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## Smoking in French prisons: Factors associated with consumption and cessation

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### ABSTRACT

For the past twenty years, researchers have emphasized the importance of producing data on tobacco use among incarcerated people. With a prevalence rate that can reach 97% in some countries, smoking is much more frequent in that population compared to the general population and this constitutes one of the main causes of chronic pathologies and mortality in prisons. In France, more than 80% of inmates use tobacco while the prevalence of smoking is 31.9% in the general population in 2021. In a global context of decreasing smoking rates, tobacco use in prison contributes to the persistence of social inequalities in health. This article presents the results of a sociological study which was part of the diagnostic phase of an interventional study whose overarching goal was to construct, implement and evaluate an intervention aiming to reduce tobacco use in prisons. The objective of this paper is to identify the factors associated with tobacco use among inmates as well as the factors that hinder or facilitate the cessation process. Qualitative interviews with 21 inmates and 30 professionals were conducted and analysed thematically, using an inductive approach and Nvivo software. In light of our findings, we discuss the importance of behavioral awareness and the community-based approach that are essential to the construction and implementation of a relevant and acceptable public health program.

### 1. Introduction

Characterized by a high level of tobacco consumption, prisons face important health issues related to smoking among inmates (Alokan & Kabir, 2022; Binswanger et al., 2014). With a prevalence rate of up to 97% in some countries, smoking among incarcerated persons contributes to the persistence of social inequalities in a global context of decreasing smoking rates (Commar et al., 2019).

In France, the smoking prevalence was 31.9% in the general population in 2021 (Pasquereau et al., 2022) but approximately 80% of the inmates use tobacco (Jacomet et al., 2016) and the harms of smoking are among the leading causes of death in custody (Sannier et al., 2009). The use of tobacco in prisons is widely accepted and, in France, inmates are allowed to smoke in their cells and in the prison yard. Such situation makes it difficult for smokers to quit (Brown et al., 2019; Richmond et al., 2009; Sweeting et al., 2019). Moreover, in French prisons, access to care is very structured inmates must write letters justifying the need for care, which may lead to barriers in access. Prison staff also have higher tobacco use than average and their daily tobacco smoke exposure is a factor of smoking maintenance (Semple et al., 2017).

While the sale of tobacco in prisons is authorized in France, it is

prohibited in several countries (United States, Canada, New Zealand, Australia). Nevertheless, it appears that cigarettes occupy a central place in the parallel market as an informal currency that inmates use to buy goods and services (Lankenau, 2001; Richmond et al., 2009).

The partial or complete ban on smoking is also a public health measure found in prisons (Brown et al., 2019; Dugdale et al., 2019). However, the isolated implementation of these different prohibition measures is not sufficient to enable inmates to commit to long-term smoking cessation (Baybutt et al., 2014). For example, while a complete ban limits exposure to passive smoking for the entire population of an institution, it also has deleterious effects related to forced cessation and the growth of a parallel market source of violence (Brown et al., 2019; de Andrade & Kinner, 2017).

While tobacco reduction is one of the priorities of prevention programs for inmates, there is a lack of research on these issues in France. Smoking in prisons is a complex research subject, as it is at the crossroad of a number of issues facing inmates and prison guards. Space and time being highly regulated and constraint in prison, tobacco use takes the form of both a remedy against anxiety and an occupational activity to cure boredom, which makes it a source of calm and incident (Richmond et al., 2009).

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Smoking prevention interventions in prisons are not well developed, as drug use is considered to be the priority target. However, multi-component smoking cessation interventions have proven to be effective in inmates, offering several actions to inform and support people who want to quit smoking while incarcerated (Bowe et al., 2021; de Andrade & Kinner, 2017). In addition, the implementation of peer health education programs is widely described as a relevant model to fight against health inequalities, especially in the prison context where particularly vulnerable populations are concentrated (Bagnall et al., 2015).

Identifying the determinants of smoking among inmates, both at the individual and contextual levels (Emond et al., 2010), is a key step in building a tobacco reduction intervention in a complex setting such as prisons. Integrating a contextual analysis into the theoretical framework of the intervention allows for better operationalization of concepts and theories from the public health literature (Minary et al., 2019; Minary et al., 2019; Moore et al., 2019; Moore et al., 2019; Moore & Evans, 2017; Moore & Evans, 2017).

We present the results of a qualitative study on smoking in French prisons. This study is the first step of an interventional research whose objective is to co-construct a smoking cessation intervention – TABAPRI – and to evaluate its effectiveness on the reduction of tobacco consumption among incarcerated smokers (Picot-Ngo et al., 2021; Picot-Ngo & Protais, 2020). By contextualizing tobacco use in custody, the results of this study will then be integrated into the conceptual framework of the intervention to increase its feasibility and acceptability. The purpose of this article is to identify and understand the individual, collective, and structural factors underlying smoking behaviors in prison settings to inform and guide the construction of a tobacco reduction intervention.

## 2. Methods

### 2.1. Study design

This sociological study is based on individual face-to-face semi-structured interviews which explored the daily experience of smokers in a prison context. It took place between January and March 2020 in prisons for convicted adult men. This study is part of a research project conducted by the National Institute of Health and Medical Research (INSERM) together with the French Monitoring Centre for Drugs and Drug Addiction (OFDT). The interviewees included inmates, guards, other prison staff (management, insertion and probation, administrative), health staff and trainers (national education, training centers).

### 2.2. Sample

Three prisons (*centres de détention*) which house people sentenced to more than two years in prison under a detention regime oriented towards resocialization were selected by the research team in conjunction with the French central administration to participate in the study based on their varied characteristics: architectural configurations, geographical areas, socio-demographic profiles of the inmate population.

Most of the participants were recruited with the help of management teams and guards, who approached both the inmates and professionals. Employed by the public hospital and not by the prison administration, the health professionals were solicited through the head of the health unit. In some cases, the investigators directly solicited individuals whom they met during their on-site visit. Of the five inmates directly approached by the investigators, two agreed to participate in the study. While the reasons for refusal were not always expressed, incompatible schedules were often mentioned by inmates who work in prison. The interviews generally took place in the prison visiting rooms with inmates and in the health care unit or in the administrative building with professionals (participants' offices or training rooms).

### 2.3. Data collection

The interviews were conducted by two investigators, CP (female, sociologist, PhD) and CPN (male, sociologist, PhD student in public health), researchers at the French Monitoring Centre for Drugs and Drug Addiction (OFDT).

Three interview guides were designed to correspond to the different statuses of the respondents: inmates, guards and other professionals. After the first ten interviews, the guides were adjusted to better match the experiences of each category of participant.

Interview guides for inmates explored factors associated with smoking and cessation in the prison context: changes in use at the time of incarceration and motivations to use or cut down on tobacco use; desired effects, experienced effects, and effects of tobacco withdrawal; modes of procurement and consumption; social interactions related to different uses; strategies for reducing use; and representations of prison regulations and public health policies regarding tobacco.

In the interviews with the guards, we questioned the daily consumption of smokers and the professional practices associated with smoking (strict application or circumvention of the regulations in force). The justifications for these practices were questioned as well as the representations of the regulatory and sanitary measures regarding tobacco in custody.

Interviews with other stakeholders often took the form of more open-ended interviews because of the diverse activities carried out by these professionals (health care, training/education, social and legal support).

All interviews started with a reminder of the objectives of the research. Oral consent was recorded at the beginning of each interview. All interviews were audio recorded, transcribed and anonymized.

During the interviews, notes were compiled in a field notebook, which allowed the interviewers to note their observations and to formulate follow-up questions in accordance with the interviewee's discursive logic.

### 2.4. Data analysis

The first thematic categories of analysis were developed by CPN after reading of a first series of five interviews. He also carried out the repartition of the content of each interview by thematic coding on the qualitative software analysis NVivo. The inductive approach (Thomas, 2006) was favored in order to allow new themes and hypotheses to emerge during the analysis and to make the thematic tree structure evolve. In the meantime, a second coding was performed manually by CP, which provided a second opinion on the set of coding thematic categories, identified common and divergent themes, and permitted to reach saturation of the mined data (Saunders et al., 2018). The finalized version of the thematic tree was discussed and validated collectively by CPN, CP, JK (sociologist, PhD).

The content analysis was systematized through the development of a matrix framework allowing for thematic ordering of the interview excerpts and discrimination of the data via a system of attributes (age, smoking status, prison). The lived experiences and representations of the various interviewees could be linked and compared according to the thematic categories of the framework matrix (Gale et al., 2013). The data were interpreted by CPN, CP, JK and KC (MD, PhD) and discussed with JMA (OFDT director) and FG (sociologist, PhD).

## 3. Findings

Fifty-one (51) interviews were conducted in the three participating prisons. Three institutions participated in our study. Table 1 presents the characteristics of the participating inmates (n=21). Table 2 shows the characteristics of the professionals: health professionals (n=4 nurses and n=3 medical doctors); other staff (n=8 probation and administration staff and n=3 external workers); and guards (n=12). The inmate group included exclusively male smokers and one ex-smoker, while the

**Table 1**  
Characteristics of the inmates participating in the study.

	Pseudonym	Gender	Age range	Number of years of incarceration	Smoking status	Interviewers
<b>Inmates</b>	D1	Male	27–31	3–4	Smoker	CPN
	D2	Male	23–27	3–4	Smoker	CP, CPN
	D3	Male	18–22	1–2	Smoker	CPN
	D4	Male	27–31	3–4	Smoker	CPN
	D5	Male	32–36	7–8	Smoker	CPN
	D6	Male	47–51	>10	Smoker	CP, CPN
	D7	Male	23–27	3–4	Smoker	CP, CPN
	D8	Male	42–46	7–8	Smoker	CP, CPN
	D9	Male	42–46	5–6	Ex-smoker	CPN
	D10	Male	27–31	1–2	Smoker	CP
	D11	Male	23–27	3–4	Smoker	CPN
	D12	Male	>52	5–6	Smoker	CP
	D13	Male	23–27	3–4	Smoker	CPN
	D14	Male	27–31	<1	Smoker	CPN
	D15	Male	>52	1–2	Smoker	CPN
	D16	Male	27–31	9–10	Smoker	CPN
	D17	Male	37–41	1–2	Smoker	CPN
	D18	Male	27–31	7–8	Smoker	CPN
	D19	Male	>52	>10	Smoker	CPN
	D20	Male	42–46	7–8	Smoker	CP, CPN
	D21	Male	23–27	5–6	Smoker	CP, CPN

**Table 2**  
Characteristics of the professionals participating in the study.

	Pseudonym	Fonction	Gender	Age range	Length of service	Smoking status	Interviewers
<b>Health professionnals</b>	PS1	Nurse	Male	42–46	>15	Smoker	CPN
	PS2	Medical doctor	Male	32–36	6–10	Non-smoker	CP, CPN
	PS3	Medical doctor	Female	37–41	1–5	Non-smoker	CPN
	PS4	Nurse	Female	27–31	1–5	Smoker	CPN
	PS5	Medical doctor	Female	37–41	6–10	Non-smoker	CPN
	PS6	Nurse	Female	47–51	11–15	Ex-smoker	CP, CPN
<b>Other staff</b>	AP1	Trainer	Female	42–46	1–5	Smoker	CPN
	AP2	Educator (Harm reduction)	Male	42–46	1–5	Ex-smoker	CPN
	AP3	Trainer	Female	37–41	6–10	Ex-smoker	CPN
	AP4	Teacher	Male	32–36	1–5	Ex-smoker	CPN
	AP5	Social worker	Male	27–31	1–5	Ex-smoker	CPN
	AP6	Social worker	Male	32–36	11–15	Smoker	CPN
	AP7	Management staff	Male	27–31	1–5	Smoker	CP
	AP8	Management staff	Male	47–51	>15	Ex-smoker	CP, CPN
	AP9	Management staff	Female	27–31	1–5	Ex-smoker	CPN
	AP10	Administrative officer	Female	42–46	11–15	Ex-smoker	CPN
	AP11	Social worker	Male	47–51	>15	Smoker	CPN
	AP12	Administrative officer	Male	47–51	11–15	Ex-smoker	CP
<b>Guards</b>	S1	Guard	Male	42–46	>15	Ex-smoker	CP, CPN
	S2	Officer	Male	42–46	11–15	Smoker	CP
	S3	Guard	Male	32–36	6–10	Smoker	CPN
	S4	Guard	Female	42–46	6–10	Smoker	CPN
	S5	Officer	Male	47–51	>15	Smoker	CPN
	S6	Guard	Male	42–46	11–15	Smoker	CP
	S7	Guard	Female	37–41	11–15	Smoker	CP
	S8	Guard	Male	47–51	11–15	Ex-smoker	CP, CPN
	S9	Officer	Male	42–46	11–15	Ex-smoker	CP, CPN
	S10	Guard	Male	42–46	11–15	Smoker	CP
	S11	Guard (sports coach)	Male	42–46	>15	Ex-smoker	CPN
	S12	Guard	Male	47–51	11–15	Ex-smoker	CP, CPN

professional group was mixed and included non-smokers and ex-smokers. Both groups included individuals between 19 and 66 years old. This methodological approach allowed for a variety of perspectives on smoking in custody. The interviews lasted between 45 min and 1 h and 40 min.

We will present our results in three parts. Firstly, we will identify the main factors associated with smoking among inmates, including the spatial and temporal constraints of the prison and the social role of tobacco products. In a second part, we will present the barriers and levers of a smoking cessation approach in custody. In the third and final part, we will model our results using the conceptual framework of health determinants (Emond et al., 2010) in order to better understand the interactions that may exist between the different levels of analysis and

highlight the potential levers for smoking cessation among incarcerated smokers.

### 3.1. The roles of tobacco in prison

Inmate smoking has characteristics specific to the closed prison environment. Interpersonal relationships and privacy are modified by spatial and temporal constraints.

First, lack of activities and the resulting boredom are quoted as the main reasons for smoking, which becomes an activity in and of itself:

The first thing that makes you think about smoking is boredom. [...] Boredom brings out the nicotine and the craving, so boredom, sitting

in front of the TV, the only thing to do is change the channel and smoke, smoke, smoke. (D4)

Moreover, incarceration is a painful experience during which inmates go through emotional hardships. Thus, the feeling of emptiness which appears in particular when the time comes to say goodbye to relatives in the prison visiting room is a situation that inmates will try to compensate by smoking tobacco:

When I go to see them [his wife and daughter], when I go back to my cell, when I know that I have to wait a long week before seeing them again, there I tend to want to smoke quite a bit (D14)

Similarly, stress is an important source of consumption. This stress may be related to waiting for court decisions or to relationships with other inmates. When they do not yet know the total length of their prison sentence, smokers tend to increase their tobacco consumption:

When I went to the sentencing hearing, I smoked more. Right after, for two days I smoked a lot [...] (D1)

Later in the interview, the same inmate explains that his smoking is also linked to the unpredictability of other inmates' behavior, which he associates with a daily feeling of fear and insecurity:

There is fear in prison too. [...] We don't know what can happen in prison, we don't know...We can get hit... (D1)

Tobacco use in custody is part of specific forms of socialization that characterize the daily life of incarcerated smokers. Smoking occurs in moments of exchange and sharing which punctuate prison time and define affinity groups:

There are two, three or four of us, we can be four in a cell and there we are, we all laugh together, we drink a coffee, we smoke a cigarette and there we go. (D1)

Exchanges related to tobacco products are an opportunity for the inmates to create mutual aid links and to express their solidarity by helping each other out:

Sometimes I'm in a bind, I go to the person and, if they have tobacco, the person will help me out. [...] Afterwards, it's a give and take [...] (D3)

In this context, refusing a cigarette offered by another inmate becomes an act that violates the norm in custody. D18 explicitly depicts this form of social pressure related to smoking:

When there are going to be people around, there are going to be cigarettes, I'm going to be tempted a little bit because I'm going to be offered a cigarette, I'm not going to be like the guy: 'I'm still hesitating', I'm going to take it, I'm going to smoke [...] (D18)

However, smoking also engenders relationships of violence and domination. In a prison context marked by informal exchanges and the impoverishment of inmates, most of whom are smokers, tobacco is an extremely coveted consumer good. In order to obtain it, some inmates do not hesitate to threaten smokers by physically and verbally assaulting them:

In tobacco, there is too much conflict. Tobacco is the number one cause of fights here [...] the guy is not going to come and fight you over a tomato sauce. (D4)

S4 was struck by this daily violence related to tobacco when she began working as a supervisor:

They would be able to hit each other, go off on a fight, but...I'm sorry, I'm going to speak crudely, but smash another inmate for a strand of tobacco. (S4)

If it can represent an object of solidarity and conviviality between inmates, tobacco also constitutes a currency on the prison parallel

market. The possession of tobacco contributes to the persistence of inequalities by allowing the richest inmates to distinguish themselves by obtaining all types of products and having access to services without going through the prison supplies service (domestic tasks, storage of illicit products, sexual relations, protection):

In prison, [tobacco] is a treasure! It's a treasure! [...] It hurts here, because whoever has cigarettes is the king. (D6)

Thus, possession of tobacco is akin to bargaining power on the parallel market, which seems difficult to do without the product.

When there is a scarcity of tobacco, the effects of the shortage give way to the degradation of smokers' self-esteem. The comparison made by several inmates between smokers who have run out of tobacco and "beggars" shows the stigma of the poor smoker present in the collective imagination of the prison:

[...] One time, I smoked the butts in my ashtray, and I thought, 'But no, you look like a bum!' [...] (D1)

[...] there are times when I'm broke and sometimes I really want to take a few hits in my mouth, and it's disgusting to be a beggar... (D5)

With such representations of tobacco scarcity, stockpiling provides a sense of self-sufficiency and appears to be a reassuring strategy for smoking inmates:

When I don't have tobacco, you get a little bit of stress, like: ah, I don't have! And if I want to, how do I do it? [...] It stresses me out, it makes me a little anxious, I prefer to have, and I'm calm. (D2)

Moreover, in exchanges between guards and inmates, guards giving tobacco to inmates has become commonplace and is essentially used to keep the peace. Tobacco thus becomes an object of negotiation through which guards and inmates agree on a code of conduct in order to maintain order:

[...] so that he wouldn't piss off my colleagues all night because he was out of cigarettes, I gave him two-three cigarettes that I had (S12)

He [the guard] gives me some tobacco because he doesn't want a mess in his facility. (D6)

### 3.2. Factors of smoking cessation in prison

#### 3.2.1. The barriers

Successful smoking cessation requires that several conditions be met. The candidate must have reliable information on the cessation process and access to various resources, whether pharmacological, psychological or social, to overcome the symptoms of withdrawal and maintain the process over time.

Our data indicate that several preconceived ideas about the mechanisms of cigarette addiction and the conditions that need to be met in order to successfully quit smoking constitute an obstacle to the engagement of inmates in a care process. Denying or minimizing the phenomenon of physical dependence (and more generally the mechanisms of addiction), inmates and guards alike agree that the success or failure of the process of quitting smoking depends solely on the will of the person:

[...] I don't think there is a physical dependence on nicotine. I think if you have the will to quit, you can quit. [...] I'll quit when I get out (D14)

The guy who really wants to quit, if he has the willpower he'll quit, for me, patches, stuff like that ..., that's it, it's just the notion of wanting to. (S11)

In this psychologizing perspective, inmates who quit smoking in the context of custody are generally perceived as people endowed with a "special mental strength" (S10) and quitting is seen as a form of

individual achievement which, while unattainable for most incarcerated smokers, reveals the intrinsic strength of those who manage to succeed. D13, who started smoking in prison, explains that he does not find such strength to stop his cigarette consumption:

[...] I asked him: 'but how did you do it? He said, 'It's all in your head', but I try to do everything, but I'm tired of smoking, but I don't see... [...] Maybe I have less brain power, I don't know. [Laughter] (D13)

This type of representation is reinforced by speeches describing nicotine replacement treatment (NRT), which are supposed to help overcome physical dependence on nicotine, as products with particularly dangerous side effects for one's health:

He [fellow inmate] had put the patch on, he had quit smoking, 2–3 days, and he went to the bathroom and it was blood coming out of his butt. [...] (D13)

Moreover, while the health units can medically accompany the detainee in his withdrawal process not only by prescribing substitutes but also by providing him with follow-up and dietary advice, the existence of negative representations of health units conveyed in custody is the cause of a lack of trust in health professionals and the help they could provide. A nurse states: [...] *there are amalgams with the penitentiary which has this vision of repression* (PS4). Perceived by some inmates as an additional mean of control in the service of prison order and not as a health care service as such, medical prescriptions are not exempt from the influence of preconceived ideas about the presumed role of health care staff in prisons:

[...] most of the inmates, in all the prisons I've seen that, 'yes, anyway, the UCSA in prison [somatic care unit], they're not real doctors, they're just there to give us pills so that we don't get upset, so that we keep calm', for them, it's as if they were being injected to keep them in line. (D20)

While collective activities among inmates are a way to remedy boredom and allow for socialization with less tobacco use, they remain difficult to initiate and organize, in particular because of the time constraints of the institution:

There is soccer every Friday afternoon, but it's not enough. [...] in fact the problem is that in the morning, there is never anyone, because in my building, everyone works [...] (D13)

If the e-cigarette is perceived by many smokers as a way to stop or limit their consumption of tobacco, the offer available in custody appears limited, especially in terms of power ranges:

[...] already if they changed their electronic cigarette, that they put bigger ones [...] I think that there are quite a few who would take up electronic cigarettes. (D10)

[...] And so I said to myself: 'That's stupid, they can buy something, but we don't allow them to buy a good electronic cigarette'. (AP4)

Finally, with a high concentration of smokers, the facilities face a high level of tobacco pollution, and exposure to secondhand smoke helps to stimulate the effects of tobacco withdrawal. As such, D6 explains that tobacco smoke is a problem for him on a daily basis:

'They [the guards] send the smoke right into the cell, they close the door and they say, 'Hello!' [...] And I smell the smoke.' (D6)

### 3.2.2. Margins of action as levers for change

If the process of smoking cessation is mostly perceived as difficult to do in prison, tobacco consumption is sometimes the subject of self-regulation strategies. Getting away from violence and changing one's lifestyle then become an essential step to control one's consumption. By reducing their consumption, incarcerated smokers can reclaim their self-

image and modify their relationship with others. The experiences described below are examples of actions that can be taken to help inmates quit smoking.

Many inmates report that they are harassed on a daily basis by incessant requests for tobacco. Some of them explained that they stopped smoking tobacco in order to reduce social pressure and to regain a form of freedom while limiting their tobacco expenses. D9 explained that he was able to defuse harassment situations related to tobacco exchanges:

When I had cigarettes, people kept knocking on my door: 'Do you have a pack of tobacco?', 'Don't worry, I'll give it back.' Then I never saw the color again. [...] I said to myself, 'If that's the way it is, I'll quit' [...] Then he wouldn't stop and I told him, 'No, I don't have any more cigarettes, now I'm smoking the electronic stuff' (D9)

In addition, tobacco use is associated with a decline in self-esteem. After several years of smoking in jail, the difficulties that some inmates experience while doing physical activity make them aware of the impact of smoking on their respiratory comfort: "*You're out of breath and you say to yourself, 'Well, look at the state of you! You can't even breathe properly'*". (D17)

The deterioration of their cardiorespiratory capacity and more generally of their physical health encourages inmates to reduce or stop smoking. The adoption of electronic cigarettes and the regular practice of physical activity are two strategies that inmates put in place to limit the harmful effects of tobacco:

I stop anyway because I cough in the morning [...] there are many who want to stop and many go through the electronic cigarette (D8)

[...] in the morning you wake up, coughing, you're blocked, fortunately there's sport to get you out of it a bit. (D20)

In terms of time management, inmates who smoke engage in daily activities that contribute to the regulation of their tobacco consumption. Household and domestic chores are part of the strategies that inmates use to keep themselves busy and reduce the number of cigarettes they smoke:

I'm going to take a broom and a mop and I'm going to clean the whole hallway. [...] At least I didn't get bored, I made a little effort and thought about something else... (D4)

Culinary and sports practices are also very important for some of them. According to D2, food and sports are resources to be mobilized to compensate for tobacco and cannabis use:

Food is precious, it's life. You compensate. All these drugs, the pot, the cigarette, you put it in the food, you are already well. Sport, food, it's already good [...] (D2)

Leisure activities and work in custody are also important resources for inmates:

On weekends, for example, on Saturday morning I go to the library, I don't smoke (D15).

[...] When I work, I smoke less. (D13)

Beyond activities, the implementation of mutual aid and solidarity relationships between inmates is also an important help to reduce tobacco use. This is the case of D3, who shares his cell with a "heavy smoker" with whom he established a common strategy to reduce the number of daily cigarettes:

He's a heavy smoker [his fellow inmate], but we help each other, we manage to agree on something, a project. Well, I'm going to try to encourage him to quit together, we've cut down together. (D3)

Finally, connections to family and friends on the outside are an important source of motivation for inmates. The psychological support they provide appears to be a motivational lever that encourages the

adoption of self-regulating behaviors. One inmate mentioned the source of motivation that his family’s involvement in a shared smoking cessation process would represent:

It would be nice if we all quit smoking together [with family members] [...] It gives us a boost, we say to ourselves ‘well my wife has quit, so have I’, my son would be nice too [...] (D17)

Parenthood and responsibilities also play a role in motivating inmates to quit smoking. This sentence from D4 is particularly evocative:

‘I’d rather have my hands in the shit of my son’s diapers than have my hands with cigarettes’ (D4).

The motivation to quit smoking can also be reinforced by the desire some inmates have to lessen their financial dependence on their families. Having taken steps to quit smoking, D5 explains that he no longer wishes to be a financial burden to his relatives:

It’s sickening, knowing that I’m being assisted, I thank my parents, I have my mother behind me, I thank my parents again, I have my little brother, my little sister behind me [...] (D5)

In addition, health professionals are increasingly adopting harm reduction in their practices, as highlighted by this doctor who prescribes NRT easily and talks about it as a tool to reduce the harms of tobacco:

I think that one consultation out of 5, a person will ask me for a nicotine replacement [...] it is also in the perspective of harm reduction and all that, we say someone who stops smoking for a month, well he will always have stopped smoking for a month. [...] we give a lot (PS5)

### 3.3. A model of the interactions between factors of smoking and cessation in prison

By interpreting our results in light of the conceptual framework of health and its determinants (Emond et al., 2010), we propose to classify

the different factors explaining inmates’ smoking behavior and identify their effects and interactions based on the analysis of the interviews conducted (Fig. 1).

The objective of this figure is to model the interactions between the systems of access to rights (work, housing, health), living environments (prison, family-outside) and individual characteristics (socio-economic, levels of knowledge and skills), to make more visible the levers of change that a tobacco control intervention could activate. This modeling highlights the strong influence of the prison environment, which concentrates many of the factors explaining inmate smoking. It also captures the importance of the prison environment and the prison and health systems as important resources for cessation. One of the challenges of a tobacco reduction intervention is therefore to make participants aware of the links between their smoking behavior, their living environment and institutional systems, so that they can best orient themselves and develop or strengthen their capacity to act, both individually and collectively. Our results also show the importance of relying on organizational levers of change, the activation of which would motivate inmates in their cessation process by offering them opportunities for action.

## 4. Discussion

Our results show that tobacco plays a central role in prison. At the individual level, the product allows inmates to manage the stress and anxiety generated by incarceration, and to occupy their time in a context characterized by boredom, making tobacco consumption a behavior that meets the norm. At the collective level, the commonplace circulation of tobacco products shapes prison sociability through exchanges that are part of power relationships between inmates or between inmates and guards (Chauvenet et al., 2008). In this context, the possession of tobacco generates a reassuring feeling among inmates who are exposed to a strong stigma in case of shortage.

Although many inmates attempt to quit smoking, they are confronted with a series of obstacles. Preconceived ideas about addiction

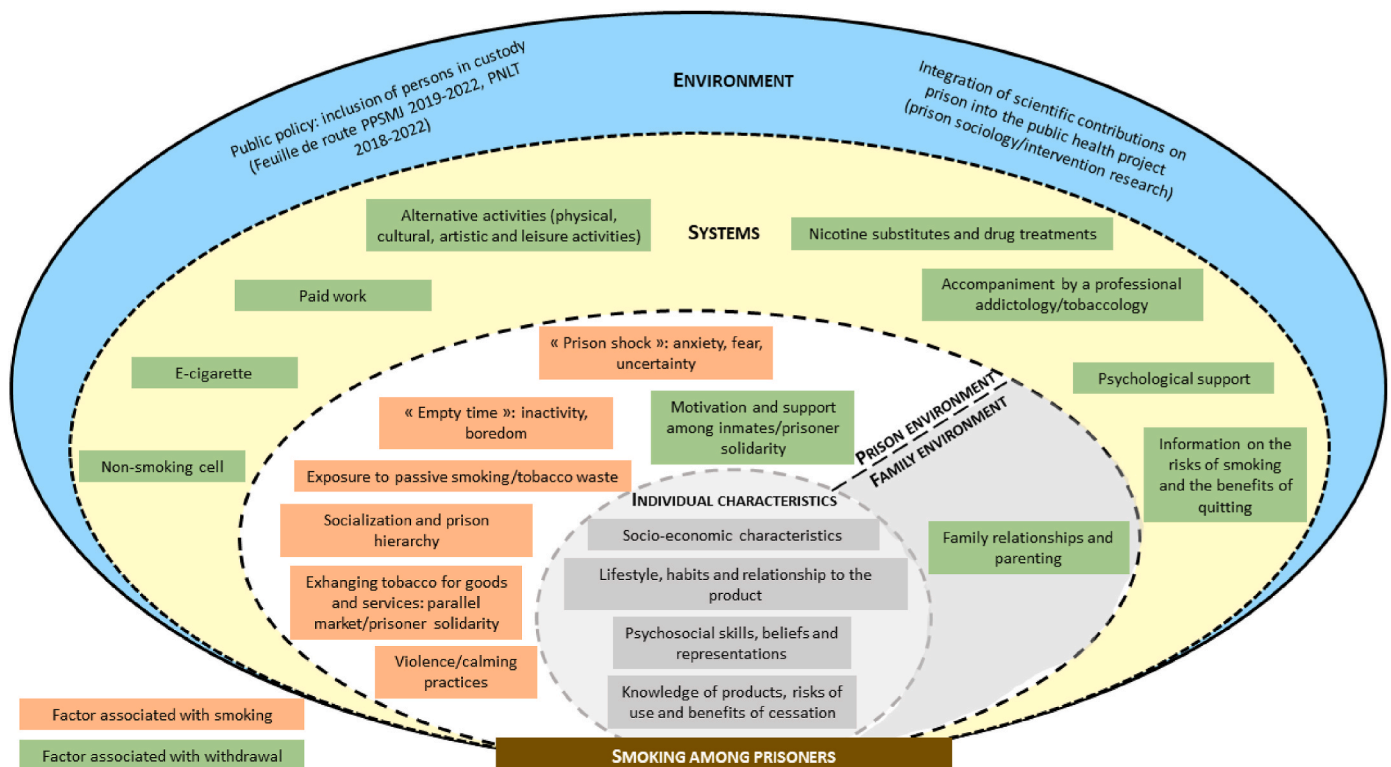


Fig. 1. Interactions between smoking and cessation factors in prison.

and cessation, as well as negative representations of health units and substitution products, slow down access to care and make quitting smoking an unattainable goal for the majority of inmates, especially since daily exposure to tobacco smoke is high. Moreover, access to group activities, NRT and vaping is limited by prison-specific constraints.

Finally, our results highlight the experiences of smokers who adopt strategies to reduce their tobacco consumption and preserve their overall health. For some, exclusive use of e-cigarettes or NRT allows them to reduce the impact of tobacco on their respiratory capacity and be less exposed to violence. For others, it is the investment in an activity that allows them to do without tobacco, physical activity, sports and food being described as good means of preserving their health capital while incarcerated. It also appears that peer support and support from family and friends on the outside, as well as the desire not to be dependent on them, are important levers for action.

Our results will be discussed from two main perspectives: awareness of smoking practices in inmates, and the participatory approach in the construction and implementation of a community-based prevention program in prisons.

#### 4.1. Awareness of practices, a key component of the intervention

Our results highlight various factors of consumption directly related to incarceration: inactivity and negative emotions, social pressure, limited access to resources, passive smoking. However, when it comes to projecting themselves into quitting smoking, this plurality of factors disappears in favor of a psychologizing and virilist reading of cessation. If inmates can describe and understand the prison environment in which they live, they do not link their consumption habits and the access to resources, to their living environment. This fragmented reading of reality stigmatizes inmates by referring them to the figure of the “homo addictus” (Peretti-Watel, 2017) with violent behaviors unable to do without the product, and at the same time, it assimilates smoking cessation to a form of dispossession, a loss of autonomy, or even a danger that only “strong” people can overcome.

The challenge for a public health intervention is therefore to make participants aware of the gap between their representations and their practices, in order to overcome preconceived ideas and the effects of stigma. Called “conscientization” by Paulo Freire (1970), this process is supposed to occur when people acquire a new knowledge of their existential situation and develop action plans to transform their daily lives. Thus, an intervention must help them “see”, decipher and understand the interactions between their living environment and their behaviors, to make the link between what they live and what they do on the basis of their experiential knowledge. This approach could be based on the combination of levels that are usually dissociated: individual criteria, living environment and systems of access to resources.

Based on our results, this type of intervention must both inform and raise awareness with inmates on the mechanisms of addiction (context/product/individual interactions) and the cessation process (stages, difficulties, resources); and allow them to recognize the benefits of cessation with regards to the specific risks of smoking in detention (health, psychosocial, financial) by proposing actions that aim at reducing them.

Awareness and preparation actions based on an interactive approach would allow smokers to find the motivation to engage in a cessation process in a more serene manner (Wand et al., 2020). In this context, preconceived ideas about the withdrawal process and substitution products should be deconstructed in order to optimize the understanding and effectiveness of the use of substitution products in a context of over-investment in care (Mahi, 2015).

Through practical actions adapted to their realities and needs in terms of withdrawal, participants could access a feeling of personal achievement by developing knowledge (substitution products, e-cigarette, sport, cooking, etc.), skills (particularly psychosocial) and ultimately their ability to act (Fonte et al., 2018; Martínez et al., 2021). For example, e-cigarette use could be associated with a tobacco risk and

harm reduction approach (Brown et al., 2021; Wang et al., 2021) that reinforces strategies of self-respect and respect for others through the reduction of violence and the development of an ethic of care among users (Vancassel & Calmes, 2014).

#### 4.2. The participatory approach as a principle of action

Tobacco control interventions must meet a set of core criteria that include raising critical awareness, fostering social support, and increasing the sense of self-efficacy among intervention recipients (Coppo et al., 2020). To meet all of these criteria, the involvement of the entire community of professionals who work in custody on a daily basis in the construction and implementation of the intervention is essential.

The model of tobacco-free health facilities based on a non-oppressive and reflective approach presents relevant avenues for action (Malone et al., 2020). In this perspective, a participatory approach based on staff awareness and the integration of tobacco control in the inmates’ course and in the prison project should be implemented. While the creation of smoke-free spaces would limit exposure to passive smoking for the entire prison community (Richmond et al., 2009), it is above all a question of initiating a joint process of reflexivity on smoking practices in which vulnerability is shared by all actors beyond status differences, as prison guards represent one of the last professions to be so exposed to passive smoking (Semple et al., 2017). It is also the professional culture of the guards that is likely to evolve through their collaboration with the health professionals and their involvement in the implementation of such a device supposed to take care of the inmates. It should be noted that this change can be a source of tension for professionals who do not consider care in their mission (Touraut, 2019b).

The involvement of health professionals in carrying out follow-up assessments of consumption and in making cessation aids available would help smokers to define strategies and objectives adapted to their individual needs and to maintain their motivation over time (Valera et al., 2020). The implementation of occupational activities would favor the management of boredom and would allow the rearrangement of life habits and social interactions (Djachenko et al., 2015; Wand et al., 2020). In this respect, practical workshops led by professionals sharing their expertise with inmates would facilitate their appropriation of techniques and methods, particularly those that make it possible to manage negative emotions and cravings and facilitate the development of psychosocial skills and access to well-being in detention (Hopkins et al., 2019; Turner et al., 2022).

The living conditions of inmates and their level of vulnerability justify the implementation of interventions that act at both the individual and collective levels by mobilizing social affinities between peers (Bagnall et al., 2015; Twyman et al., 2014). In this respect, self-support groups and techniques used within the framework of cognitive-behavioral therapies have shown their effectiveness, including in prison (Valera et al., 2020). Setting up participative groups promoting solidarity links built around the objective of quitting would favor the exchange of experiences between peers and the behavioral adaptation during the withdrawal (Ford et al., 2013). Families are also directly impacted by the imprisonment of their loved one (Touraut, 2019a). Our results show that they are a significant source of motivation to stop smoking, which would justify the association of public actions through which they can invest their role as caretaker (e.g.: no-smoking month).

Even when they did not wish to stop smoking, inmates showed a particular interest in the scientific approach of research concerning tobacco, this accepted object referring to many dimensions of daily life in detention. In the next phase of the research project, the adoption of the dynamic and interactive method of focus groups will allow to reflect and exchange on the contents and modalities of implementation of an intervention, in a space where researchers and participants can think together to co-construct concrete actions (Anadón, 2007). The objective of these focus groups is to promote the collective production of knowledge through the critical analysis of field data. Thus, the role of the



researcher will be to create a space of trust that favors the awareness of problems related to tobacco in detention, and to help individuals and groups to look for solutions on the basis of their experiential knowledge in order to consolidate their capacity to act by adopting a facilitator's posture (Baillergeau & Duyvendak, 2016; Unger, 2019).

This methodological choice is in line with the ethical precautions that this type of intervention implies. It allows for the establishment of a framework of trust that is essential, particularly because the intervention questions the lifestyle and intimacy of the participants, raising questions related to their mental health. Indeed, the objectives of tobacco reduction can challenge the principles and values that are firmly anchored in participants and provoke reactions of mistrust, or even renunciation of participation in the project. Finally, by confronting structural issues, it is also the participation of inmates in the implementation of activities (Charbit, 2021) and the inmate-guard relationship that this type of intervention questions (Icard, 2016).

## 5. Study limits

The recruitment of participating inmates during the first field study was mainly carried out by the administration who asked for volunteers to participate in the interviews. Thus, our study panel during this sociological study shows an under-representation of inmates with disciplinary problems. Also, interviews with migrant inmates who speak little or no French (who are increasingly numerous in detention - as of April 2020, 23.5% were not French nationals) would have provided additional elements of understanding of the multiple roles that tobacco can play in the daily life of isolated and precarious inmates. Moreover, data on race, ethnicity or religion are not easily accessible in France, which makes it impossible to use them for research purposes. Finally, as this study was carried out just before the first lockdown, it did not take into account the contextual effects related to the Covid-19 epidemic (Mahi et al., 2022).

## 6. Conclusion

By highlighting factors in smoking and cessation among inmates, our study overcame preconceived notions about the supposed inability of incarcerated smokers to quit smoking in prison. If resources for smoking cessation exist at an individual level and within their living environment, our study identifies the levers of action operating between the systems of access to rights and living environment, the activation of which would offer opportunities for change and encourage inmates to engage in a cessation process and to maintain it in the long term. However, the activation of these levers of change can only be done with the strong involvement of the different parties concerned by the project, whether they be the inmates themselves (and their families) or professionals working in prisons who can help with withdrawal. These are mainly health professionals (medical doctors, nurses, psychologists, etc.), prison staff (guards, probation officers and management staff), but also people from outside the prison (national education and associations) who can offer activities to inmates. This research intends to make the experiential knowledge of inmates visible, structured and valued, as well as the internal and external resources of the institutions, in order to propose a smoking reduction program that opens the way to innovative and relevant actions for all the actors.

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## Ethical considerations

Ethical approval was granted by the Institutional Review Board of the National Institute for Health and Medical Research (INSERM)

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Consolidated criteria for reporting qualitative research (COREQ) guided the reporting of this study (Tong et al., 2007).

## Declaration of competing interest

The authors have no conflict of interest to declare.

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