.6
60+	1.9
Years working in public health	
<1	4.9
1–5	26.2
6–10	19.1
11–15	11.2
16+	38.6
Regions of Hungary	
Central Hungary	51.0
Central Transdanubia	7.4
Southern Transdanubia	7.0
Northern Hungary	13.8
Northern Great Plains	13.0
Southern Great Plains	8.2
Smoking status	
Current	20
Former	28
Never	51
Perceived importance for the local public health agencies to offer tobacco prevention and cessation programs	
Not important	7.0
Somewhat Important	45.4
Absolutely important	47.6

tion and cessation is not important to the public health agency, however, this was disproportionately among those who smoked (13% versus 6%).

The public health workers reported that they are responsible for many services and programs. The most common types of activities include: communicable disease control (84%), immunizations (82%), tobacco prevention and cessation (82%), nutritional health programs (80%), school inspections (79%), restaurant inspections (76%), and family planning (74%). While 82% of those surveys say they are involved in tobacco prevention and cessation, the vast majority of those are involved in school-based programs (76%) – Table 2. Few agencies participate in community-based programs (30%) or law enforcement opportunities for curbing tobacco use (27%). These data represent subjective interpretations of agency responsibility rather than mandatory roles of agency staff.

The majority of respondents (75%) state that there is someone responsible for organizing tobacco education programs at their agency. However, only 7 individuals (3%) indicated that their public health agency received earmarked funding to provide tobacco programs above regular budgetary funding; the majority of those asked did not know. When asked who should be responsible for reducing tobacco use in the community, respondents reported that teachers (78%), health care workers (78%), public health workers (65%), and family (64%) should be primarily responsible. There were no statistically significant differences between smokers and non-smokers. One exception is that smokers were less likely than non-smokers to indicate that restaurant owners should be responsible for reducing tobacco use in the community (22% versus 39%, respectively).

Table 2. *Types of tobacco programs offered at the public health agency (n=269)*

Types of tobacco local programs	%
School-based tobacco educational programs	75.6
Community-based tobacco educational programs	29.7
Information about law enforcement possibilities	27.0
On-site personal consulting for prevention	26.3
On-site personal consulting for cessation	21.5
% reporting that there is a person at the local agency responsible for organizing tobacco education programs	75.0

Social Will to Deter Tobacco Use and Exposure to Secondhand Smoke

Table 3 provides a description of the social will for tobacco control among the Hungarian public health workforce. Despite the fact that only 37% of respondents indicated that governments should be responsible for tobacco reduction in Hungary, the majority of respondents (67%) support a tax increase on cigarettes. Additional taxation was clearly favored by non-smokers with 78.5% supporting an increase compared to only 25% among the non-smokers ($p<0.001$). Among non-smoking tax supporters, preferred taxation is 200 HUF or more per pack. Half of the non-smokers also preferred the same level of taxation. The package price of the most preferred brand of cigarettes was 460 HUF in 2006 in Hungary with a 27.5% excise tax (i.e., 126.5 HUF) (7).

Overall, there was strong personal support for initiating bans in restaurants (81%) and confined sporting events (93%). There was less support for banning smoking in casinos (43%), bars (32%), and outdoor public spaces (22%). There were considerable differences between smokers and non-smokers in terms of personal level of support for smoking bans, with smokers being less favorable of restrictions in all venues ($p<0.01$). However, while some differences appear to exist between smokers and non-smokers when asked if they felt the community would support smoking bans in restaurants and confined sporting events, the differences were not significant.

Factors Associated with Social Will for Tobacco Control

In a multivariate model, the youngest workers (<30 years of age) reported a lower social will for tobacco control than older respondents – see Table 4.

Table 3. *Social Will for Tobacco Control among the Hungarian Public Health Workforce (n=269)*

	x, sd Min-Max
1. If you could decide, would you increase taxes on cigarettes?	3.1 (2.2) (0–4)
Response options (0–5): 0 HUF; 1–50 HUF; 51–100 HUF; 101–150 HUF; 151–200 HUF; 200+HUF.	
2. At what grade level should tobacco education be required in your local schools?	2.6 (0.92) (1–4)
Response options (0–4): No need; basic school ages 6–10; basic school ages 11–14; gymnasium ages 14–18; college.	
3. Do you agree or disagree that the central government should have to cover the cost of programs that help people stop smoking?	3.1 (1.0) (0–4)
Response options (0–4): strongly disagree, disagree, unsure, agree, strongly agree.	
4. How supportive are you of a local law that would ban smoking in:	
Response options (0–3): against, unsure, accept, very supportive.	
Restaurants	2.7 (0.74) (0–3)
Bars	1.9 (1.0) (0–3)
Casinos	2.1 (0.98) (0–3)
Outside public spaces (such as parks, walking down the street)	1.4 (1.1) (0–3)
Local sporting events in confined areas	2.9 (0.45) (0.3)
5. What percent of the people in your community would support a ban in:	
Response options (0–4): 0–20%; 21–40%; 41–60%; 61–80%; 81–100%.	
Restaurants	2.6 (1.2) (0–4)
Bars	1.5 (1.2) (0–4)
Casinos	1.6 (1.3) (0–4)
Outside public spaces (such as parks, walking down the street)	1.1 (1.3) (0–4)
Local sporting events in confined areas	3.2 (1.6) (0–4)
Social Will Score (x, sd, min/max)	30.1 (7.6) 11–46
Social Will Scale Reliability ( )	0.73

In addition, smoking status was inversely associated with social will. A person who identified as a former or never smoker was more likely to report a higher social will for tobacco control compared to current smokers ($p<0.001$). Further, there was a modest association between individuals who perceived that it is 'absolutely important' for public health agencies to offer tobacco prevention and cessation programs and higher social will ($p=0.06$). The demographic and employment characteristics included in the multivariate model of social accounted for 19% of the total variance. Smoking status of the public health employee was the most important factor in determining social will to curb tobacco use.

SWOT Analysis

Based on the results, we propose a SWOT analysis that highlights the strengths, weaknesses, opportunities, and threats of utilizing the public health workforce to engage in tobacco prevention and cessation efforts in Hungary.

Strengths

- Perceived importance of tobacco as a public health issue.
- General perception that public health workers have some responsibility for reducing tobacco use.
- Most public health workers have experience with school-based tobacco educational programs.
- General support for reducing exposure to environmental tobacco smoke.

Table 4. *Factors associated with social will for tobacco control among the Hungarian public health workforce (n=246)*

	r, se	*p*
Age (<30 referent)		
30–39	1.81 (1.6)	0.27
40–49	3.33 (1.6)	0.04
50–59	4.57 (1.8)	0.01
60+	5.78 (3.5)	0.10
Smoking status (current smoker referent)		
Former	6.33 (1.32)	<0.001
Never	6.87 (1.21)	<0.001
Perceive it is important for the local public health agencies to offer tobacco prevention and cessation programs ("not important" referent)		
Somewhat important	1.07 (1.9)	0.57
Absolutely important	3.56 (1.9)	0.06
Adjusted r-squared	*0.19*	

*controlling for gender, agency location, years worked in public health

- Infrastructure already in place to have population-level impact.

Weaknesses

- 1 in 5 public health workers currently smoke, which may reduce their personal level of input and support for local programs and policies.
- Lack of a local "champion" or administrator of tobacco prevention and cessation efforts.
- Responsibilities for many different tasks rather than specialization may decrease viability for sustained and focused tobacco control program at the local level.
- Lack of consistent, tobacco prevention and cessation training for all public health employees.
- Lack of earmarked funding for tobacco prevention and cessation programs.
- Lack of support from public health employees on the agency's role in curbing tobacco use. Given that 1 in 5 public health employees smoke, this could affect "buy in" on any proposed efforts to enhance the agency's support of tobacco prevention and cessation programs.

Opportunities

- Provide agency-level support to reduce tobacco use among the public health workforce. Agency staff serve as public health 'role models' to the broader community.
- Enhance the current nurse visitor program to include tobacco assessment and counseling at every visit. This program currently provides in-home support and screening for prenatal and postnatal care for mothers and their infant children, but does not necessarily include tobacco prevention and cessation efforts.
- Utilization of evidence-based mass media campaigns in the local communities, distributed by the public health workforce.
- Public health workforce can serve as educators, not only to school children, but also to health care workers and law enforcement.
- Serve as advocates for regulatory changes that support the mission of the public health agency.

Threats

- Current economic climate may limit opportunities for designated funding to tobacco.
- No external pressure to prioritize tobacco prevention and cessation.
- Competing interests of the tobacco industry and tobacco lobby. Hungary is a tobacco-producing country and has approximately 6,000 families who grow tobacco.
- Lack of unanimous support for tobacco programs within the public health agency.
- Lack of tobacco control branch at the state level.

DISCUSSION

More men die in Hungary of lung, mouth, esophageal, and laryngeal cancer than in any other EU member country (8). Women are almost equally affected, ranking first in the EU in mouth cancers and second in lung cancer mortality. Although smoking prevalence declined in the early nineties, there is evidence that the decline has leveled among adults and use may be increasing among women. Although there are several studies demonstrating the high prevalence of tobacco use among adults and children and the potential intrapersonal contributors to use, there is a dearth of tobacco prevention and cessation studies in Hungary and no current strategy to lead a comprehensive tobacco control program that is evidence-based (3, 9, 10). This research study was conducted to evaluate the social will and potential opportunity for public health workers to participate in a country-wide effort to reduce tobacco use.

Public health workers in Hungary are strongly supportive of increased programs and policies to curb tobacco use in Hungary, although support is favored among non-smoking and middle-aged workers. Two-thirds of those surveyed feel that they (i.e., the public health workers) should have bear some of the responsibility to reduce tobacco use. There are opportunities to educate the public health workforce about the various approaches that can reduce tobacco incidence and prevalence. In addition, these workers

may be well-positioned within the local communities to provide prevention and cessation counseling if the appropriate fiscal and logistical needs are met in order for them to fulfill this role.

Respondents were generally supportive of tobacco use bans in restaurants and confined sporting events. They also indicated that the larger community would likely support such bans. In addition to support for bans in certain locales, almost two-thirds of respondents supported a cigarette tax increase, although to varying degrees and depending on smoking status. Thus, not only could they provide local support for community-based programs, public health workers could advocate for broader policies that could have a significant impact on the population's health.

This research and SWOT analysis is meant to provoke a discussion about what could be done if funds were earmarked to support the public health agency's role in tobacco control. The ideas presented here are meant to serve as a starting point for dialogue rather than a foregone conclusion. In addition, these data are not without limitations. It is unclear how well-informed public health employees are about the potential role(s) they could play in a tobacco control effort. It is also unclear about their level of expertise in the area of tobacco control (including their educational achievement and professional responsibilities), whereby making it difficult to know what additional training would be needed to enhance their participation and effective delivery of anti-tobacco programs.

The public health agency, while well-positioned to participate in the tobacco control effort, cannot operate in isolation. A comprehensive approach to tobacco control, which utilizes multiple levels of influence such as access to tobacco cessation counseling, tobacco bans and taxation, and enforcement of existing tobacco control policies are very likely to lead to a greater reduction in tobacco use than if a single approach were used. Of course, the current economic and political context must also be ripe for the implementation and dissemination for any new public health agency programs to curb tobacco use.

KEY POINTS

- There are no peer-reviewed publications which explore the potential opportunities and barriers for engaging the public health workforce in tobacco control in Hungary.
- Most manuscripts on tobacco use in Hungary focus on the prevalence of use. Few (if any) adequately explore organizational (or extra-individual) solutions to a countrywide problem.
- There is a real opportunity to enhance tobacco science in Hungary, which has largely been ignored in the scientific literature.

Acknowledgements

This research project was supported while Dr. Foley completed a Fulbright Fellowship in residence at Semmelweis University, Budapest, Hungary and was sponsored by the U.S. State Department and the Hungarian-American Fulbright Commission. This research project could not have been completed without the generous support of the Central Public Health Agency in Budapest, Hungary. Since the inception of this grant, the tobacco control research has been extended in Hungary though a grant funded by the Fogarty International Center, the National Cancer Institute, and the National Institute of Drug Abuse (1 R01 TW007927-01, PI: Kristie Foley, PhD)

REFERENCES

1. World Health Organization. Hungary smoking prevalence tobacco economy. Geneva: WHO; 2002.
2. Global Youth Tabacco Survey Collaborative Group. Tobacco use among youth: a cross country comparison. Tob Control. 2002 Sep;11(3):252-70.
3. Nyári TA, Herédi K, Parker L. Addictive behaviour of adolescents in secondary schools in Hungary. Eur Addict Res. 2005;11(1):38-43.
4. Johan Béla national programme for the decade of health [Internet]. Budapest: Ministry of Health; 2003 [cited 2008 Nov 6]. Available from: http://www.eum.hu/english/public-health-programme/national-public-health.
5. Price JH, Dake JA, Jordan TR. Development of a social will for tobacco control index. Am J Health Behav. 2006 Jan-Feb;30(1):15-26.
6. StataCorp. 2001. Stata statistical software: release 7.0 [computer software]. College Station (TX): Stata Coorporation; 2001.
7. Elements of the coalition's menu/press tobacco taxation. Hungarian antismoking coalition sponsored by the Foundation for our Health in the 21th Century [Internet]. Áfonya: Health 21 Hungarian Foundation [cited 2008 Nov 6]. Available from: http://health21.hungary.globalink.org/koal_menu_elemei/sajto_dohanyado_200609.doc. (In Hungarian.)
8. Levi F, Lucchini F, Negri E, Zatonski W, Boyle P, La Vecchia C. Trends in cancer mortality in the European Union and accession countries, 1980-2000. Ann Oncol. 2004 Sep;15(9):1425-31.
9. Piko B. Smoking in adolescence do attitudes matter? Addict Behav. 2001 Mar-Apr;26(2):201-17.
10. Piko BF. Does knowledge count? Attitudes toward smoking among medical, nursing, and pharmacy students in Hungary. J Community Health. 2002 Aug;27(4):269-76.

Received April 27, 2009
Accepted in revised form September 29, 2009