

Supplementary File 1: Operationalization of data collection in the process evaluation (implementation degree and mechanisms of change) and the outcomes evaluation

	Concept	Operationalization	Data collection
Implementation degree			
Organizational development	Fidelity	If the workshops and course has resulted in a shared smoke-free school hours understanding and new skills to support students dealing with not smoking during school hours	Staff survey 1; Staff survey 2
	Adaptions	Context-specific adjustments and initiatives	Project coordinator survey 2; Facilitator questionnaire (NGOs)
	Dose	Extent to which new learnings from workshops and skills from course are being used at school	Staff survey 1; Staff survey 2
	Quality of delivery	Organization of new learnings and skills at school	Staff survey 1; Staff survey 2
	Participant responsiveness	Attitudes towards workshops and course	Staff survey 1; Staff survey 2
	Reach	For whom is the component implemented (sub-group analysis)	Staff survey 1; Staff survey 2
Physical environment changes	Fidelity	If new school-break activities and smoke-free-signing has been established, and smoking facilities removed	Project coordinator survey 2
	Adaptions	Context-specific adjustments and initiatives	Project coordinator survey 2; structured observations on school grounds; Project coordinator interviews
	Dose	Extent to which school-break activities and smoke-free signing is known to students	Student survey 2
	Quality of delivery	Extent to which new school-break activities are being used by students and smoke-free signing has a prominent position	Student survey 2; structured observations on school grounds
	Participant responsiveness	Attitudes towards workshops new school-break activities and smoke-free-signing	Student survey 2
	Reach	For whom is the component implemented (sub-group analysis)	Student survey 2
Individual guidance	Fidelity	If the school offers smoking cessation help or other help for students to cope with smoke-free school hours	Project coordinator survey 2
	Adaptions	Context-specific adjustments and initiatives	Project coordinator survey 1; Project coordinator survey 2; Project coordinator interview
	Dose	Number of smoking cessation courses delivered and number of students attending the courses	Project coordinator survey 1; Project coordinator survey 2
	Quality of delivery	Extent to which students know which support to cope with smoke-free school hours is provided	Student survey 2
	Participant responsiveness	Attitudes towards help to cope with smoke-free school hours and attitudes towards attending smoking cessation courses	Student survey 2

	Reach	For whom is the component implemented (sub-group analysis)	Student survey 2
Capacity building between the school and community	Fidelity	If the relationship between school and NGOs, and school and municipality has been strengthened	Project coordinator survey 2
	Adaptions	Context-specific adjustments and initiatives	Project coordinator survey 2; Project coordinator interview
	Dose	Extent to which the school has discussed smoke-free school hours implementation with NGOs and local municipality	Project coordinator survey 2
	Quality of delivery	Extent to which the schools has experienced support from the NGOs and local municipality	Project coordinator survey 2
	Participant responsiveness	Attitudes towards integrating external resources in smoke-free school hours implementation	Staff survey 2
	Reach	For whom is the component implemented (sub-group analysis)	Facilitator questionnaire (NGOs)
Smoke-free school hours implementation	Fidelity	If smoking is allowed during school hours and extent to which students experience smoking during school-hours	Staff survey 2; Staff survey 3; Student survey 2
	Adaptions	Context-specific adjustments in sanctioning and enforcement procedures and practice	Staff survey 2; Staff survey 3; Project coordinator interview
	Dose	Extent to which students know the policy and extent of smoking visibility	Student survey 2, Staff survey 2; Staff survey 3; Structured observations on school grounds
	Quality of delivery	Frequency and manner/method of enforcement	Staff survey 2; Staff survey 3
	Participant responsiveness	Attitudes towards the policy and whether staff experience the policy as a normal part of their work	Student survey 2; Staff survey 2; Staff survey 3
	Reach	For whom is the component implemented (sub-group analysis)	Student survey 2; Staff survey 2; Staff survey 3
Mechanisms of change			
Interactions between the intervention and context-mechanisms i.e. reasoning and behavior among participants, constrained by e.g. organizational norms, values and discourses	Coherence	If and why smoke-free school hours makes sense given the situation the school currently face. Extant to which there's a shared understanding about the policy and the organizational members see the potential value of smoke-free school hours.	Management interview; Project coordinator interview; Teacher focus groups; Staff survey 2; Staff survey 3
	Cognitive participation	If and how there's been established a community of practice around smoke-free school hours, if there's key people driving the implementation forward or the contrary and who. If it is seen as a legitimate part of the schoolwork and if there's been established new practices. Extent to which the organizational members are open to change their daily routines to work with smoke-free school hours.	
	Collective action	If and how smoke-free school hours in enacted as part of routine practice including management practices e.g. how is the work organized and which resources are in place to support the implementation. To what extent the work can be integrated into the everyday school practices and whether people involved has sufficient skills and confidence in work with smoke-free school hours.	
	Reflexive monitoring	If and how smoke-free school hours affect the everyday school life. Formel and informal appraisal procedures and reconfiguration.	

Sub-study 3: Outcomes			
Baseline	Primary outcome measure	Smoking during school hours (Y/N)	Student survey 1
	Secondary outcome measures	Number of cigarettes smoked per day, Intention to quit, Smoking status	
	Covariates	Age, gender, SES etc.	
Follow-up 1	Primary outcome measure	Smoking during school hours (Y/N)	Student survey 2
	Secondary outcome measures	Number of cigarettes smoked per day, Intention to quit, Smoking status	
	Covariates	Age, gender, SES etc.	
Follow-up 2	Primary outcome measure	Smoking during school hours (Y/N)	Student survey 3
	Secondary outcome measures	Number of cigarettes smoked per day, Intention to quit, Smoking status	
	Covariates	Age, gender, SES etc.	