



Figure 1. Students have received intrinsic motivator as a reward for cooperative behaviour and can scribble on the chalkboard

# Piloting PAX Good Behaviour Game in Estonia

## Short-term impact of the intervention on first grade students

Karin Streimann, Aire Trummal, Kai Klandorf, Tiia Pertel  
National Institute for Health Development, Estonia

**BACKGROUND** Numerous studies have confirmed that Good Behaviour Game (GBG), a universal classroom behaviour management strategy, has strong impact in protecting children from emotional and behavioural disorders. PAX GBG (GBG with additional elements added by PAXIS Institute) includes evidence-based kernels and a classroom game where students are organized into teams and reinforced for their collective success in inhibiting inappropriate behaviour (Dimitrovich et al. 2010).

**DESIGN** In 2014/15 PAX GBG was implemented in 20 Estonian schools and data was collected from 30 classrooms about 718 first grade students. Schools that met inclusion criteria<sup>1</sup> and agreed to take part of the study were recruited. The project was conducted in two phases:

1. 10 schools/classes started implementing PAX GBG in October 2014 (phase 1; n=265);
  2. 10 schools/classes started implementation in February 2015 (phase 2; n=245);
- 10 classes from phase 2 schools (n=245) acted as a comparison group without receiving the intervention.

**OBJECTIVES** Aim of the study was to test the acceptability of PAX GBG in Estonia and assess if students in classes implementing the intervention for at least 4 months will demonstrate decrease in emotional and behavioural problems and increase in prosocial behaviour.

**IMPLEMENTATION** Teachers from intervention classes had to complete 1 and a half day training and were supported by the mentor, who visited their class once a month and provided counselling via e-mail and phone. All mentors had to complete the PAX GBG 3-day-training.

**METHODS** Strengths and Difficulties Questionnaire (SDQ; Goodman 1997) and classroom observations were used to assess the impact of the intervention. SDQ consists of 25 statements about a child's behaviour which are divided between 5 scales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour. Teachers filled SDQs about each student in their class. Classroom observations were carried out during 2 continuing lessons and lasted 15 minutes per lesson. PAX GBG observation form was used for counting disruptive or otherwise unwanted behaviours in the classroom during the observation.

Data was collected 3 times during school year- baseline (autumn 2014), in the middle of the school year (winter 2015) and post implementation (spring 2015). Phase 2 intervention classes started implementing the intervention after the second classroom observations were carried out.

### REFERENCES

Dimitrovich, C. E., Bradshaw, C. P., Greenberg, M. T., Embry, D., Poduska, J. M., & Jalongo, N. S. (2010). Integrated models of school-based prevention: Logic and theory. *Psychology in the Schools*, 47(1): 71-88.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, 38(5): 581-586.

**RESULTS** Results showed promising effects of the program: disruptive behaviours observed in the classroom decreased in both intervention groups and slightly increased in control classes (Figure 1).

Significant changes ( $p < 0.05$ ) were detected within 11 items out of 25 in phase 2 intervention classes on SDQ. The biggest developments were related to prosocial behaviour and hyperactivity: significant changes were seen in 3 items out of 5. By the end of the school year children were more helpful towards others and had better concentration on their tasks. This was reflected in the total score of prosocial behaviour: the amount of students with slightly lowered, low or very low prosocial behaviour had decreased in phase 2 intervention classes from 24.5% to 17% ( $p < 0.05$ ). Only few changes were noticed in phase 1 intervention group. No positive change was seen in the control group.

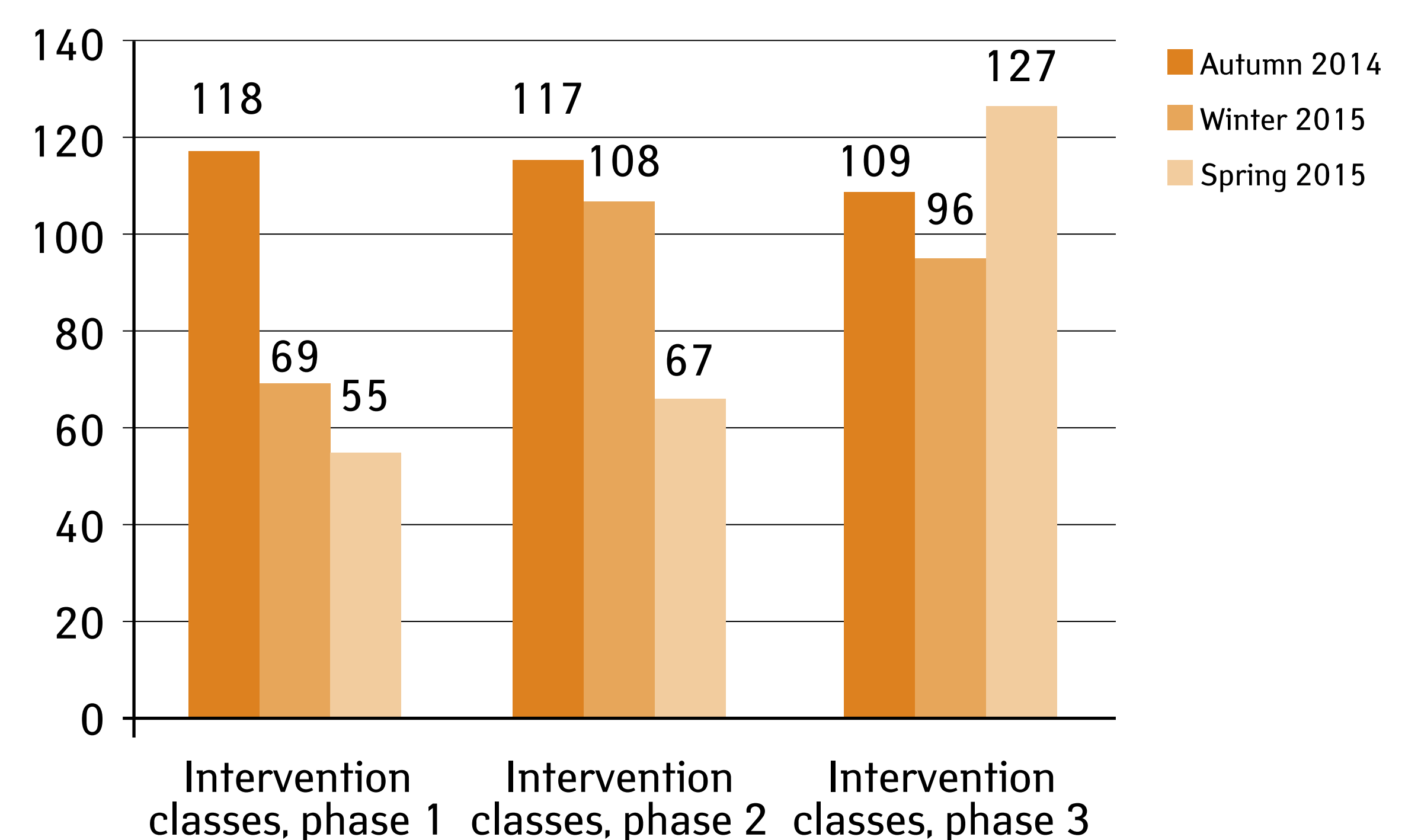


Figure 2. Mean number of disruptive behaviours per class during 15 minutes<sup>2</sup>

**CONCLUSION** Findings suggest that the behavioural influence mechanisms within the GBG program also work in Estonia. Better results were achieved among second phase intervention group, which could be explained with more experienced mentors and smoother coordination of the program. During the first phase the aim was to understand which adaptations are needed to suit Estonian socio-cultural context. The first phase was, thus an important learning experience and the second phase can be described as piloting the program. Results of this study have encouraged continuing implementing PAX GBG and related research in Estonian schools.

<sup>1</sup> Schools were eligible if they were located within 50 km from the mentor; if they had 24 or more students studying in the first grade classroom and had at least two first grade classes per school; if they were not implementing any other prevention program in the school and if their language of instruction was Estonian.

<sup>2</sup> The amount of disruptive behaviours per class is related to the amount of students per class. The mean number of disruptive behaviours per student was similar with results shown in Figure 1 (since classes involved had similar sizes). Mean number of disruptive behaviours per student during 15 minutes during 3 observation rounds: phase 1 intervention classes: 4.6 - 3.2 - 2.4; phase 2 intervention classes: 5.2 - 5.2 - 3.2; control classes: 4.8 - 4.6 - 6.4.