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Lingkar Sehat Banyuwangi (Banyuwangi Healthy Circle): a school, retailer, and government partnership model for healthy consumption among adolescents in Banyuwangi District, Indonesia

Submission date	**Recruitment status**	[X] Prospectively registered
07/02/2022	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
16/02/2022	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
29/07/2024	Other	

Plain English summary of protocol

Background and study aims

The number of smokers and obese among adolescents in Indonesia continues to increase. Smoking and obesity are linked to unhealthy choices that adolescents make that are affected by what products are available, affordable and advertised around them. This study aims to recruit a total of 500 students and 300 retailers around schools to test whether Banyuwangi Healthy Circle, a Healthy Trading Model Around Schools can reduce unhealthy consumption among adolescents in Banyuwangi Subdistrict.

Who can participate?

Students in grades 4, 5, 7 and 8 of participating schools can participate. Retailers that sell food, drinks or cigarettes within 250 m of the participating schools can participate in this study

What does the study involve?

Students and retailers are distributed into schools that apply the Banyuwangi Healthy Circle Model and schools without the model. Students in the schools with Banyuwangi Healthy Circle Model will be trained to make healthy choices and encouraged to shop at Healthy Vendors as well as to watch whether Healthy Vendors practice healthy trade. Retailers around schools with Banyuwangi Healthy Model will be trained to practice healthy trading with adolescents. Healthy trading includes hiding cigarettes from sight, refusing unhealthy product instore advertisements, refusing to sell cigarette to adolescents, increasing the number of healthy choices, offering healthier alternatives to adolescents and giving health advice to adolescent customers. Healthy vendors will receive a certified label from District Health Office and a banner with a Healthy Vendor sign. Healthy Vendors will also be promoted to students by schools and government offices.

Students and retailers around schools without the model will run as usual.

What are the possible benefits and risks of participating?
Participation in Banyuwangi Health Circle will provide participants with some useful information about healthy consumption and will help them to practice a healthy lifestyle and healthy trading. The study is low risk and there will be no adverse effects associated with participation. Participants will be informed about the study and are able to leave the study at any time

Where is the study run from?
Research Group for Health and Wellbeing of Women and Children of the Faculty of Public Health Universitas Airlangga in Banyuwangi is running the study (Indonesia)

When is the study starting and how long is it expected to run for?
March 2021 to June 2023

Who is funding the study?
Lembaga Pengelola Dana Pendidikan (LPDP) (Indonesia)

Who is the main contact?
Dr Susy K. Sebayang
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Contact information

Type(s)
Principal investigator

Contact name
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Additional identifiers

Protocol serial number
PRJ 61/LPDP/2021

Study information

Scientific Title
The impact of Lingkar Sehat Banyuwangi (Banyuwangi Healthy Circle) as a healthy trading model around schools to reduce unhealthy consumption among adolescents in Banyuwangi District, Indonesia

Study objectives
1. Lingkar Sehat Banyuwangi (Banyuwangi Healthy Circle) reduces unhealthy food intakes among adolescents
2. Lingkar Sehat Banyuwangi (Banyuwangi Healthy Circle) reduces intention to smoke among adolescents
3. Lingkar Sehat Banyuwangi (Banyuwangi Healthy Circle) improves knowledge of healthy consumptions among adolescents
4. Lingkar Sehat Banyuwangi (Banyuwangi Healthy Circle) improves knowledge of healthy trading among retailers

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 11/06/2021, Health Research Ethics Committee (Faculty Of Public Health, Universitas Airlangga, Mulyorejo, Surabaya, East Java 60115, Indonesia; +628165402532 ; adm.kepk@fkm.unair.ac.id), ref: 10/EA/KEPK/2021

Primary study design
Interventional

Study design
Single center interventional randomized controlled trial

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Prevention of smoking and unhealthy diets in adolescents

Interventions
Current intervention as of 21/03/2022:
A total of 10 Adiwiyata schools in Banyuwangi and Giri Subdistrict will be randomly selected to the intervention group and a total of 10 Adiwiyata schools in Genteng and Rogojampi Subdistrict will be randomly selected to the control group. Randomization is done in Stata from a list of eligible students and retailers. Adiwiyata schools are schools that are acknowledged by the local, provincial and or national government as having good management for a healthy school environment.

Each school in the intervention group will receive a package of intervention which include the following:
1. Randomly selected students grade 4, 5, 7 and 8 will be selected to receive:
a. a training on healthy consumption choice
b. Information and reminders about Warung Sehat (Healthy Vendors) around schools
c. A training on monitoring and evaluation of Healthy Vendors
2. All school cafeterias and randomly selected retailers within 250 m outside of school will be trained to be Healthy Vendors (Warung Sehat). A Healthy Vendor will be required to:
A. Refuse placement of unhealthy advertisement from cigarette and or food companies
B. Hide unhealthy products especially cigarettes
C. Increase the number of healthy choices

D. Offer healthy products to adolescent customers
E. Offer healthier alternatives if adolescents request for unhealthy products
F. Reject selling cigarettes to adolescents
G. Give health advice including hand washing, no smoking, healthy and nutritious diets)
3. Each participating Healthy Vendor will receive:
a. A label certified by District Health Office and a banner with Healthy Vendor (Warung Sehat) sign
b. Warung Sehat promotion by participating schools and by District Health Office, District Education Office and District Cooperatives, Micro enterprise and Trade Office through their public communication channel and social media

Intervention is followed up until 6 months

Students will be selected from a list of students at grade 4, 5, 7 and 8 in each school. A total of 250 students in each arm will be selected randomly using Proportion to Population size method. A total of 100 of the 250 students in the intervention group will be selected to receive training on monitoring and evaluation of the Healthy Vendors' compliance.

All cafeterias in participating schools will be recruited to participate. Retailers outside of schools will be randomly selected to participate from a list of retailers that sell either food, drinks, or cigarettes within 250 m of schools. Either the owner or a keeper of the vendor will be asked to participate.

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Previous intervention as of 04/03/2022:
A total of 10 Adiwiyata schools in Banyuwangi and Giri Subdistrict will be randomly selected to the intervention group and a total of 10 Adiwiyata schools in Genteng and Rogojampi Subdistrict will be randomly selected to the control group. Randomization will be done in excel spreadsheets from a list of eligible students and retailers. Adiwiyata schools are schools that are acknowledged by the local, provincial and or national government as having good management for a healthy school environment.

Each school in the intervention group will receive a package of intervention which include the following:
1. Randomly selected students grade 4, 5, 7 and 8 will be selected to receive:
a. a training on healthy consumption choice
b. Information and reminders about Warung Sehat (Healthy Vendors) around schools
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Each school in the intervention group will receive a package of intervention which include the following:
1. Randomly selected students grade 4, 5, 7 and 8 will be selected to receive:
a. a training on healthy consumption choice
b. Information and reminders about Warung Sehat (Healthy Vendors) around schools
c. A training on monitoring and evaluation of Healthy Vendors
2. Randomly selected retailers within 250 m of school (including school cafeteria) will be trained to be Healthy Vendors (Warung Sehat). A Healthy vendor will be required to:
A. Refuse placement of unhealthy advertisement from cigarette and or food companies
B. Hide unhealthy products especially cigarettes
C. Increase the number of healthy choices
D. Offer healthy products to adolescent customers
E. Offer healthier alternatives if adolescents request for unhealthy products
F. Reject selling cigarettes to adolescents
G. Give health advice including hand washing, no smoking, healthy and nutritious diets)
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a. A label certified by District Health Office and a banner with Healthy Vendor (Warung Sehat) sign
b. Warung Sehat promotion by participating schools and by District Health Office, District Education Office and District Cooperatives, Micro enterprise and Trade Office through their public communication channel and social media

Intervention is followed up until 6 months

Students will be selected from a list of students at grade 4, 5, 7 and 8 in each school. A total of 250 students in each arm will be selected randomly using Proportion to Population size method. A total of 100 of the 250 students in the intervention group will be selected to be receive a training on monitoring and evaluation of the Healthy Vendors' compliance.

Retailers will be randomly selected to participate from a list of retailers that sell either food, drinks or cigarettes within 250 m of schools (including school cafeteria). Either the owner or a keeper of the vendor will be asked to participate.

Intervention Type
Behavioural

Primary outcome(s)
1. Intention to smoke next year will be measured using a questionnaire to students at baseline, 2 months and after 6 months after intervention
2. Sugar sweetened beverage, salt and fat intake will be measured using food frequency questionnaire to students at baseline, 2 months and 6 months after intervention
3. Student’s knowledge of healthy consumption will be measured using a battery of questions regarding healthy consumption at baseline, after training, 2 months and 6 months after intervention
4. Improvement in retailers’ knowledge of healthy trading will be measured using a battery of questions regarding healthy trading at baseline, after training, 2 months and 6 months after intervention

Key secondary outcome(s)
1. Adolescents’ expenditure on unhealthy food purchased will be measured using a food frequency questionnaire at baseline, 2 months after training, and 6 months of intervention
2. Smoking prevalence will be measured using a questionnaire to students at baseline, 2 months, and after 6 months of intervention
3. BMI (kg/m²) for age will be measured at baseline, 2 months, and 6 months of intervention

Completion date
30/06/2023

Eligibility

Key inclusion criteria
1. Students: grade 4, 5, 7 and 8 of the randomly selected Adiwiyata schools
2. Retailers: retailers’ owners or keepers who sell either food, drinks or cigarettes within 250 m radius of the selected Adiwiyata schools

Participant type(s)
Other

Healthy volunteers allowed
No

Age group
Mixed

Sex
All

Total final enrolment
729

Key exclusion criteria
Does not meet inclusion criteria

Date of first enrolment
05/03/2022

Date of final enrolment
29/06/2022

Locations

Countries of recruitment
Indonesia

Study participating centre
Research Group for Health and Wellbeing of Women and Children, Faculty of Public Health, Universitas Airlangga
Jl. Ikan Wijinongko No 18, Sobo
Banyuwangi
Indonesia
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Sponsor information

Organisation
Universitas Airlangga

Funder(s)

Funder type
Government

Funder Name
Lembaga Pengelola Dana Pendidikan (LPDP)

Results and Publications

Individual participant data (IPD) sharing plan

Data sharing statement to be made available at a later date

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article			29/07/2024	Yes	No