

Enhancing implementation of smoke-free places: A comparative qualitative study across seven European cities

Martin Mlinarić^{a,*}, Laura Hoffmann^a, Pirjo Lindfors^{b,c}, Matthias Richter^a, SILNE-R study group (Julien Perelman^d, Teresa Leão^d, Joana Alves^d, Bruno Federico^e, Diego Marandola^e, Anna di Marco^e, Vincent Lorant^f, Adeline Grard^f, Nora Mélard^f, Pierre-Olivier Robert^f, Anton Kunst^g, Michael Schreuders^g, Paulien Nuyts^g, Mirte Kuipers^g, Martin Mlinarić^h, Laura Hoffmann^h, Matthias Richter^h, Arja Rimpleäⁱ, Pirjo Lindforsⁱ, Anu Linnansaariⁱ, Jaana Kinnunenⁱ, Luke Clancy^j, Sheila Keogan^j, Elisabeth Breslin^j)

^a Institute of Medical Sociology, Medical Faculty – Martin Luther University Halle-Wittenberg, Germany

^b Faculty of Social Sciences, Health Sciences, Tampere University, Tampere, Finland

^c Tampere University Hospital, Department of Adolescent Psychiatry, Tampere, Finland

^d Escola Nacional de Saúde Pública, Universidade NOVA de Lisboa, Italy

^e Department of Human Sciences, Society and Health, University of Cassino and Southern Lazio, Belgium

^f Institute of Health and Society, Université Catholique de Louvain, Brussels, Netherlands

^g Department of Public Health, Amsterdam Public Health Research Institute, Amsterdam UMC, University of Amsterdam, Germany

^h Institute of Medical Sociology, Medical Faculty – Martin Luther University Halle-Wittenberg, Finland

ⁱ Faculty of Social Sciences, Health Sciences, University of Tampere, Ireland

^j TobaccoFree Research Institute, Focas Research Institute, Dublin, Ireland

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ABSTRACT

Background: Advocacy, resources and intersubjective reasonable arguments are known as factors that contribute to smoke-free (SF) adoption and implementation in Chinese and Anglo-Saxon places. Less is known about how the implementation of smoking bans differs across European places. The aim of this qualitative comparative study is to identify and classify the SF policy implementation processes and types undertaken at the local level in seven European cities according to the views of local bureaucrats and sub-national stakeholders.

Method: Semi-structured expert interviews (n = 56) with local decision makers and stakeholders were conducted as qualitative part of the comparative SILNE-R project in Belgium (Namur), Finland (Tampere), Germany (Hanover), the Republic of Ireland (Dublin), the Netherlands (Amersfoort), Italy (Latina), and Portugal (Coimbra). Qualitative interviews were analyzed using the framework analysis.

Results: Implementation of SF environments predominantly focuses on indoor bans or youth-related settings. Progressive-hungry (Dublin), moderate-rational (Tampere), upper-saturated (Hanover, Amersfoort), and lower saturated (Namur, Coimbra, Latina) implementation types can be distinguished. These four types differ with regards to their engagement in enhancing SF places as well as along their level of perceived tobacco de-normalization and public smoking visibility. In all municipalities SF environments are adopted at national levels, but are differently implemented at the local level due national policy environments, enforcement strategies and the level of collaboration. Major mechanisms to expand SF regulations were found to be scientific evidence, public support, and the child protection frame. However, counter-mechanisms of closure occur if data on declining prevalence and new youth addiction trends trigger low prioritization.

Conclusions: This study found four SF implementation types two mechanisms of progressive expansion and

* Corresponding author. Institute of Medical Sociology, Medical Faculty, Martin Luther University Halle-Wittenberg, Magdeburger Str. 8, 06112, Halle (Saale), Germany.

E-mail addresses: martin.mlinaric@medizin.uni-halle.de (M. Mlinarić), laura.hoffmann@medizin.uni-halle.de (L. Hoffmann), pirjo.lindfors@uta.fi (P. Lindfors), m.richter@medizin.uni-halle.de (M. Richter).

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defensive closure. Development and enhancement of smoking bans requires a suitable national policy environment and indirect national-level support of self-governed local initiatives. Future SF policies can be enhanced by laws pertaining to places frequented by minors.

1. Introduction

Six tobacco control policies (TCPs) have been recommended by the World Health Organization (WHO) to de-normalize smoking and decrease second-hand smoke (SHS) exposure (WHO, 2008). One primary prevention strategy across countries is implementing smoke-free (SF) places, which is consistent with the WHO FCTC Article 8 guidelines to protect people from SHS exposure (WHO, 2009).

Smoking bans have been implemented in most middle- and high-income countries at public places, the hospitality sector, workplaces as well as in schools (Eriksen et al., 2015; Mlinarić et al., 2018). The large majority of European Union (EU) member states remains at the level of indoor bans (Muilenburg et al., 2010; Martínez et al., 2014; Fu et al., 2016). The persistence of SF indoor settings with often partial designs, such as exceptional smoking rules and designated smoking areas, is not compatible with urban health objectives of the WHO *European Healthy Cities Network* initiative (Lawrence and Fudge, 2009; Lawrence, 2013; Farrington et al., 2015).

To enhance existing SF places knowledge on existing implementation processes at local level is important. So far, evidence on European implementation processes is still scant as most studies on SF indoor and

outdoor implementation at the local level come from China (Fong et al., 2015; Luo et al., 2015) and the Anglo-Saxon countries (Blaine et al., 1997; Montini and Bero, 2008; Fallin et al., 2014; Marsh et al., 2014; Mark et al., 2014). In a recent realist review summarizing the existing evidence across all countries around the globe, one could identify three mechanisms that influence sustainable SF development and implementation processes (Mlinarić et al., 2018): First, (absent) alliance-building among tobacco control advocacy coalitions (Weishaar et al., 2016) and evidence-based local data on the benefits and effectiveness of TCPs triggers trust among decision makers in shared “policy core beliefs” (Sabatier and Weible, 2007, p. 194f). Second, sufficient state-funded (human) resources increase priorities for SF policy enforcement (Klein et al., 2007; Kennedy et al., 2014; Mark et al., 2014). Third, intersubjective reasonable arguments such as the child protection frame or public support limit opposing interests and consolidate de-normalization of smoking (Thomson et al., 2009; Crosbie et al., 2011). However, whether and how authorities have clarified implementation steps, the allocation of resources, and the distribution of responsibilities among keypersons could mislead correct implementation of SF legislation (Satterlund et al., 2011; Mark et al., 2014; Marsh et al., 2014).

Table 1
Contextual characteristics of each participating country/city in SILNE-R.

place		smoke-free (SF) legislative context ^a	adults (15+ years olds) daily tobacco prevalence ^b		local prevalence of 14–16 year old weekly smokers ^c		level of implementation ^a (Total & SF laws)	SF non-compliance ^a in % (seeing smokers)	
country	city	SF legislation sectors and locations	male	female	boys	girls	(TCS) score: (0–100)	bars	work
Belgium ^j (2007–2011)	Namur	workplaces, bars & restaurants, public transport, public places	21.6	16.4	16.0	16.9	49/100 (Total), 15/22 (SF)	23.0	21.0
Finland ^j (2007–2009)	Tampere	workplaces, bars & restaurants, public transport, public places, private cars + “TF Finland 2030” ^d	17.2	14.0	5.5	6.2	60/100 (Total), 18/22 (SF)	8.0	8.0
Germany ^j (2007/2008)	Hanover	workplaces, bars & restaurants, ^e public transport, public places	25.1	17.1	4.3	6.4	37/100 (Total), 11/22 (SF)	29.0	20.0
Ireland ^j (2004)	Dublin	workplaces, bars & restaurants, public transport, public places, private cars + “TF Ireland 2025” ^f	19.9	17.3	5.3	3.0	70/100 (Total), 22/22 (SF)	5.0	13.0
Italy ^j (2005)	Latina	workplaces, ^g bars & restaurants, public transport, public places, private cars	22.8	14.9	17.2	22.3	51/100 (Total), 14/22 (SF)	13.0	44.0
Netherlands ^j (2008)	Amersfoort	workplaces, ^h bars & restaurants, public transport, public places	17.0	17.0	10.0	8.2	53/100 (Total), 15/22 (SF)	31.0 ^h	16.0
Portugal ^j (2008)	Coimbra	workplaces, bars & restaurants, ⁱ public transport, public places	23.5	10.9	8.8	9.0	50/100 (Total), 11/22 (SF)	43.0	23.0

^a Data derived from Tobacco Control Scale (2016): Joossens and Raw (2017): The Tobacco Control Scale 2016 in Europe. Seventh European Conference on Tobacco or Health, Porto, Portugal, 22–25 March 2017. This report includes Eurobarometer survey (2014) results on non-compliance with SF legislation in hospitality sectors and at workplaces.

^b Data derived from Tobacco Atlas (see: <https://tobaccoatlas.org/topic/prevalence>).

^c Unpublished SILNE-R survey results on weekly smoking of 14–16 year old adolescents (n = 12,942) in Namur, Tampere, Hanover, Dublin, Latina, Amersfoort, and Coimbra.

^d The Tobacco Free Finland 2030 initiative is since 2014 an endgame policy of the Ministry of Social Affairs and Health. It is an action plan – “Roadmap towards a Smoke-Free Finland” – to eliminate the use of tobacco products in the country by the end of the year 2030. It includes an extension of SF policies to residential properties, private cars (when minors present), playgrounds, amusement parks and beaches (www.savutonsuomi.fi/en/).

^e Legislation of smoking in bars and restaurants is a competence of sub-national regions/units (“Länder”) but in line with general federal guidelines. Hanover (Niedersachsen) has – as most German federal states – only a partial ban in bars and restaurants with designated smoking rooms. Only Bayern, Saarland, and North-Rhine Westphalia have passed a comprehensive ban in the hospitality sector.

^f The Tobacco Free Ireland 2025 initiative is an endgame policy and was launched by the Minister for Health in 2013 (www.who.int/fctc/ire_tobacco_free/en/).

^g The 2014 Eurobarometer shows weak compliance (cf. Joossens and Raw, 2017, p. 18f.). 44% report being exposed to secondhand smoke at work.

^h A smoking ban for small bars came into in 2015 (after fieldwork of Eurobarometer survey on compliance) and is respected. The ban allows smoking rooms (cf. Joossens and Raw, 2017, p. 18, p. 18).

ⁱ Until 2020 smoking areas still allowed in work places, restaurants, and pubs bars. 43% report that people smoke inside bars. (cf. Joossens and Raw, 2017, p. 18ff).

^j Year of implementation of SF laws in hospitality sector.

1.1. Situation in Europe

In Europe, action plans for tobacco control at regional and SF policies at local levels were studied mostly in the United Kingdom (Edwards et al., 1999; Semple et al., 2007; Arnott et al., 2007; Ritchie et al., 2010). Edwards et al. (1999) and Arnott et al. (2007) identified, for the UK context, the need of a) coordinated advocacy and a multi-agency, partnership approach, b) sufficient time, staff, and resources, and c) gaining public support by solid arguments (e.g., SHS exposure). Research on SF implementation in continental EU cities has been scarcely studied and has focused on healthcare or hospital domains (Ilén et al., 2002; Giraldi et al., 2013). Moreover, existing European studies researched often large-scale population effects such as the impact of SF laws on home smoking bans or SHS exposure (Lotrean, 2008; Mons et al., 2013; Ward et al., 2013; Kuntz and Lampert, 2016).

Less is known about how (sub-)national smoking bans are monitored at local levels, how they differ across European places, and how they could be possibly enhanced. This is mainly because many local authorities in Europe do not rule public health ordinances, on the contrary there is a long tradition in the US and Australia of ruling out SF policies at the local level (Satterlund et al., 2011; Mark et al., 2014). SF legislations are across all EU countries mostly implemented at the national level (e.g., Ireland, Italy), but may deviate in legal details at the level of sub-national units (e.g., “Länder”/federal states in Germany, Walloon vs. Flanders region in Belgium) and may differ therefore substantially in the practical implementation in cities or municipalities. There is no cross-national study so far that compares how SF places are implemented under different local circumstances and within specific national “policy environments” (Willemssen, 2018, p. 8). Such knowledge is pertinent to enhance existing SF places, as certain EU cities could learn from advanced local contexts in terms of implementation and enhancement of SF places.

1.2. Aims and research objectives

In this realist study, we compare seven cities located in Belgium (Namur), Finland (Tampere), Germany (Hanover), Ireland (Dublin), Italy (Latina), the Netherlands (Amersfoort), and Portugal (Coimbra). These cities are placed within countries and national policy environments which differ considerably in contextual factors such as SF legislation, locations in which SF legislation is regulated, the prevalence of tobacco consumption in each country, and the level of implementation of TCPs (Table 1). This is reflected in the Tobacco Control Scale (TCS), since we know that Ireland and Finland for instance are progressive with a large range of SF sectors (e.g., workplaces, public places, private cars) being regulated within national-level tobacco endgame agendas (e.g., “Tobacco Free Finland, 2030”) and high compliance rates, while Germany has exceptions such as smoking rooms in hospitality sector and also lower SF compliance at workplaces (Joossens and Raw, 2017, p. 19). Table 1 depicts also large differences across and within contexts by gender and age, such as that the prevalence being highest among German male adults and Italian girls from the city of Latina, while being lowest among Hanover boys and Dublin girls.

The aim of this qualitative comparative study is to identify and classify the SF policy implementation processes and types undertaken at the local level after passing national SF legislation in several sectors and locations in seven European cities according to the views of local bureaucrats and sub-national stakeholders. In addition, we explore the contexts, mechanisms and outcomes that have occurred after applying several types of SF policy implementation process. Based on a “bottom-up approach” (Sabatier, 1986) to implementation research which also considers the top-down effects from the national policy environments (Willemssen, 2018), we will derive recommendations on how to possibly enhance SF places in the future. We are interested in policy learning by exploring the views and experiences of “local bureaucrats” in EU cities, which will help to unveil their norms, knowledge, abilities, resources,

and motivations in enforcing smoking bans at local levels. This element of how policy implementation can fail or succeed may provide new insights to the tobacco control community to better advise policy-makers and possibly enhance design, implementation, and monitoring of SF policies (May, 1992).

This qualitative comparison aims to address the following research questions:

1. How are SF legislations in several sectors and locations implemented in seven EU cities according to the view of local bureaucrats and sub-national stakeholders?
2. What kind of SF policy implementation types occur when studying the enforcement and compliance of (sub-)national SF legislation in municipalities?
3. What are the contexts, mechanisms and outcomes that derive from each policy implementation type?

2. Methods

This qualitative study is part of the SILNE-R project (silne-r.ensp.org) that studies the implementation of TCPs in seven European countries at national, local and school levels by using a realist approach (Pawson et al., 2005; O'Campo et al., 2011). In this paper, we are studying the implementation of (sub-)national SF legislations at local levels. A realist approach studies the contexts, mechanisms and outcomes that have occurred after applying specific programs or policies in a given place or location (Pawson et al., 2005; O'Campo et al., 2011). Ethical approval was granted through the ethical committee of the Medical Faculty of the Martin Luther University Halle-Wittenberg (2016-90 hm-bü), Germany, and obtained in all participating countries separately to comply with respective national standards.

2.1. The realist approach: a place- and context-sensitive perspective

This realist comparative study has an explanatory character and seeks to unravel context-mechanism-outcome configurations (CMOs). Qualitative research methods are compatible with the realist methodology (Pawson et al., 2005; O'Campo et al., 2011), since they aim to unpack hidden processes at micro and meso levels (Flick, 2013). A realist approach investigates *how* and *why* policies work differently in real world contexts (C), trigger beneficial or adverse mechanisms (M) and produce multiple outcomes (O). Such a place- and context-sensitive perspective is indicated, since SF policies might alter (human and financial) resources and (legislative) constraints (C), which then triggers mechanisms (M) which produce (un-)intended outcomes (O) across different places (Mlinarić et al., 2018). Studies have applied a realist methodology in health research (Greenhalgh et al., 2009; Jagosh et al., 2012). However, just a few realist studies so far have paid attention to tobacco control interventions (Douglas et al., 2010; Oladele et al., 2013; Schreuders et al., 2017).

2.2. Sampling

We conducted problem-centered (Witzel, 2000) expert interviews (n = 56) in seven cities of the EU. Qualitative expert interviews are a standard instrument in tobacco control research (Martin, 2004; Montini and Bero, 2008; Hall et al., 2015). Namur, Tampere, Hanover, Dublin, Latina, Amersfoort, and Coimbra were selected as comparable medium-sized municipalities, because they reflect the respective national average in terms of demography, unemployment rates, average income, and proportion of migrants (Lorant et al., 2015).

The aim of the semi-structured interviews was to map whether and how existing SF places were implemented at the level of the seven EU municipalities and what is needed to enhance future initiatives at the local level. Based on a realist review (Mlinarić et al., 2018) and in correspondence with all participating project partners a topic guide

with ten thematic blocks and a short-questionnaire were defined (Supplementary file 1). The final topic guides and short-questionnaires were translated in the respective national language.

We obtained a purposive sample strategy. Each national representative identified informative decision makers and stakeholders relevant to the local implementation of TCPs via digital stakeholders mapping (Mehrizi et al., 2009; Varvasovszky, 2000). The intended profile of the respondents was defined and proposed by MM, LH and MR in an advisory stakeholders mapping inclusion and exclusion criteria document (Supplementary file 2).

2.3. Data collection

Data collection was carried out in collaboration with SILNE-R project partners. A three-day training workshop was held in order to train all national field workers on qualitative expert interviews. The general aim of the workshop was to familiarize all field workers with the topic guide and train them for the multicenter data collection, which was carried out – including with interview pre-tests - across all seven cities between January and July 2017.

Interviews took place in a quiet and undisturbed ambience. Mostly participant's offices or conference rooms were arranged as interview places. Participants gave verbal and active (written) informed consent. All interviews were audio-recorded and conducted in the native language, transcribed verbatim in the respective language, and finally translated by professional English-translating offices (Enzenhofer and Resch, 2013; Roth, 2013; Klein-Ellinghaus et al., 2016). A back-translation check of transcript data was done by each project partner, who delivered data to the organizing researchers (MM & LH). A short-questionnaire (see Supplementary file 1) was carried out at the end of the interview in order to collect basic sociodemographic data such as age, gender, occupation, current institutional position, working experience, and smoking status.

In total, $n = 56$ expert interviews were carried out and lasted, on average, 45 min (Table 2). The characteristics of the participants are displayed in Table 2. 89 persons were contacted and informed by a study information letter, recruited via e-mail, by phone, and snowball sampling. The total response rate was 63%. The significantly lower response (22%) in the German city was due to an institutional-administrative division between the region (city of Hanover plus urban hinterland) and the city of Hanover. This division led to a refusal to participate among identified keypersons from the region of Hanover, as they felt not being knowledgeable for procedures in the city of Hanover. Such a context factor was absent in the other six cities which resulted in a higher response in these municipalities.

The average age of the participants was 51-years and respondents were predominantly female (66%). With 20 years, Irish interview

Table 3
Institutional spheres of respondents.

Field	N	proportion in %
health and welfare promotion	27	48.2
addiction	11	19.6
youth protection	5	8.9
advocacy (e.g., unions, health NGOs)	5	8.9
public order (e.g., police, food safety and consumers protection)	5	8.9
education	3	5.4
Total	56	100.00

partners had the longest working experience. About 27% of the interview partners were ever smokers. Table 3 displays that more than two third of participants could be assigned to institutional spheres of health and welfare promotion (48%) or addiction (20%). The other respondents worked in the fields of youth protection (9%), public order (9%), unions or health advocacy (9%), and education (5%).

2.4. Data analysis

We applied a step-by-step design with the aim of constructing empirically grounded typologies (Kluge, 2000), which enables comparisons across places. Typology construction is a well-established methodology in the social sciences (Bloombaum, 1964; Capecchi, 1968; McKinney, 1969; Weis and Willems, 2016). Such kind of qualitative data analysis is consistent with the framework method (Gale et al., 2013; Ritchie, 2014), which ensures also a step-by-step process and generates themes by making comparisons within, across and between cases (Gale et al., 2013).

Our typology construction can be divided into four stages (Fig. 1). We performed the analysis with MAXQDA (11) by (1) categorizing, (2) summarizing, (3) synthesizing, and (4) characterizing steps. In a first inductive step categories were developed by open coding. City cases and the emerging themes were coded openly in seven city-specific MAXQDA files in order to categorize and summarize the specific SF context at an inductive level of analysis. Collective meaning-making processes and regular discussions between MM & LH were performed throughout the open and axial coding process by monthly team meetings and daily communication in order to resolve interpretative disagreements. The first two interviews in each EU city ($n = 14$) were coded separately by MM and LH. The first emerging coding trees of MM were compared afterwards for consistency with LHs codes and categories. The same procedure was repeated after the fourth ($n = 28$) and sixth interview ($n = 42$) in the respective city. The seven city-specific axial coding trees were developed and refined by generating major

Table 2
Characteristics of the expert interview participants.

country	N	1st contact	snow-ball	Response in %	age ($\bar{x}$)	Female in %	policy-maker	stakeholder	working experience in years ($\bar{x}$)	ever smokers in %	duration min. ($\bar{x}$)
Belgium (Namur)	10	10	2	83.3	51.1	70.0	5	5	13.9	20.0	52.1
Finland (Tampere)	9	13	0	69.2	48.0	77.8	3	6	9.7	11.0	43.3
Germany (Hanover)	8	28	8	22.2	52.8	75.0	3	5	16.5	87.5	42.6
Ireland (Dublin)	10	10	4	71.4	48.2	40.0	5	5	20.3	10.0	54.0
Italy (Latina)	6	5	3	75.0	49.8	66.7	3	3	11.3	50.0	38.3
Netherlands (Amersfoort)	6	7	0	85.7	49.8	83.3	2	4	15.0	0.0	37.2
Portugal (Coimbra)	7	9	0	77.8	55.6	57.1	3	4	16.0	14.3	37.9
7 EU cities	56	72	17	62.9	50.6	66.1	24	32	14.8	26.8	44.8

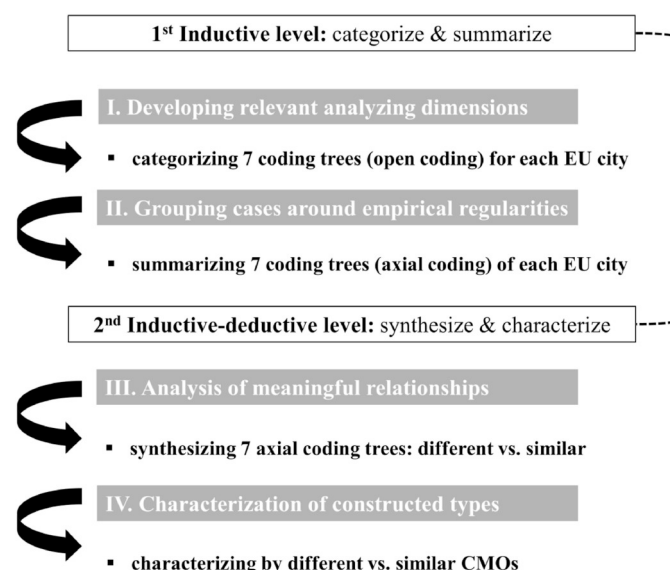


Fig. 1. Empirically grounded type construction. Based on the methodology of: Kluge S. Empirically Grounded Construction of Types and Typologies in Qualitative Social Research. *Forum: Qualitative Social Research* 2000; 1(1).

categories and subthemes in relation to the interview data. Finally, individual cases (interviews) were grouped around empirical regularities. Inductive (data-driven) and deductive (theory-driven) categories and coding trees with ten main categories were defined in a qualitative codebook (Supplementary file 3). Finally, theory-driven CMOs were applied in order to synthesize meaningful relationships and characterize implementation types (Fig. 1).

3. Results

Across all cities, the implementation of SF environments predominantly focuses on indoor bans (e.g., hospitality sector, workplaces) or youth-related settings, such as school tobacco policies (STPs) and child-related SF contexts (e.g., SF playgrounds). Adoption of SF environments at workplaces, public places, schools, in public transport (including private vehicles), and in the hospitality sector is across the seven EU countries analyzed passed either at national (e.g., Ireland, Italy) or sub-national levels (e.g., “Länder”/federal states in Germany). A point of saturation is reported in most cities with regards to expand SF laws in the future, since smoking prevalence is regressive in most of the seven countries and existing smoking bans are perceived as sufficient.

Improve them. I don't really have any idea. Because when you forbid smoking in every public space, public transports ... there aren't many other places, except for private places.

[BEL#4, burgomaster of sports, health and human resources]

3.1. Context factors: policy environments, enforcement strategies, and collaboration

SF places are mostly adopted at national levels, but are implemented differently at local levels due to varying context factors, such as the level of collaboration, enforcement strategies, and existing SF legislation. The reported policy-making process works primarily as a top-down-process, since (sub-)national legislations and authorities (mostly health, education, and youth-related decision makers) are requested to introduce SF laws. SF places are implemented by local authorities (e.g., police, public order, food safety and consumers' protection authorities, etc.) and administrative departments of health

promotion, addiction or educational departments “on the ground.”

He [MM: minister] brought in the Public Health Tobacco Act 2004. [IRL#10, health department official]

There is a smoking ban, but it is the Federal legislation that is applied everywhere (...). I think that there are no other further rules that apply on a communal level, in that regard. Bans are already vast enough.

[BEL#2, educational department]

They derive from national legislation “the Sirchia law,” which mainly deals with passive smoking, approved in parliament in 2003 and extended in 2013. In 2016 the second part of the decree that had been discussed and rejected three years before in 2013 was enacted.

[ITA#4, prevention department]

While the policy making processes represent relatively common context factors across all cities, existing national *policy environments* in the shape of SF legislature are varying circumstances. Dublin and Tampere are placed within comprehensive national-level regulations concerning smoking bans in public places. Both national policy environments have relatively strong policy ambitions (see Table 1: Tobacco-free (TF) Ireland 2025, TF Finland 2030) and a long tradition of SF interventions going back to the 1970s (FIN) and 1980s (IRL). Both cities intend on improving SF policies with respect to family-related outdoor and private contexts, such as SF parks, balconies, playgrounds, and sport facilities. Therefore, being in an advanced stage of FCTC implementation both places report a strong tendency to expand SF environments to outdoor or even private areas.

I mean we had restrictions on smoking in certain places under legislation going back to 1988 and we had restrictions on smoking in schools for example, and prohibitions of smoking on school grounds and that kind of thing, but I think what you are talking about is the 2004 ban and that came about partly as a result of, the Towards a TF Society policy.

[IRL#10, health department official]

(...) at the moment, the most important and the most current issue brought about by the new tobacco law is the possibility to ban smoking on balconies.

[FIN#6, environmental health inspector]

We did a snapshot report on SF spaces across the island, (...) but obviously there is you know, the basic SF legislation within the workplaces but there is also the SF playgrounds across a number of local authorities, there are SF touchlines within the GAA [MM: Gaelic Athletic Association] and some of the sports clubs have done quite a bit of work on that as well, as part of the GAA Healthy Clubs initiative.

[IRL#4, policy advisor in public health quango]

On the other hand, cities from more defensive policy environments, such as Hanover and Namur, have introduced partial smoking bans mostly in the year 2007, with designated smoking areas in the hospitality sectors. These cities miss – except of the recent Dutch “SF generation” initiative – ambitious national-level initiatives, comprehensive TCPs or tobacco-free endgame proposals with extensions of SF policies to residential properties, playgrounds, amusement parks and beaches (see Table 1). Lower compliance and weak implementation are reported from cities that are located in such saturated SF policy contexts.

They didn't want to get into a fight with the hospitality sector, that's why we have the 75 m² sq rule (...). [You can still smoke] in pubs below 75 m² sq where no food is served. Otherwise not.

[GER#5, coordinator of regional addiction prevention]

(...) it is most complicated in the HORECA [MM: hospitality] sector, where there are a few exceptions to the legislation.

[BEL#3, Ministry of Health Walloon Region]

The law is very permissive: restaurants and such, which are half smokers, half non-smokers, meaning, everybody smokes at the same time, everybody smokes at the same time.

[POR#1, Lung Foundation]

I: Do you think this law is well implemented?

R: According to my experience, absolutely not.

[ITA#4, prevention department]

Enforcement of SF policies by environmental health departments (Tampere, Dublin), police or enforcement officers (Latina, Namur), consumers' and food safety authorities (Hanover, Coimbra, and Amersfoort) works differently across the seven municipalities. In Tampere and Dublin one can observe a relatively well-intended documentation and a kind of implementation plan with data-based reports and long-term monitoring.

And in the past few years we have even created a nation-wide data system, although it is a poorly functioning one. There have been a lot of problems and now we have started over and in a few years we should have a nation-wide data system for monitoring that is used by all environmental health officials (...). But we are gathering data and monitoring data and there should be some sort of connection [MM: between municipality and national levels] so that the state could give directions based on the monitoring data.

[FIN#6, environmental health inspector]

So the ban came in, we developed a number of procedures and reporting mechanisms to allow us to monitor the levels of compliance across the country. The Environmental Health Officers (EHOs) visit quite a lot of premises, certainly all the pubs and all the restaurants but also the retail premises as part of enforcement of other legislation, food safety particularly but also other bits of legislation as well so we were using them as well and they were very supportive of the whole initiative.

[IRL#10, health department official]

In most cities, inspections take place in a rather action-based way at specific days in a year, and are often combined or feature a stronger focus on the observation of the bans on sales of tobacco or alcohol to minors. Local authorities act mostly only upon indications of active citizens.

R: Generally, we do it action-based, so that means that we plan an action on one day, for example a Saturday, and then a whole center, area or an entire street gets inspected. And then it can be that all businesses are first inspected anonymously without the owner knowing (...).

I: Okay, people can report that to you?

R: Yes, we have a public phone number at the NVWA [MM: Dutch food safety authority], on the website you can submit a complaint or report that they are still smoking there, and that it is bothering me, and then we can inspect that place.

[NED#3, inspector of consumer's protection]

Exactly. Imagine that we have a, we have a complaint of a of a restaurant that doesn't comply with the hygiene requirements ... or other!.. we decide that this week we're going to inspect restaurants, as many restaurants as possible in Coimbra.

[POR#5, economic and food safety authority]

If you have 'no prosecutor making a complaint, you will have no judge to decide on' [MM: German saying]. The public order office acts only upon indications. Do such things happen often? I don't think so. I don't think that they put many resources into that or that they need any additional supply.

[GER#5, coordinator of regional addiction prevention]

Collaboration between the third sector of local or regional NGOs with administrative health, youth, and education sectors is to be found in all seven cities and are mostly considered as beneficial advocacy, although often focused on the area of STPs, child-related SF areas (e.g., playgrounds) or SF health facilities.

(...) I think that it's the essential, the thing is, there must be a combination of several organizations to have then those environments improved, okay.

[POR#5, economic and food safety authority]

Yeah, very important [MM: working with other organizations]. I suppose advocacy, the primary part of our work is information provision and advocacy isn't a huge part of that, so for other organizations who do fit into that piece, it is good for us to support them and vice versa, because there is different skill sets that we all have, so we can contribute to each other. In terms of smoking, the Irish Cancer Society and then we work very closely with the ## [MM: National Health Service] Quit Team so they would be the main collaborators in terms of smoking. Then obviously, we work with ## [MM: youth organization] and places like that, and sometimes college SU's [MM: student unions]. But it depends as well, like if there was ever a smoking campaign that we did that might be targeted at a specific demographic or if there is a specific demographic where there's higher rates of smoking in and if there are organizations which are already working with them, we would seek to collaborate with them as well so, it is definitely really important to our work yeah (...).

[IRL#5, youth NGO]

Successful SF bottom-up initiatives that resulted from trustful collaboration and effective long-term strategies can be mostly found in Dublin (e.g., SF campus, playgrounds), which are often located in health facilities, child-related contexts and sometimes piloted first by by-laws. These initiatives are performed on a long-term basis, from planning until implementation.

Yes. We adopted a TF campus policy in-house. We have an office here and an office in Belfast so we have a TF campus statement and a two-year plan for what we want to do within the two years, so we haven't achieved all of those things but we are moving in the right direction.

[IRL#4, policy advisor in public health quango]

My focus has been on the by-law in relation to playgrounds and those things take a long time to get lined up, but when that's in place, I suppose it becomes easier and less unacceptable or intrusive for people to buy-in to more initiatives around that. So, if we are doing a family day in a park now that is associated with play facilities with bouncing castles and all that, I would be saying at the planning (stage), 'how can we do that to promote SF activities for children?'

[IRL#2, county council official, parks department]

The analysis of Dublin indicates that experts report multiple actors as part of effective SF advocacy and alliance-building. Such coalitions require political leadership, SF advocacy by health-oriented NGOs, youth organizations, trade unions, and policy makers. Irish municipalities and the big four Dutch cities indicate that local bottom-up initiatives contributed to adoption of SF playgrounds for children (e.g., IRL: by piloting first a by-law). However, in federal states – such as Germany and Belgium – with multi-level governance an ambitious national-level support may be more appropriate to support indirectly self-governed local initiatives than in grassroots-oriented countries.

3.2. Mechanisms: progressive expansion vs. defensive closure

Certain intersubjective and reasonable arguments need to be made

in public discourse to achieve knowledge diffusion for SF goals and convergence of policy core beliefs. We found supportive arguments (e.g., scientific evidence, public support, child frame) to *expand* SF policies, but also obstructive counter-mechanisms (e.g., data on declining prevalence, 'nanny-state/freedom of choice' frames) that limit and *close* windows of SF opportunities. Processes of *expansion* are triggered if evidence-based knowledge on tobacco harms (e.g., SHS), effectiveness of SF policy measures, and public support for TCPs are evident.

To me, that whole movement of SF environment and a SF country, and a SF Ireland has come from sound evidence and research (...) about the consistent details of the damages of cigarette smoke.

[IRL#1, advocacy organization]

(...) you've got to arm them with the evidence, arm them with the arguments, and co-ordinate that attack then.

[IRL#3, trade union official]

(...) if we gather enough public support for a SF generation to convey the concept to the municipality then they will be more eager to take this on.

[NED#6, clean air prevention organization]

Low socioeconomic status (SES) is considered in all places as a barrier for support and implementation, primarily in vocational schools and low SES neighborhoods. However, children-related contexts are across all seven places considered as reasonable and promising future intervention area for smoking bans. This holds for national (e.g., SF cars carrying children) and local policies (e.g., SF kindergarten, playgrounds, parks, etc.).

(...) the ban on smoking in cars when there are minors. Indeed, this is one of the debates, since we are in the private sphere, and therefore we don't have the right to ban it. But it's also related to the rights of the child, who has the right to live in a healthy environment.

[BEL#3, Ministry of Health Walloon Region]

(...) relevant are in any case places frequented by children and youth (...). I've seen it in New Zealand 'we are a smoke-free kindergarten' (...).

[GER#6, coordinator of regional health promotion]

Counter-mechanisms of closure are to be found if (sub-)national decision makers do not share same policy core beliefs due to other priorities or interests, even if public support for SF places is evident. This is evident in the Belgian, Italian and German contexts, as the national policy environments are perceived as institutional barriers and defensive with regards to expand SF areas.

Public sensibility goes much faster than the legislative system. This is surprising. We wonder why decision-makers don't follow ... I told you about the protection of children in cars, 90% of people and smokers agree.

[BEL#7, life habits section]

I'd like to be a little controversial about this because the bill was blocked by ## [MM: leader of the radical party and the defender of civil rights] who held it to be limiting individual rights.

[ITA#4, prevention department]

(...) there are European countries where smoking in cars is forbidden if you're carrying minors. You could try this in Germany. No chance. This will not happen. (...) it's crucial what the tobacco and alcohol industry does with our parliamentarians in the Bundestag. That plays a central role.

[GER#1, head of federal addiction prevention]

Moreover, if SF priorities are perceived to be low, due to declining tobacco consumption among young people, one can observe a

mechanism of displacement. This results in minor prioritization of existing implementation and future enhancement, which could be observed especially in the Finnish, Dutch and German contexts. Youth smoking rates in these three cities are reported as regressive at national and local levels and other "hot topics" are reported as becoming much more relevant, which triggers a counter-mechanism of closure for future SF expansion. Priorities are shifting from tobacco to allegedly "more important" substances (e.g., cannabis), youth trends (e.g., digital harassment, online bullying), and specific industry innovations, like Snus (Tampere) or Shisha (Hanover), and e-cigarettes.

And I also just looked at some recent data that come from the monitor of the GGD, and that is taken from the somewhat older youth and from that is obvious that in 2011 the percentage that admitted to ever smoking was 34% and in 2015 this has decreased significantly to 19%, and the youth that smokes daily is only 4% has decreased as well. Therefore, my advice for new policies would also be to not invest in that.

[NED#1, policy director healthcare]

When we looked at the key figures for the Welfare report, we saw a declining trend in smoking among school-children but cigarettes have been replaced by snus. Our welfare coordinators inform us of an increase in snus-use particularly in Tampere and the municipalities surrounding it. So it's a big problem and one we must somehow address and be quite active about it.

[FIN#2, health promotion officer]

3.3. Outcomes: differences in saturation and tobacco de-normalization

Except for Irish respondents from Dublin, we found outcomes of relatively low prioritization of SF policies and explicit saturation of future expansion efforts. Even in a progressive Finnish tobacco control context such as Tampere, enhancement of existing implementation of smoking bans is perceived as a rather minor policy issue. Mental health, minor refugees, general public order issues, alcohol and Snus, for instance, are domains that are reported as more urgent at the local level.

We tend to think that we have so many other duties, what with the environment, sustainable development, mental health, narcotics – that tobacco is just sort of (...). Not that big of a deal.

[FIN#9, coordinator in substance use prevention]

About my profession I must say that smoking is not one of our priorities. I hope you're not disappointed.

[ITA#5, commander of police unit]

Like I said, tobacco is a minor issue to me (...).

[GER#4, coordinator of local addiction prevention]

What I have noticed that it never seems to be a hot topic because people, and municipalities, have a lot of things to consider. And smoking doesn't affect them immediately, alcohol does and then they have to find something for it, but smoking doesn't bother them that much.

[NED#6, clean air prevention organization]

The context of Dublin is unique, since SF outdoor expansion, especially in outdoor places and at public events frequented by children, is set up as a clear objective. However, increased tobacco de-normalization is perceived across all cities as dominant trend, which follows the storyline that smoking has lost its dominant status compared to former times and has become less visible, less normal, less legitimate, and more stigmatized ever since.

I would strongly recommend or focusing on is the whole events area, so as a council, and as a body, sponsoring events that are SF so starting with children's events and then working that up so that you're constantly expanding the range and level of acceptance that

SF is something that is part and parcel of everyday life (...). There is no question; it is just accepted, in the same way it is in this restaurant now- nobody would dare to [MM: light up a cigarette]. You go to an event, a sports event or they're kids playing in this area so nobody even thinks about saying that they need a cigarette (...).

[IRL#2, county council official, parks department]

We can do it and it's the trend, it's the dominant wind (...) I ate a pizza at noon, and no one could imagine a smoker at the other table. It's won. The de-normalization has started.

[BEL#7, life habits section]

But the Marlboro man, he got a bit long in the tooth.

[GER#2, drug commissioner and youth protection]

If you think of a situation where someone might go marching for smoking cigarettes, they would be shouting into the wind.

[FIN#3, director of welfare services]

In the past if we had parties you would put ashtrays everywhere and even made sure you had cigarettes for people who smoked. Now you don't even think about it anymore. If you smoke, you are the exception. So no ... A lot has changed in the past 10 years, and it has been paid a lot of attention in society, and now just the last actions.

[NED#5, manager of medical centre]

Still, reported smoking prevalence, perceived visibility of smoking at SF places as well as a noticeable lower tobacco de-normalization is found in the Mediterranean (Latina, Coimbra) and Belgian (Namur) cities especially. Smoking in these contexts is still a relatively normal and omnipresent behavior in public streets, at workplaces, and in cafes.

You don't have to go too far to see what's happening. Just take a look along a busy road and you don't see other than people with cigarettes and a cell phone. Just go in some public place where they have opened smoking room and you'll see clouds of smoke and the people indifferently passing by.

[ITA#1, head of addiction prevention]

I see many, many consumers, many consumers, and especially here in the offices' area, people smoke a lot in the building, at the back, at the back of this block, people smoke a lot.

[POR#7, association for consumer's protection]

Now there are a lot of people who smoke on the street, everybody sees it. I'll tell you something, you are at a bus stop, sometimes it's stifling, I have to get away from it because I don't like it that much. It doesn't bother me that people smoke if they want to smoke, but it doesn't amuse me that much to be smoked out, that's for sure.

[BEL#8, local substance use prevention]

3.4. Smoke-free policy implementation types

The typology analysis identified four SF policy implementation types across seven EU cities, which are displayed and defined in Fig. 2. Progressive-hungry (Dublin), moderate-rational (Tampere), upper-saturated (Amersfoort, Hanover), and lower-saturated (Coimbra, Namur, Latina) implementation types can be distinguished. These four cross-city typologies differ mainly with regards to their engagement in implementing existing and enhancing future SF environments, as well as along their level of perceived tobacco de-normalization.

4. Discussion

This is the first comparative study that investigates the implementation of smoking bans at the level of European municipalities. Context-dependent processes contribute to either *progressive expansion* or *defensive closure* of SF policy enhancement. Progressive and defensive tobacco control policy environments at national levels were found to virtually “trickle-down” to local levels, which points out to the relevance of the national context.

4.1. Interpretation and comparison with existing research

Our findings are in line with Willemsen (2018), who argued that specific national policy environments, the role of scientific evidence, and collaborative coalition building determine policy making processes in tobacco control (Willemsen, 2018). This may explain the leading role of progressive-hungry Dublin and moderate-rational Tampere with having ambitious national-level tobacco endgame policies, which is

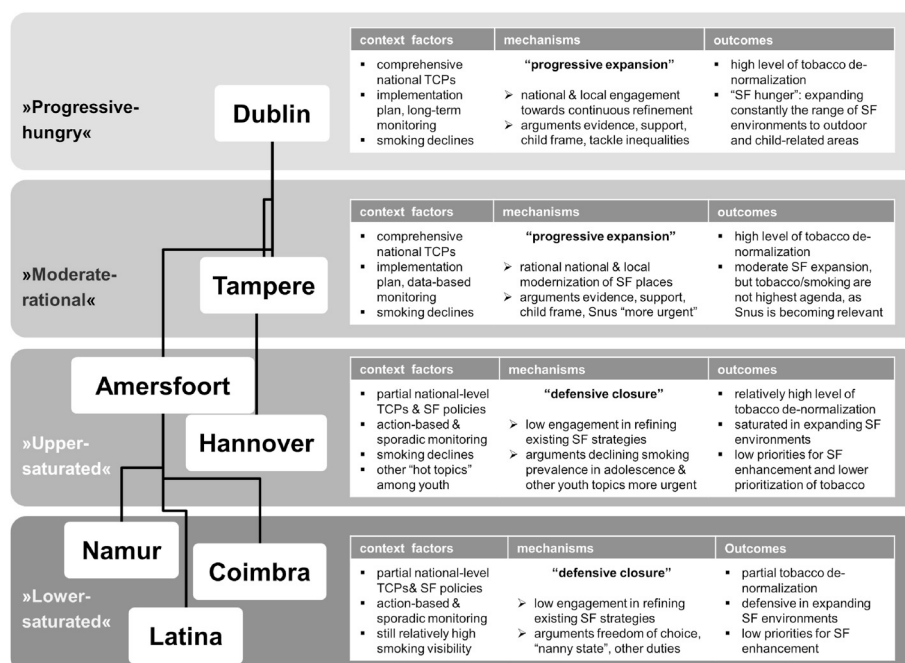


Fig. 2. Four SF implementation types.

also in line with Californian findings which revealed that broader provincial or national level legislation is a key for local conditions (Montini and Bero, 2008). Quantitative and qualitative studies from Anglo-Saxon regions showed that long-term monitoring of SF environments and degree of SF priorities at local levels depends strongly on staff and time (Klein et al., 2007; Marsh et al., 2014; Montini and Bero, 2008; Mark et al., 2014; Satterlund et al., 2009). Research from these same contexts identified limited time resources as a reason for low prioritization of sustainable implementation (Douglas et al., 2015; Satterlund et al. 2009, 2011; Kennedy et al., 2014; Marsh et al., 2014; Mark et al., 2014). These findings were synthesized in a previously published realist review (Mlinarić et al., 2018) as a “increasing priorities” mechanism and were found as perception in our qualitative data as well. But the qualitative results point out that, even if more resources were to be supplied, SF development and enhancement requires especially in the lower- and upper-saturated types, firstly, a suitable national context and, secondly, reasonable arguments in order to expand policy-making ambitions and to avoid mechanisms of SF closure.

This is in line with a “limiting opposing interests” counter-mechanism, which underlines the relevance of intersubjective reasonable arguments, such as SHS exposure (Bayer and Bachynski, 2013; Mlinarić et al., 2018). Scientific evidence on SHS (Bayer and Bachynski, 2013), public support (Thomson et al., 2016; McIntosh et al., 2015), and the child frame (Klein et al., 2007; Mlinarić et al., 2018) contribute to policy core belief convergence and expansion of SF outdoor places across all identified implementation types. Still, the German and Dutch cities point to the complexities of such processes, since we found that high de-normalization can result in lower prioritization and close opportunities for SF enhancement. Our qualitative study highlights and unpacks counter-mechanisms of closure, since evident data on declining smoking prevalence or new emerging youth trends may result in lower priorities for SF policy enhancement. Research on hard-to-reach populations in the US context however shows that community-based participatory approaches and incentive programs may be one option to foster tobacco control even in marginalized communities with low priorities for SF policies (Robertson et al. 2017).

The success or failure of SF policy implementation may also depend on culture, public awareness and support (Muilenburg et al., 2010), smoking prevalence and political tradition (Feliu et al., 2019), which may explain the defensive lower-saturated types in Italy, Belgium and Portugal. These three countries and cities observe also relatively high smoking prevalence among both genders in adulthood and adolescence (Table 1). The wording of SF legislation may be across countries almost identical, but cultural and contextual social elements – such as tobacco prevalence and norms – could affect its implementation such as resistance to the policy during implementation (Mlinarić et al., 2018).

Countries of the EU may do not have the cultural tradition of ruling out SF policies at the local level such as other Anglo-Saxon countries have (Satterlund et al., 2011; Mark et al., 2014). A possible institutional explanation one could borrow from political sciences may be that these units affiliate to different “family of nations.” (Obinger and Wagschal, 2001) Corporatist EU policy systems have distinctive policy-making processes and integrate also industry interests which may hinder effective tobacco control lobbying at several levels of complex multi-level governance (Willemsen, 2018).

However, one can determine a clear tendency for expansion to child-related SF areas (e.g., SF playgrounds, SF parks, SF cars, etc.) in progressive types. The child frame is a useful discursive tool to enhance tobacco control policy support (Kuijpers et al., 2018). Our results show, such as other studies, that SF environments are perceived as supportive and easier to communicate if children and minors are framed as part of the intervention strategy (Thomson et al., 2009; Crosbie et al., 2011; Klein et al., 2007). Quantitative US-based surveys (Klein et al., 2007) and a review of SF outdoor areas in Anglo-Saxon municipalities (Thomson et al., 2009) found also that the vast majority of people

support children-related SF outdoor areas at playgrounds and parks. Another argument for SF places as primary prevention strategy, which was present but not dominant in our data, but may have future potential, is to tackle smoking inequalities and SES differences in tobacco-attributable mortality (Lorant et al., 2016; Bosdriesz et al., 2015, 2016).

4.2. Limitations

This qualitative study is, due to its European focus, limited in being transferred to low- and middle-income contexts that are penetrated by tobacco industry interference (Gilmore et al., 2015). The constructed typology cannot be generalized for all medium-sized cities in the EU countries analyzed, although we found that national policy environments are major factors which might imply that we would have altered similar results in other municipalities. Most interviews (n = 48) were analyzed based on English transcripts and coded by German-speaking scholars, which might have resulted in partial misreading and lost meaning during analysis and interpretation (Enzenhofer and Resch, 2013; Roth, 2013; Klein-Ellinghaus et al., 2016). Dublin was found to be the most progressive place in our analysis, but Irish interview partners also had the longest working experience (20 years) in our field of interest and Irish interviews had the longest duration (54 min). This might be also influenced by Dublin's status as the national capital, whereas the remaining cities are medium-sized places with less connection to national-level institutions and national policy making.

4.3. Recommendations

Our findings suggest that the local level in the EU must be subsidized and indirectly supported by national levels in order to be able to take a step towards enhancement of existing SF areas. Local initiatives must be framed with adequate and ambitious national policy environments such as the TF Finland 2030 or TF Ireland 2025 endgame initiatives, including effective tobacco taxation, comprehensive SF laws, banned vending machines, plain packs, point-of-sale, and advertising bans. In defensive and saturated types, smoking bans need to be adapted and modernized specifically for outdoor places (e.g., playgrounds, parks) and private contexts (e.g., cars) that are frequented by minors, and demand child protection.

5. Conclusions

This study found four SF implementation types and binary CMOs of progressive expansion and defensive closure. Progressive-hungry (Dublin), moderate-rational (Tampere), upper-saturated (Hanover, Amersfoort), and lower-saturated (Namur, Coimbra, Latina) implementation types can be distinguished. One can observe increasing smoking de-normalization, but with clear distinctions which are reflected across the four SF implementation types. There is a general challenge of displacement and priority shifting from tobacco to “more important” substances, such as cannabis, Snus, Shisha, and e-cigarettes.

Contributorship statement

MM managed the whole process of the qualitative study, conducted the German interviews, coded all interviews from the seven EU cities openly and axially, and drafted the whole manuscript. LH was involved in managing the whole process of the qualitative study, in coding all interviews from the seven EU cities openly and axially, and synthesis of evidence. PL conducted the Finnish interviews. PL and MR were involved in the design of the paper, and refinement of the synthesis of evidence. All authors contributed to the writing of the final version manuscript and approved the final manuscript.

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Declaration of competing interests

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Appendix A. Supplementary data

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