



**Interreg**  
POCTEFA



**A project-based learning intervention to promote  
*active commuting to school: a pilot study in  
Spanish children.***

**Javier Zaragoza , José Antonio Julián, Eduardo Ibor,  
Alberto Abarca-Sos , Sheila Rodríguez.**

**European Capas-City project**

EFYPAF research group (Physical Education and Promotion of Physical Activity).  
University of Zaragoza. Spain.

## 1-Reference context



- Characteristics of the city of Huesca (Spain)
- Objectives

## 2-Methods

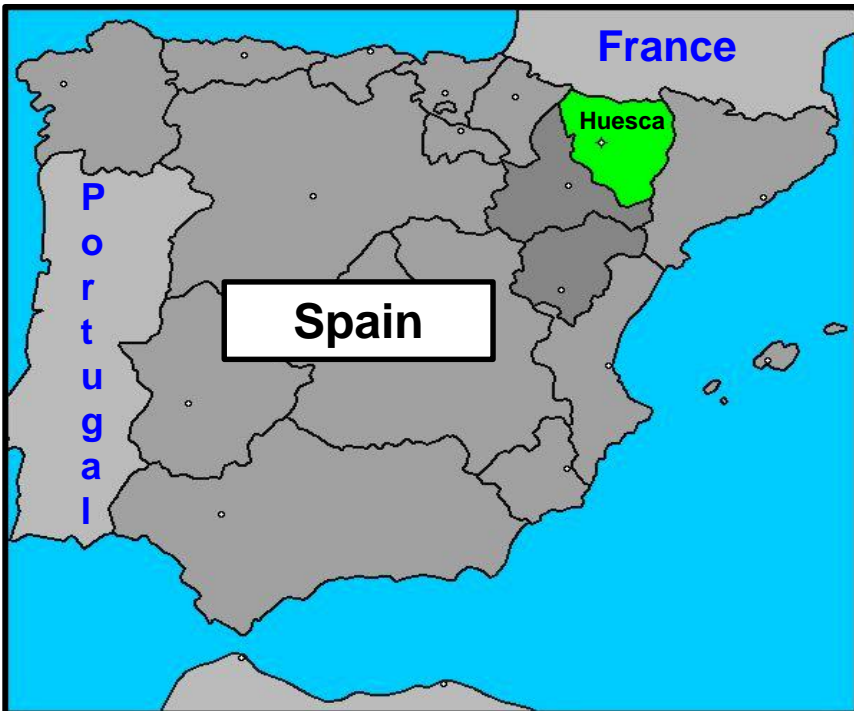


- Participants and design
- Intervention program

## 3-Results and conclusions



- Effect of a school-based intervention on active commuting

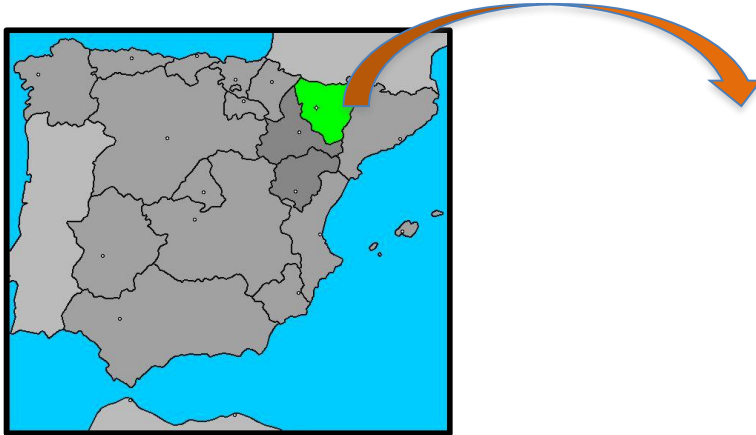


**Huesca city: North Spain (Aragon region)**

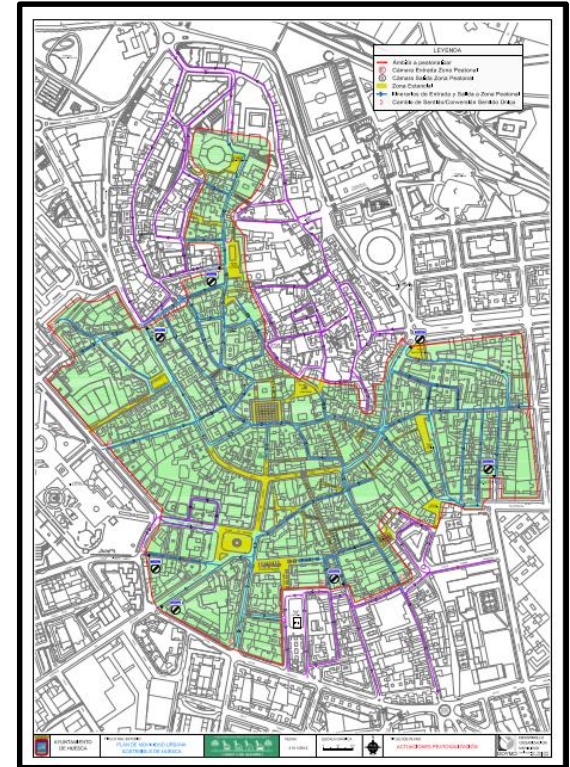
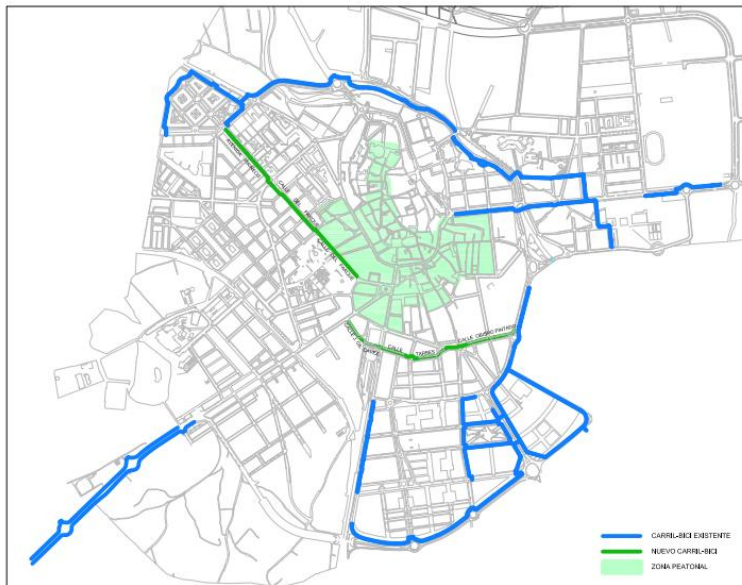
**52,819 population (January 2017)**

**Moderate continental climate**

# Where are we?



## Map of the bike lane (15 Km)



## Map of the pedestrian zone

(79 acres)





## Ideal city to live in, and to practice Physical Activity





✓ The prevalence of overweight and obesity in Aragon is 31% in childrens aged 6-12 years old

✓ 58.3% of the young people satisfy WHO recommendations

✓ 47.6% of children aged 6 to 12 years old walk to school.

Objective



Increase Active Commuting to school

2016/2017

2016/2017

2017/2018

Pilot intervention study



A diagnostic assessment



Intervention Phase

## Methods: study design

**49 Pupils (22 girls)**  
**Age range 10-11 years**

**Control Group**

**Experimental Group**  
PE teacher

**50 Pupils (32 girls)**  
**Age range 10-11 years**



**Intervention period (February, March , April)**  
**12 weeks/48hours**



## Methods: study design



**Pre- intervention**



**Post-intervention**



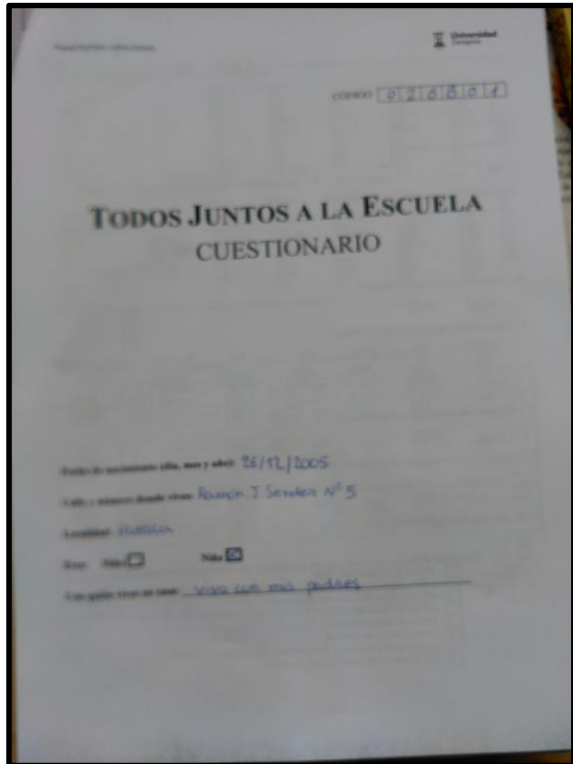
**Start of study**  
February 2017



**End of study May 2017**

Follow-up measures:  
5 and 12 months post-  
intervention (October/May  
2018)

## Self-report questionnaire



**Usual Mode of active commuting**  
(% sample walk/bike to and from school)

**Frequency of active commuting**  
Numbers of active journeys per week to and from school  
(range active journeys on foot/bicycle : 0–20)

(Herrador-Colmenero et al., 2014)

**Perceived barriers** (Forman et al., 2008; Molina-García et al., 2016)

**Commuting behavior in relation to the Theory of Planned Behaviour and the Self Determination Theory** (intention; autonomy...)

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## **Promising school-based strategies and intervention guidelines to increase physical activity of adolescents**

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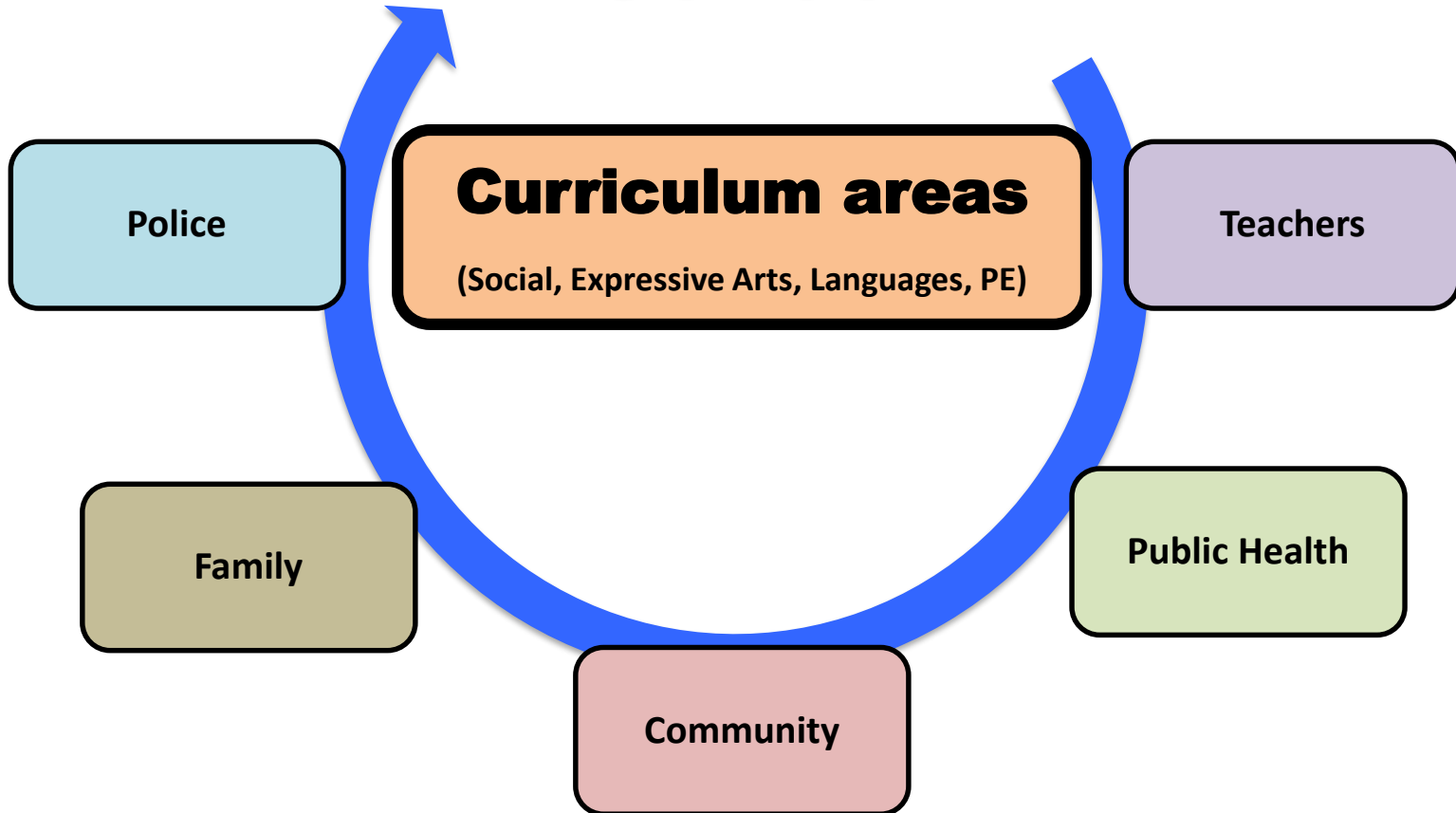
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*Received on May 1, 2012; accepted on February 14, 2013*

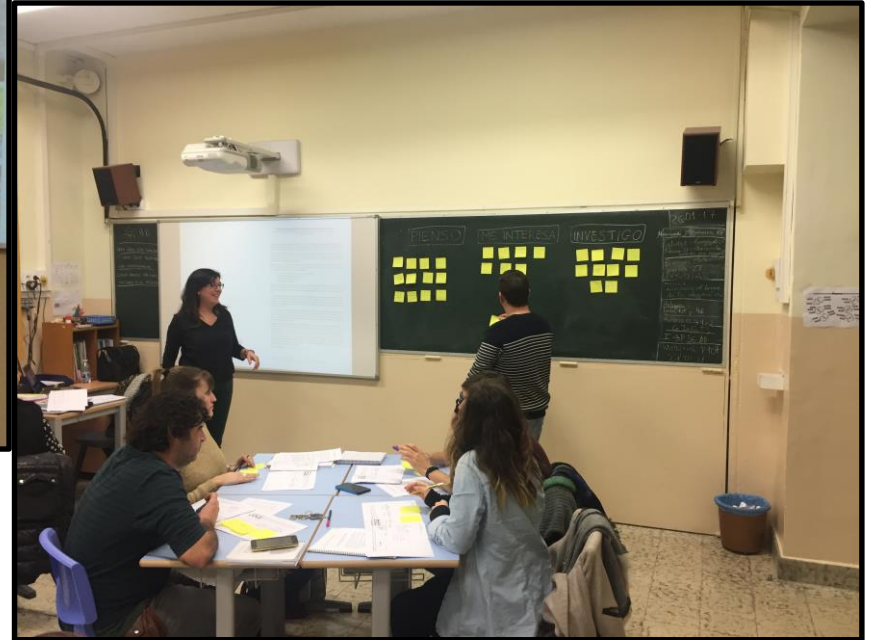
- 1.- The intervention of different curricular areas and different teachers**
- 2.- The leadership of the physical education teacher with the aid of our research group**
- 3.- The participation of different agents: children, parents, teachers, community...**

Intervention program characteristics

# School



All strategies and activities are integrated into Spanish National Curriculum

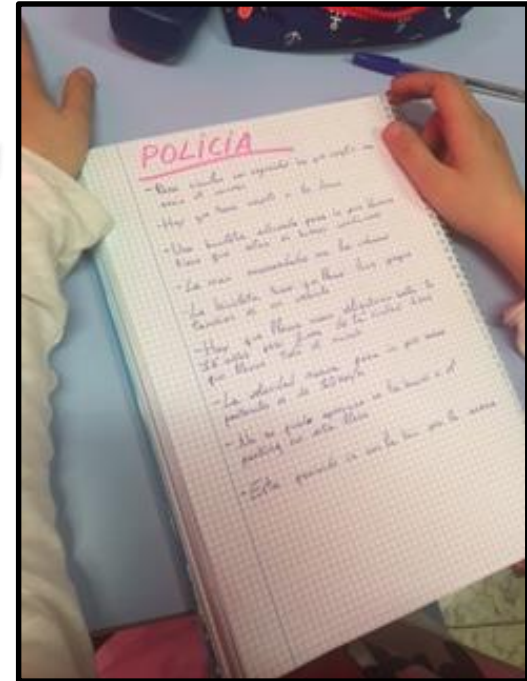
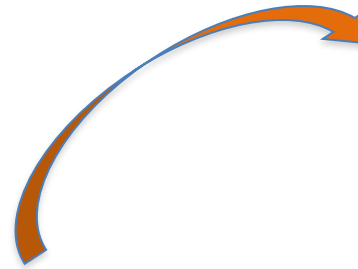


**Intervention program:** designed and implemented by the school teachers



## Language Area

Student prepared questions to ask the police chief



## Expressive Arts Area

Students designed a  
logotype and a  
t-shirt for the project



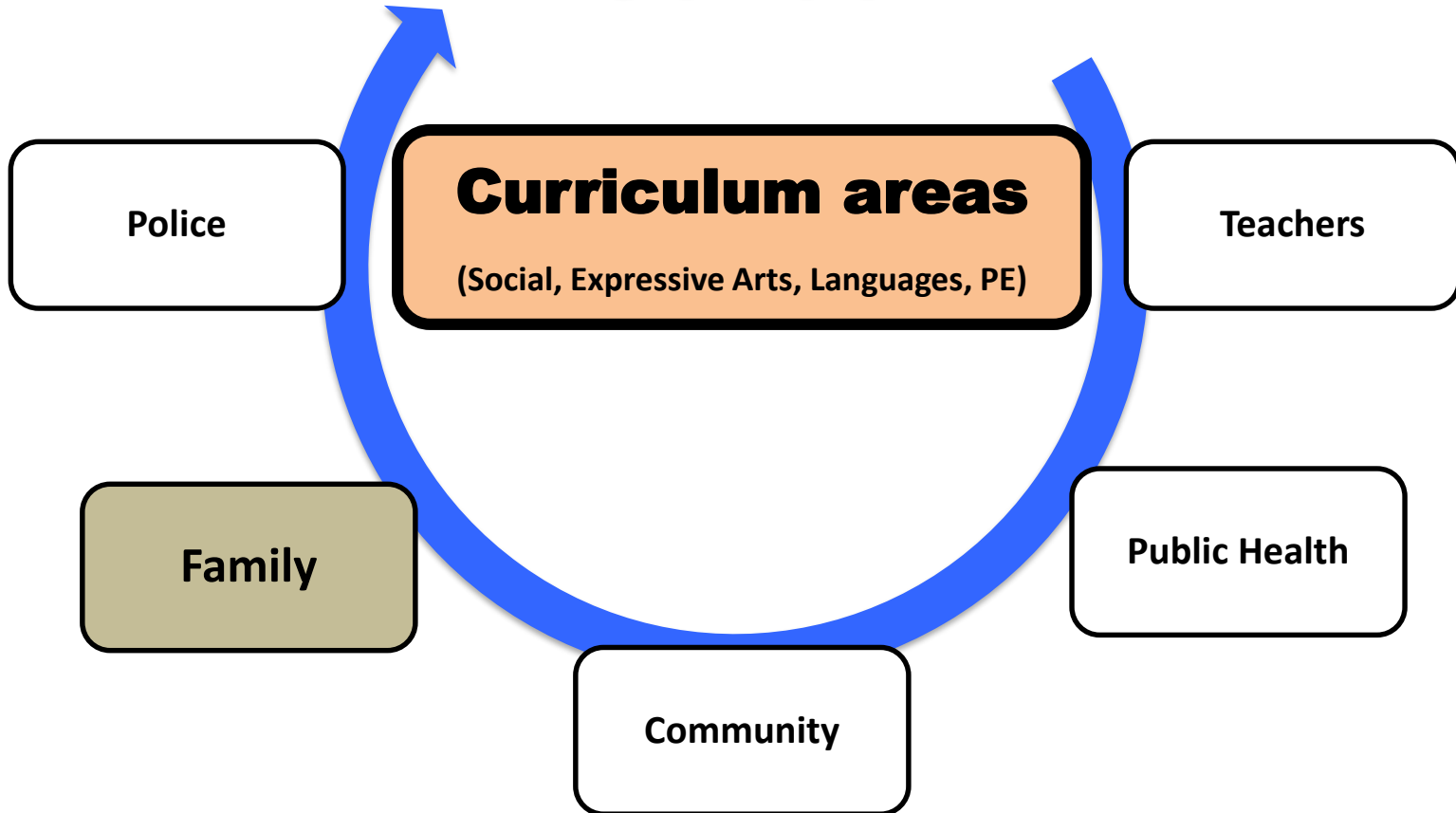
## Physical Education Area

### Cycling learning unit



Intervention program

# School





## Family: parents

### Presentation of the project

Presentation of the project to the parents



### Parents participation

Parents participated in a bike excursion out of the school

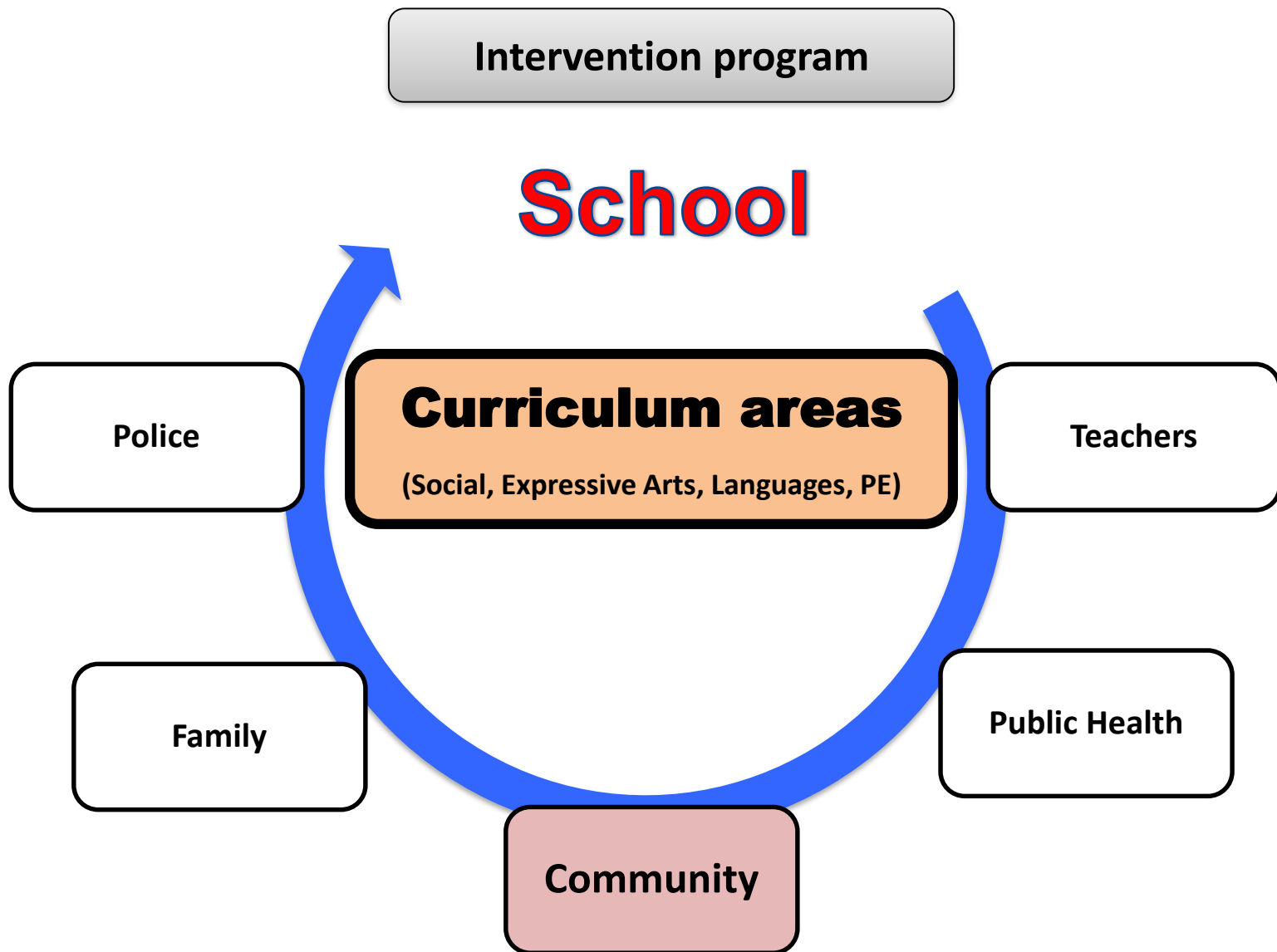


### Children and parents

The children explain their parents how the project is developing







The intervention consists of a Spanish Curriculum based program

All strategies and activities are integrated into Spanish Curriculum



**Mayor of Huesca**



**Head of Sports City Huesca**



**Head of Traffic**



**Doctor. Pediatrician**

Diario del Alto Aragón — Jueves, 1 de junio de 2017

Tuotot



Una de las actividades realizadas para concienciar sobre el uso de la bicicleta.



El grupo 5º de Primaria del colegio Salesianos de Huesca se implican en un proyecto educativo de la Universidad de Zaragoza.

### Una ciudad más amable para peatones y ciclistas

Alumnos de 5º de Primaria del colegio Salesianos de Huesca se implican en un proyecto educativo de la Universidad de Zaragoza.

**HUESCA.** A finales de febrero, los alumnos de 5º de Primaria del colegio Salesianos realizaron la propuesta de peatones y ciclistas de la Universidad de Zaragoza. Como parte del proyecto se realizaron actividades que Huesca sea una ciudad más amable, con peatones y ciclistas. Como parte del proyecto se realizaron actividades que Huesca sea una ciudad más amable, con peatones y ciclistas. El objetivo es ser conscientes de que en nuestra ciudad hay un número de peatones y ciclistas que necesitan una ciudad más amable y segura para poder moverse con facilidad. La primera actividad fue mostrar la situación real en nuestro colegio para los que elaboramos una encuesta para que la comunidad educativa de 5º, 6º y 7º, opinara y expresara sus sugerencias. Una de las actividades realizadas para concienciar sobre el uso de la bicicleta.

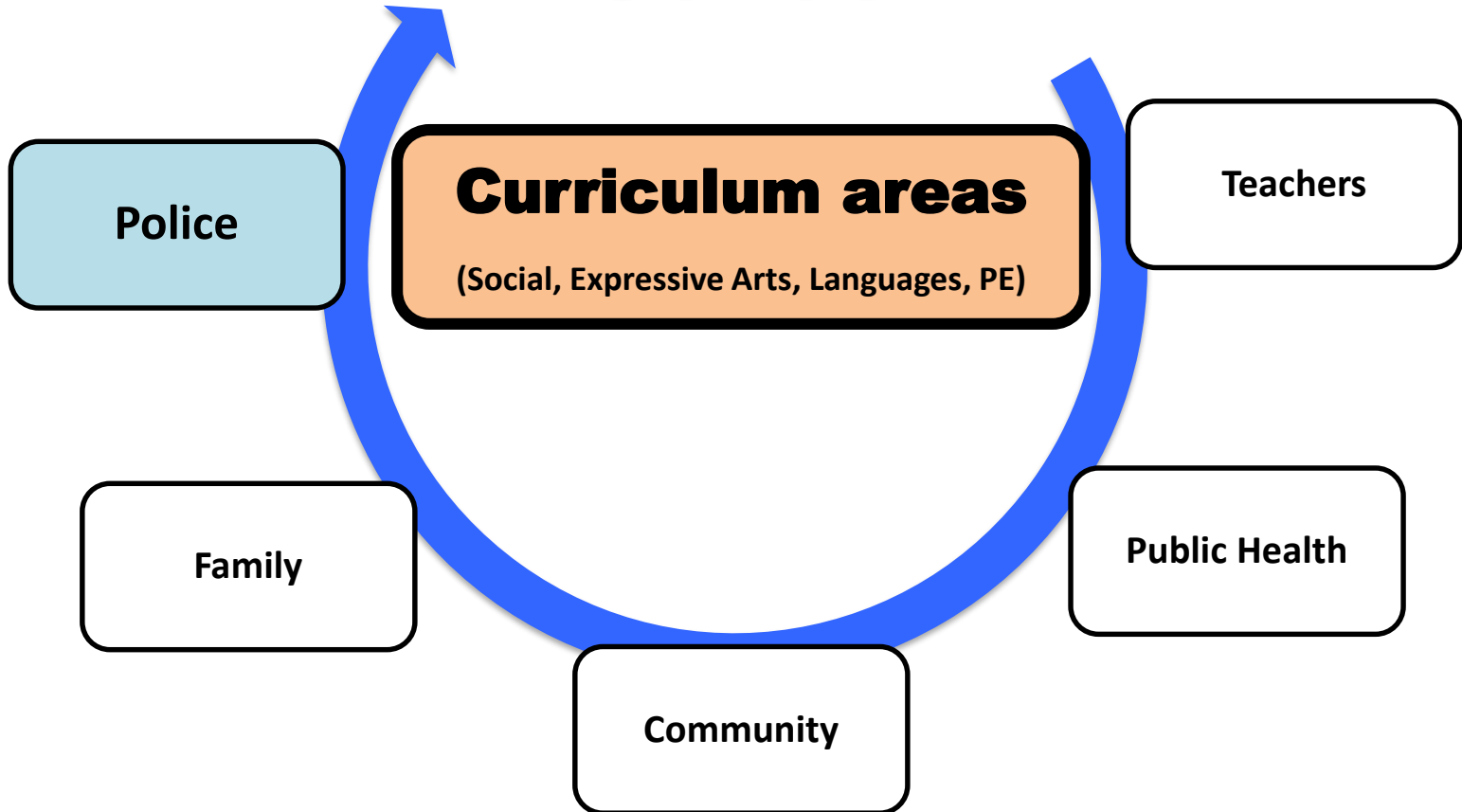
**Toda la actividad culminó con una Sesión Activa y el Día de la Rueda**




Mass media: Newspaper and TV

Intervention program

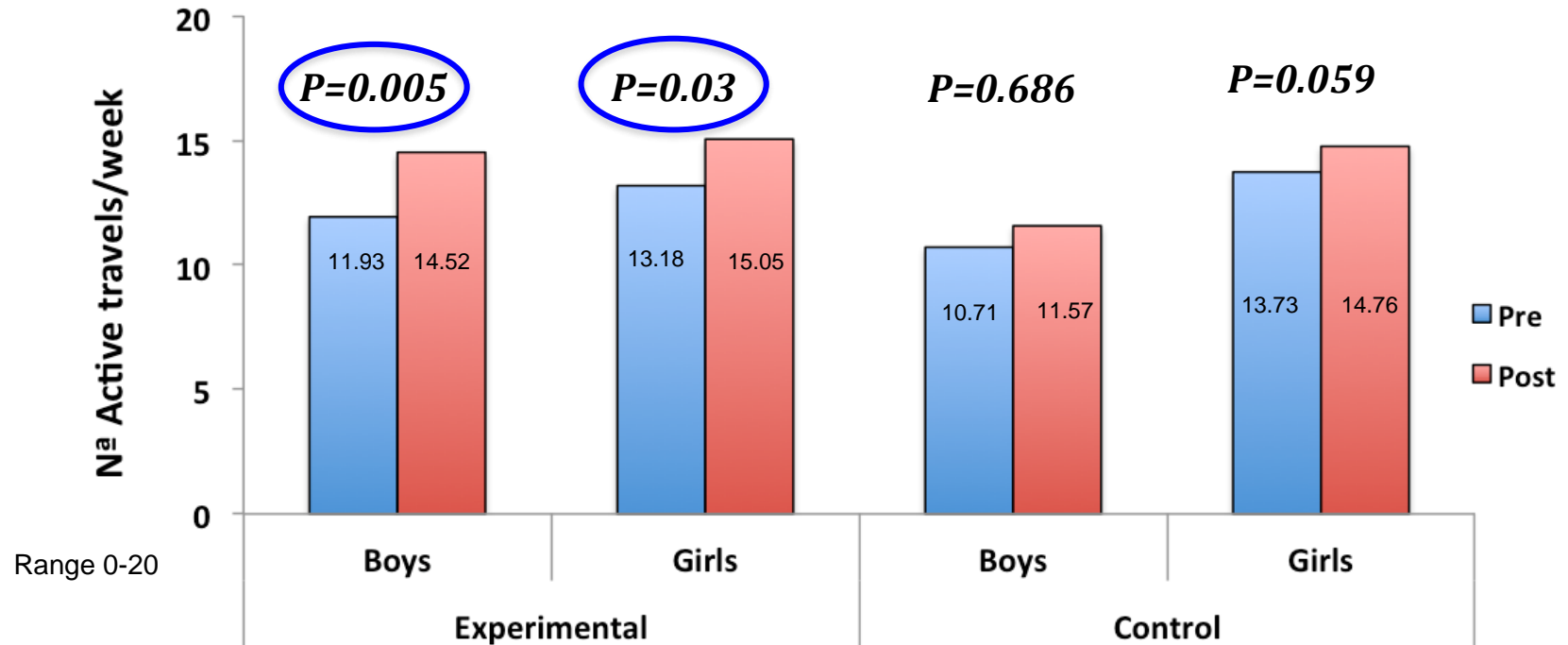
# School







**Frequency of active commuting to school by study group, sex and assessment time point**



- ✓ Our data, which are similar to other studies, indicate an increase in the active journeys per week to and from school (13.46% in boys) and (9.35% in girls)

(Boarnet et al., 2005; Heelan et al., 2009; Wen et al., 2008; Mendoza et al., 2009)

## Things to improve...

- Improve parental involvement
- Improve teacher training

This pilot intervention program focused on promote active commuting to school, could be effective strategy for increasing the frequency of active commuting to and from school

SALESIANOS

HUESCA



# Thank you

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