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**FACULTÉ  
DE SCIENCES  
HUMAINES  
ET SOCIALES**  
SAINT-ÉTIENNE



ÉCOLE NATIONALE SUPÉRIEURE DES MINES

**Adolescents (15-18 years old)  
in the narratives of experimentation  
and use trajectories : structuring factors  
and their effects on transitions  
between vaping and smoking**

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**INSPIRING  
INNOVATION**  
SINCE 1816

# CONFLICT OF INTEREST AND FUNDINGS

## FOREWORD



The authors have no conflicts  
of interest to declare  
in relation to this work



**Funding: 2019 research program and  
interventions to reduce  
and fight against tobacco consumption**

# BACKGROUND, RESEARCH QUESTION AND OBJECTIVES

## BACKGROUND

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The different types of trajectories have been little studied in French schools.

Similarly, little is known about the motivational and structuring factors behind these trajectories.



# BACKGROUND, RESEARCH QUESTION AND OBJECTIVES

## RESEARCH QUESTIONS

- What are the trajectories that adolescents build between e-cigarettes vaping and tobacco smoking ?
  - What is the baseline product from which adolescents build dual-use trajectories ?
- What are the motivating and structuring factors of these trajectories ?
  - Do they change according to the types of trajectories ?



# BACKGROUND, RESEARCH QUESTION AND OBJECTIVES

## OBJECTIVES

To study and identify  
different trajectories of e-  
cigarettes vaping and  
tobacco smoking

Experimentation  
trajectories

Use trajectories

To determine factors structuring the logics behind the  
construction of these trajectories and their effects on :

Initiation to experimentation and/or use of one of  
these products → single-users

Abstinence of these products → non-users

Resistance to relapse in the re-use of these products →  
former-users

Direction and the product from which the dual-use is  
set up (gateway effect ?) → dual-users

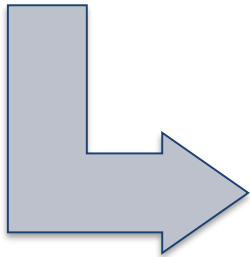


## POPULATION

Population  
of the study  
(n=28)

- **Inclusion criteria**

- 1- Adolescents (15-18 years old) in two high schools (Saint-Etienne, France)
- 2- Registered on the list of study participants, and being student in one of the two high schools selected
- 3- Have the will to participate in the study
- 4- Obtained the signed consent form (from the parents or legal representatives)
- 5- Have returned the consent form to the school nurses



Total  
sample size  
(n=21)

- **Excluded students (=7)**

- 4 students did not receive the signed consent form
- 3 students withdrew themselves from the list of participants



## TWO SAMPLING METHODS

### Voluntary participation

Volunteers students self-identified and presented themselves to their school nurse to be registered on the participants' list.

### Snowball sampling

Snowball component : allowing self-appointed participants to refer reluctant peers who also expressed a willingness to participate in the study to school nurses.



## VAPING AND SMOKING STATUS



**Non-users:**  
never experimenting  
and/or using vaping  
and/or smoking (n=9)



**Current users:** current smokers  
and/or vapers (n=9)

**Single vapers:** vaping 12 months  
before and still continuing vaping

**Single smokers:** smoking 12  
months before and still continuing  
smoking

**Double-users:** smoking and  
vaping 12 months before and still  
continuing smoking and vaping

**Former-users:** stopped vaping  
and/or smoking (n=3)

**Former single-vapers:** stopped  
vaping 12 months before and no  
longer vaping

**Former single-smokers:** stopped  
smoking 12 months before and no  
longer smoking

**Former double-users:** stopped  
vaping and smoking 12 months  
before and no longer vaping and  
smoking





## QUALITATIVE DESIGN



zoom

Join a Meeting

Sign In



### Material :

- ➔ Socio-demographic survey
- ➔ Interviews guide  
using semi-structural interviews

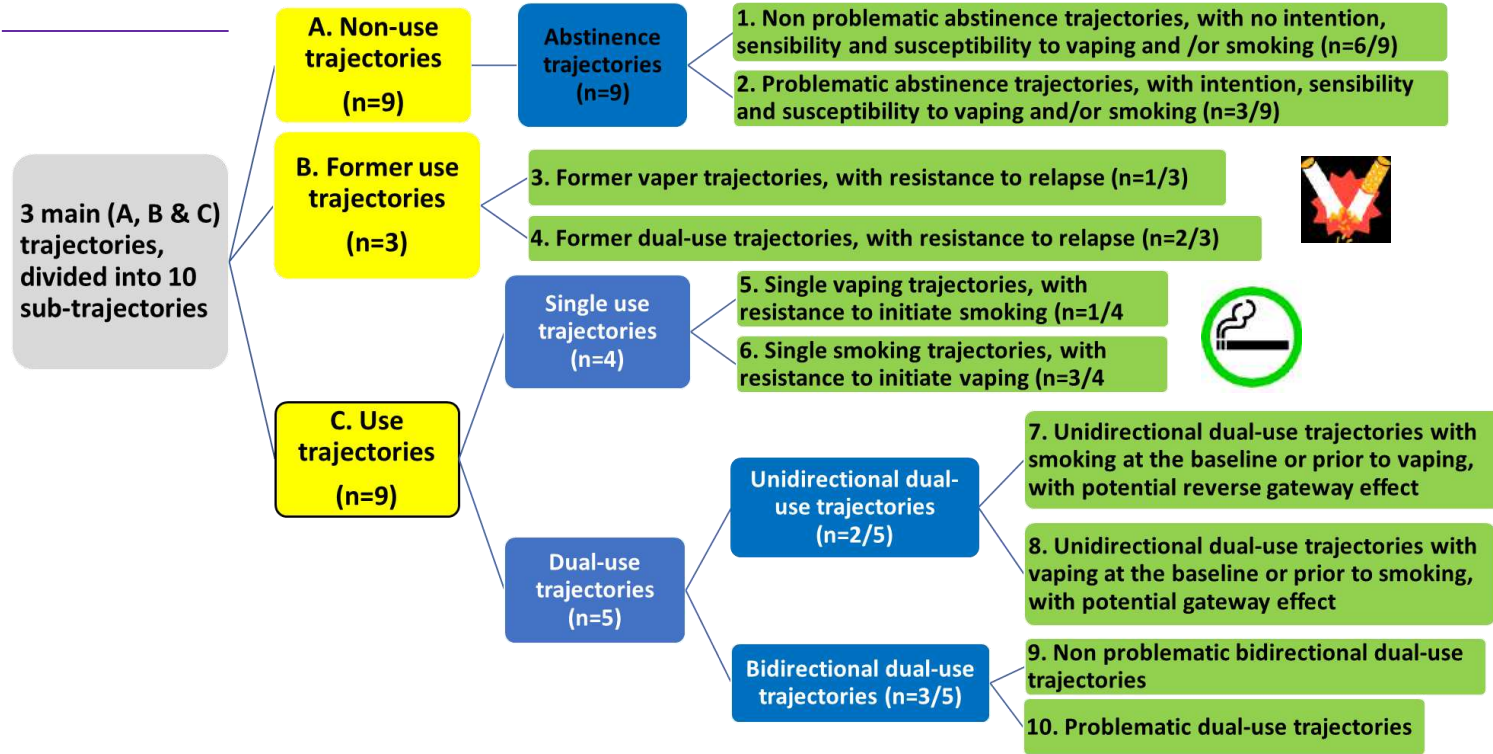
### Data collecting methods :

One-to-one interviews *via* Visioconference  
using **Zoom**

### Qualitative interview guide topic :

- Abstinence/resistance structuring factors
- Vaping and tobacco experimentation  
and use trajectories
  - Baseline product
- Vaping and tobacco risk and health
- Vaping and/or smoking intention

## Graphical representation of the different trajectories identified



# RESULTS

## Structuring and motivating factors of the different trajectories

### ROLES

- Common roles associated
  - Reduces stress and relaxation
- Specific roles associated
  - E-cig users : Gateway and Therapeutic object, tobacco diversion, health protection
  - Tobacco users : Exposure addiction role

### RISK PERCEPTIONS

- Common risk perception associated
  - Health harms, risk of addiction and tobacco-related diseases
- Specific risk perceptions associated
  - E-cig users : Less health harms
  - Tobacco users : Potential health harm, in terms of risk of addiction and tobacco-related diseases

### EXPECTANCIES

- Common expectancies
  - Negative consequences
- Specific expectancies associated
  - E-cig users : Health protection
  - Tobacco users : Health harms

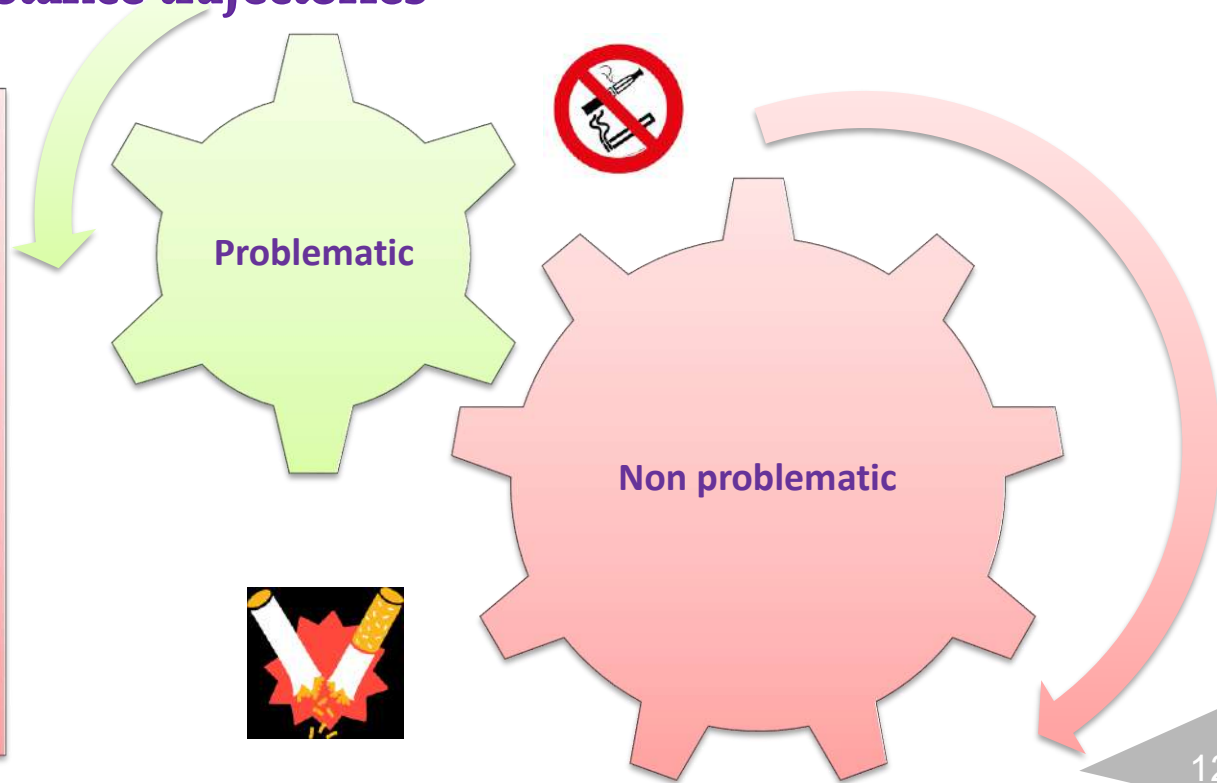
# RESULTS

## Focus: abstinence or resistance trajectories

### Non-problematic

Result from a decision to choose **stable abstinence** or resistance from the experience of the first-time scenario.

Strong sense of personal competences and self-efficacy with intrinsic self-defined motivations (individual characteristics or resources) and a non-precarious socio-ecological environment (family support and stable relationships with parents, friendly friends, poorly stimulating environment for initiating psychoactive products).

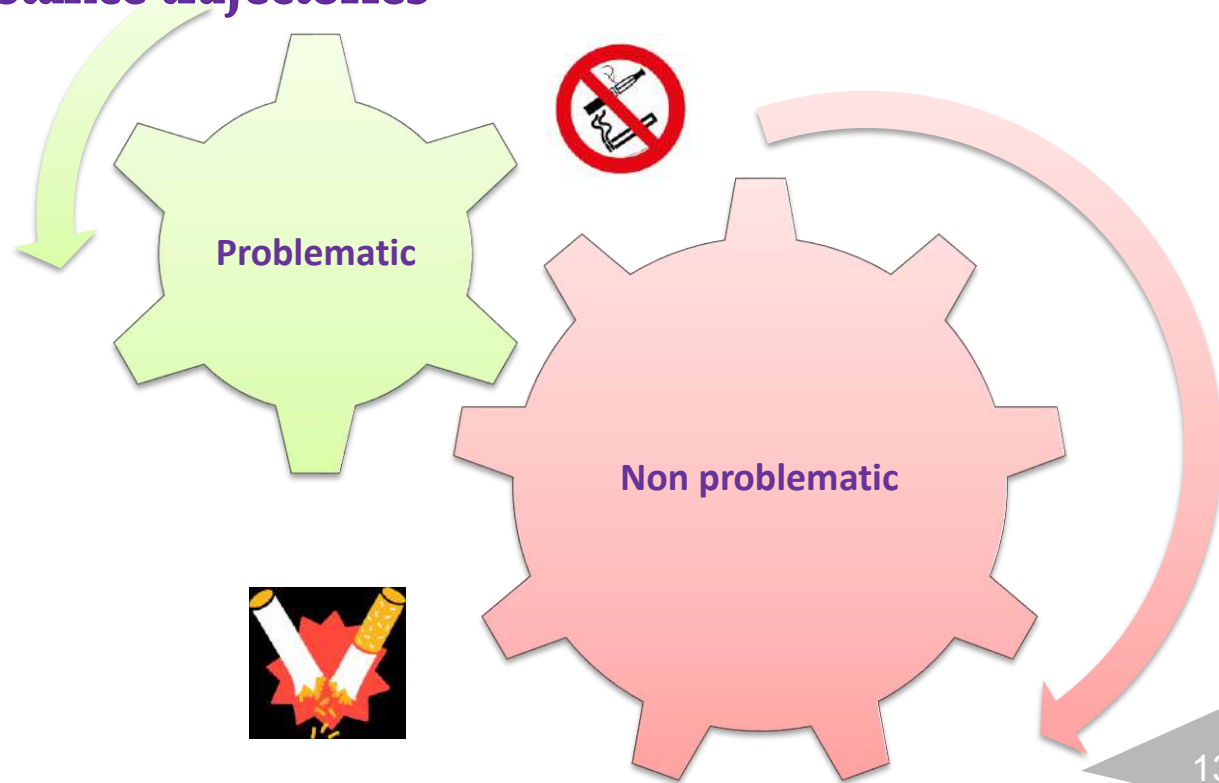


## Focus: abstinence or resistance trajectories

### Problematic

Resulted of a decisional ambivalence in the choice to maintain abstinence, leading to a **vulnerability** to smoking/vaping accompanied by the intention to initiate the first-time scenario.

Low sense of personal competence and self-efficacy with self-determined extrinsic motivations; socio-ecological context characterized by the vulnerability of family and environmental resources (precarious family support, relational tensions with parents, social pressure and influences from friends, hyper-stimulating environment to the first-time scenario).



# RESULTS

## Motivating factors of abstinence or resistance trajectories



### Intrinsic motivations:

Resulting from the mechanisms of individual self-determination, specific to the student, with as determinants:

the "power to say no"; "having principles"; "decide for oneself"; "be mentally strong and determined not to touch it"; "able to maintain his decision despite the temptation due to the influence of friends"

### Extrinsic motivations:

Resulting from the mechanisms of individual self-determination, specific to the student, with as determinants:

"the prohibition or parental control" (even the fear of punishment) (n = 12/21); "avoidance of smoking and/or vaping pairs" (n=7/21), and "not frequenting smoking and/or vaping environments (n=5/21)"

### Mechanisms structuring relapse resistance trajectories among former-users

Perceive both e-cigarettes and tobacco as presenting the same high level of dangerousness and harmfulness to health (negative perceptions) favoring the reinforcement of the behavior of resistance to relapse.





# RESULTS

## Dual-use and baseline product : from non-users and former-users perspective



Almost all **non-users** (n=7/9) reported that those who use vaping and tobacco products **always started with tobacco cigarettes.**

**Former-users** reported that they started with tobacco cigarettes and that if the relapse of either product became unavoidable and irresistible, they would prefer e-cigarettes with nicotine rather than smoking because of the proximity between tobacco nicotine and e-cigarettes.

Concerning **non-users**, if abstinence became problematic, they would prefer e-cigarette without nicotine.



No/Low gateway effect



# RESULTS

## Dual-use and baseline product : from users perspective



1/5 initiated dual-use from vaping: **vaper-smoker**

4/5 started with tobacco smoking: **smoker-vaper**

Dual-users would prefer smoking rather than vaping (if there was a choice between smoking and vaping) and would prefer vaping with nicotine (if there was a choice between e-cigarettes with or without nicotine).

They would prefer stop vaping and adopt regular smoking-tobacco if only one alternative was possible.



No/Low gateway effect



# RESULTS

## Dual-use and baseline product : from users perspective



**Smokers-vapers:** reported no intention to quit/reduce smoking.

They consider that e-cigarettes are a healthy alternative to tobacco smoking considered more harmful to their health. They also reported that e-cigarettes are an alternative to smoking at home (parents exercising authoritarian control).

**Vaper-smoker:** reported no intention to quit/reduce smoking.

They consider that e-cigarettes and tobacco smoking are equally harmful to their health and preferred tobacco smoking because of the higher nicotine delivery feeling.



## Many others observations in this study

- Diversity of trajectories.
- No/Low gateway effect (e-cig → tobacco) but rather reverse gateway effect (tobacco → e-cig).
- Focus on the impact of socio-ecological characteristics in order to propose strategies that can help precarious and vulnerables single-users and non-users to maintain this decision sustainably.
- Focus on smoking prevention acts based on the experience of abstainers with particular attention to precarious abstainers/resisters living in problematic socio-ecological conditions.

**FACING SMOKING AND/OR VAPING, ABSTAINING FROM IT, RESISTING TO THEIR RE-USE AND TO INITIATE SMOKING SUBSEQUENT TO VAPING: STUDY OF THE MECHANISMS OF PREVENTION OF THE SCENARIO OF THE FIRST TIME IN ADOLESCENTS (15-18 YEARS OLD)**

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**Funding:** 2019 research program and interventions to reduce and fight against tobacco consumption

**CHU** Saint-Etienne

**INTRODUCTION**

- ✓ The mechanisms underlying the decision to abstain from smoking or vaping, and those of resistance to relapse in their re-use and initiation to tobacco smoking subsequent to vaping are little studied in adolescence.
- ✓ Moreover, the effects of socio-ecological and socio-demographic characteristics on this decision are unknown according to smoking status. However, while the mechanisms structuring and motivating the experimentation and/or use of e-cigarettes and tobacco cigarettes are regularly studied, those structuring the motivation to abstain or resist them are rarely addressed or remain unknown.
- ✓ Social pressure and peer influence, associated with supply, smoking, experimentation and use environments, can lead to vulnerable abstinence.

**RESEARCH QUESTIONS**

- What mechanisms do adolescent non-users of vaping/smoking, former-users, single-vapers and single-smokers implement to, respectively, not initiate the first vaping and/or for smoking, resist relapse into re-use of e-cigarettes and tobacco smoking, and reset inhibiting smoking subsequent to vaping?
- How to live in vulnerable environments, facing social pressure and peer tobacco smoking and/or e-cigarettes vaping, and abstain from it sustainably?
- How to be a single-vaper, facing smoking and resist the initiation of smoking subsequent to vaping?

**MAIN OBJECTIVES**

- To identify the characteristics and vulnerability factors that may expose adolescent non-users, former-users, single-vapers, single-smokers, at risk of experimentation/use of tobacco smoking/vaping, relapse into re-use of tobacco smoking/vaping, initiating tobacco smoking subsequent to vaping, or switching from smoking to vaping.
- To study the mechanisms structuring the motivations for abstinence from smoking/vaping, resistance to relapse, and the initiation of smoking subsequent to vaping.

**DESIGN:** Qualitative design (comprehensive and ethnographic) was conducted with 21 adolescents (15-18 years) attending two high school in St-Etienne, France.

**MATERIALS:** One-to-one qualitative interviews using semi-structured interview. Videoconference, known as Voice over internet protocol (VoIP) was adopted as a platform for qualitative data collection.

**RESULTS**

There are non-problematic and problematic abstinences:

- Non-problematic abstinences appeared to reflect both a strong sense of personal competences and self-efficacy, stemming from intrinsic self-defined motivations (individual characteristics or resources), and a non-precarious socio-ecological environment (family support and stable relationships with parents, friendly friends, poorly stimulating environment).
- Problematic abstinences appeared to stem from both a low sense of personal competence and self-efficacy, stemming more from self-determined extrinsic motivations; and from a socio-ecological context characterized by the vulnerability of family and environmental resources (precarious family support, relational tensions with parents, social pressure and influences from friends).

**Mechanisms structuring relapse resistance trajectories among former users:** for former single and former dual-users, the "mental capacity" to maintain one's decision despite the "temptation due to the influence of peers" seems to be the efficient medicine for resistance to relapse in the re-use of e-cigarettes and tobacco cigarettes. Thus, they reported that the decision to resist relapse would result from undifferentiated perceptions of the risks associated with smoking and e-cigarettes.

**Mechanisms structuring smoking abstinence trajectories among single-vapers:** as with non-users, "single-vaper" said that without a "strong mind and a strong personal determination not to touch it" he would never have had the "strength and power to say no" to the temptation to initiate the first tobacco cigarette after experimenting with and using e-cigarettes daily.

**Mechanisms structuring smoking/vaping abstinence among non-users:** the "power to say no" to the "First Time Scenario" was unanimously declared by the non-users participants as a factor structuring abstinence and resistance to vaping and smoking. They did not make a distinction between the levels (high, low) of risks (of health and dependence) perceived associated with tobacco cigarettes and e-cigarettes.

**Conclusion:** To focus future studies on the impact of socio-ecological characteristics on the decision to abstain from smoking, in order to propose strategies that can help precarious non-users to maintain this decision sustainably.

**Main message:** to focus smoking prevention acts on the experience of abstainers; target young adolescents living in problematic socio-ecological conditions (particular attention to precarious abstainers/resisters).



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# Thanks for your attention ! Questions ?







## RESULTS - DUAL-USE BIDIRECTIONAL TRAJECTORIES & MOTIVATING/STRUCTURING FACTORS

### Bidirectional dual-use trajectories and environment of initiation

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**Case of Ralph-« vapor-smoker »-FZ-T<sup>1e</sup> : e-cigarettes <-> rolled tobacco <-> tobacco cigarettes**

Shifts from e-cigarettes, to rolled-tobacco and tobacco smoking, and sometimes to drugs, in that or another order, depending on circumstances and contexts, and above all, the availability of products.

**Case of Annie-« smoker-vaper »-FZ-2<sup>nd</sup> : Rolled-tobacco <-> e-cigarette <-> tobacco smoking**

Shifts from rolling tobacco, to e-cigarettes and tobacco smoking to drugs and vice versa, depending on circumstances and contexts, and most importantly, the availability of one product or another.