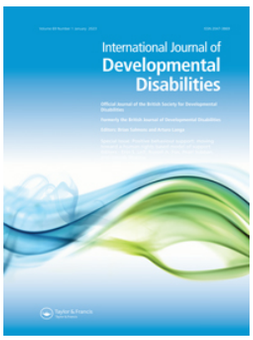

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Individual behavior support in positive behavior support schools in Finland

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One objective in Finnish basic education is for pupils with disabilities or behavioral problems to be able to participate in mainstream education and ordinary classrooms. Positive behavior support (PBS) is an approach that offers multi-tiered behavior support for pupils. In addition to providing support at a universal level, educators need to have the necessary skills to provide more intensive individual support for pupils who need it. Check-in/Check-out (CICO) is a research-based individual support system that is widely used in PBS schools. The Finnish application of CICO includes an individual behavior assessment process for pupils with persistent challenging behaviors. In this article, we examined which pupils in Finnish PBS schools are provided CICO support, and in particular, how many have identified needs for specific pedagogical support or behavior-related disabilities, and whether educators find CICO to be an acceptable way of supporting behavior in an inclusive school setting. CICO support was found to be used the most in the first four grade levels, and support was offered mainly for boys. The number of pupils receiving CICO support in participating schools was much lower than expected, and CICO seemed to be secondary to other pedagogical supports. The social validity of CICO was equally high for all grade levels and pupil groups. The experienced effectiveness was somewhat lower among pupils with a need for pedagogical support in basic academic skills. The results suggest that Finnish schools may have a high threshold for starting structured behavior support despite its high acceptability. Implications for teacher education and the development of the Finnish version of CICO are discussed.

Keywords: positive behavior support; special education; neuropsychiatric disability; school-based intervention; check-in/check-out

Introduction

One objective in Finnish basic education is to welcome all children, including pupils with disabilities or behavioral problems, to participate in mainstream education primarily in ordinary classrooms. Positive behavior support (PBS), when implemented at the school-wide level together with multi-tiered support, offers support of varying intensity for schools to address most behavioral problems in an inclusive manner (see Gage *et al.* 2018, Sugai and Horner 2020). PBS is a proactive framework to strengthen and reinforce teaching and learning environments and provide social behavior support to all pupils (Lee and Gage 2020, Solomon *et al.* 2012). Systematic development of positive school climate and proactive discipline practices improves pupils' behavior and especially pupils with problem behavior benefit from this (Bradshaw *et al.* 2015).

The background of school-wide PBS is in applied behavior analysis (ABA) that provided the conceptual framework to behavior change and different assessment and intervention strategies (Carr *et al.* 2002). Check-in/Check-out (CICO) is an evidence-based behavioral intervention widely used to prevent severe problem behaviors in PBS schools (Hawken *et al.* 2021). CICO support is mostly used as Tier 2 support and the research on the effectiveness of CICO has been conducted with pupils with minor misbehaviors (Bundock *et al.* 2020, Commisso *et al.* 2019).

The Finnish education system has had a three-tiered support system in schools for more than 10 years (Finnish National Agency for Education [FNAE] 2014). The three-tiered support structure has similar Tiers as shown in the U.S. PBS models (Sugai and Horner 2020) but was originally formed primarily as an administrative framework for systematizing support services rather than a framework for preventing and diagnosing

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disabilities as in the U.S (Björn *et al.* 2016). The Finnish three tiers are called universal, intensified and special support (Ministry of Education 2007). Another major difference is that special education teachers offer support in all three Tiers of the system. (Björn *et al.* 2016). Trials of CICO began in Finland in 2013 (Karhu *et al.* 2019), shortly after the first efforts to establish school-wide PBS in some schools. After initial research trials, schools began implementing CICO as a part of their support services, but CICO was not linked administratively to the Three-Tiered system. Until today it is not known for whom CICO is provided in Finnish PBS schools. This study aimed to determine to what extent CICO is provided as early preventative support for behavior issues and to what extent CICO is provided to pupils who have already been identified as having special educational needs and/or disabilities.

Flexible intensification of PBS support

Universal support involving the entire staff for all pupils is the basis of the PBS framework: school-wide behavior expectations are formulated, and concrete expected behaviors and rules for all necessary locations are described. Expected behaviors are taught to all pupils, and the entire staff is trained to use behavior-specific praise to acknowledge appropriate social behavior (see Zoder-Martell *et al.* 2019). The goal is for expected behavior to be taught to and positive feedback used with all pupils systematically throughout the school. While there is evidence that universal support reduces problem behaviors (Bradshaw *et al.* 2015, Rusby *et al.* 2011) and improves experienced social interaction among pupils and between pupils and teachers (Sørlie and Ogden 2015), some pupils need additional support. It is estimated that approximately 10–15% of children experience significant behavioral and social difficulties at school at some point and could benefit from more individual support in school (Drevon *et al.* 2019, Mitchell *et al.* 2011). Educators need to have the necessary skills to plan support for pupils who need more support. To be effective, additional support should be consistent with schoolwide behavior expectations and include opportunities to practice and receive positive feedback on appropriate behaviors (Drevon *et al.* 2019).

In the Finnish school system, additional support for behavior issues and for pupils with behavior-related disabilities has traditionally been the referral of pupils into special classes, which involves an official identification of special educational needs and the related administrative decision. While today this administrative process can be based solely on pedagogical assessment, pupils with behavior issues are still often referred to health services, which may result in receiving a diagnosis of neuropsychiatric or developmental disabilities. A challenge in the support system has been that pupils with behavioral problems have not had systematic evidence-based support targeting specifically their behavioral problems experienced in the mainstream classrooms. This may have resulted in the aggravation of problems for both pupils and teachers, with the first type of additional support being placement into special education, with or without a specific behavior-related diagnosis. Having behavioral supports available in mainstream classroom would decrease the need to exclude pupils because of behavioral problems from mainstream into separate special education.

The three-tiered support system and additional curriculum instructions given later (FNAE 2014) clearly aim to transform the education system to be more inclusive and emphasize the early prevention of problems in learning or social interactions in the school environment. However, problem behaviors in classrooms have been an ongoing challenge, and until recently, immediate and effective support for pupils for whom universal support is not adequate has been missing. Thus, CICO has been implemented to respond to this gap in support services.

Individual CICO support

In PBS schools, CICO often serves as the first step beyond universal support on the continuum of flexibly intensifying PBS on Tier 2 (Hawken *et al.* 2014, Majeika *et al.* 2020). Educators have indicated that CICO is relatively easy to implement and produces positive changes in pupils' behaviors (Wolfe *et al.* 2016). CICO utilizes the core principles of the daily report card (DRC) intervention. The DRC includes an operationalized list of a pupil's behavioral goals and specific criteria for meeting these goals. Educators commit to providing immediate positive feedback regarding the behavioral goals, and usually a reward system is used. The DRC intervention has been shown to be effective for increasing desirable behavior, particularly in pupils with ADHD (Drevon *et al.* 2019: Iznardo *et al.* 2020, Pyle and Fabiano 2017).

One of the most important elements of CICO is positive adult contact each day before and after school hours. CICO provides pupils with frequent instruction regarding expected behaviors, and pupils also receive consistent prompts and systematic feedback throughout the day. Several systematic reviews have found CICO to be effective (see Majeika *et al.* 2020, Wolfe *et al.* 2016). The core elements of effective CICO support are described in the Procedures section.

The majority of CICO research originates in the USA, where CICO is usually planned based on a school's universally defined behavior expectations, meaning that expectations are the same for every pupil in the school who is receiving CICO support (Commisso *et al.* 2019). This format can facilitate quick access to the support (Bundock *et al.* 2020). Behavior expectations can also be modified to target an individual pupil's needs, but this requires that at least a simple

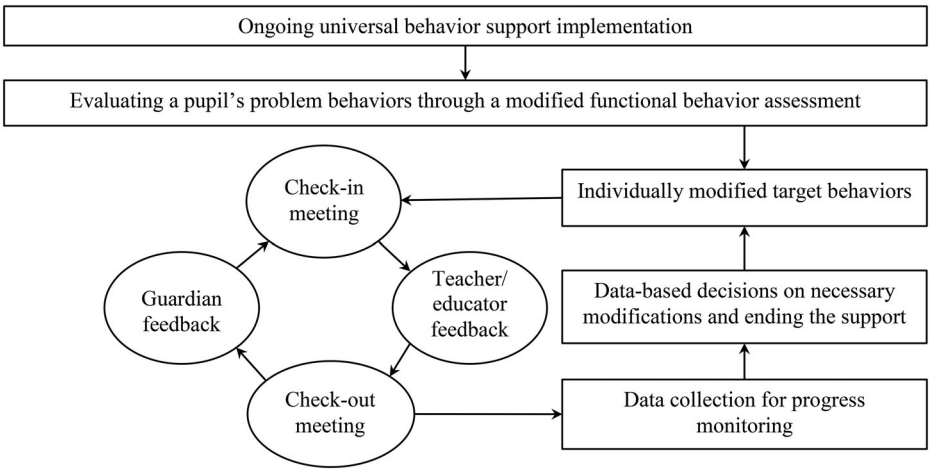

Figure 1. Finnish application of CICO support.

or modified functional behavior assessment be conducted (Lewis *et al.* 2017). In Finnish implementations, the approach of individualizing support goals has been adopted, as it fits the requirements of the Finnish legislation on three-tiered support (see FNAE 2014). The aforementioned Finnish model of CICO support (Figure 1) is efficient and has benefitted participating pupils, and its social validity was estimated to be high (4.7 on a scale of 1–6; Karhu *et al.* 2019).

Present study

This is the first large scale study on CICO in Finland and the purpose of this article is to analyze and describe to whom CICO support is provided in Finnish PBS schools and how school personnel experience the social validity (i.e. effectiveness and feasibility) of CICO support. More specifically, we wished to analyze how often CICO is used as a support for pupils who have been identified by the school system as having specific needs for support (of any kind) or for those who have been diagnosed by the health system as having a behavior-related disability. Furthermore, we wanted to establish the social validity of CICO based on teachers' experiences and determine whether the social validity varies between the supports given to pupils identified as having specific needs for individual pedagogical support or disabilities and pupils without specific needs for individual pedagogical support or neuropsychiatric disabilities.

The following research questions were asked:

1. Who are the pupils receiving CICO support in Finnish PBS schools?
   - What is the gender and grade-level distribution of pupils receiving CICO support?
   - What is the proportion of pupils receiving CICO support who have been identified as having specific needs for individual pedagogical support?
   - What is the proportion of pupils receiving CICO support who have been diagnosed by health services as having a behavior-related disability?
2. What is the level of social validity of CICO support in Finnish PBS schools, and does social validity vary according to pupils' grade levels or identified specific educational needs or behavior-related diagnoses?

Methods

Participants

Altogether, 51 pupils and their teachers participated in the study. All participants followed the standard curriculum and studied in a typical learning environment considered for each school. CICO support was provided for pupils who had problems adhering to the behavior expectations set by the schools. The inclusion criteria for the intervention was: 'Pupils having challenging behaviours in school environment to such a degree that they impaired children's social adaptation and academic progress.' Pupils' behaviour was followed for five consecutive days with DRC in order to cross-check and document the baseline level of the challenging behaviour. The final decisions regarding pupils' participation in the intervention were made by a group responsible for implementing CICO. Identified challenging behaviours by school personnel were disruptive behaviours which occurred mostly in classrooms, such as speaking without own turn, loud speaking, poor engagement to tasks and disobedience.

Participation was voluntary, and consent was received from both the pupils' guardians and the teachers. Prior to commencement, the study was evaluated by the Ethical Committee of the University of Jyväskylä. The pupils received additional behavior support (CICO) during the 2019–2020 and 2020–2021 school years.

The participants came from 11 Finnish PBS schools in Eastern Finland comprising three different communities. Ten of the schools were situated in urban or suburban areas and one in a rural area. The number of pupils in each school varied from 75 to 347 ($M = 246$, SD = 97.58). All participating schools were committed to using the PBS framework and had implemented

universal-level PBS support with high fidelity which was measured with Tiered Fidelity Inventory (TFI; McIntosh *et al.* 2017). The TFI contains 15 items that assess critical features of PBS implementation. Each item was evaluated with a three-stage Likert-scale, not implemented, partially implemented, or fully implemented. TFI values ranged from 73.3% to 96.7% ($M = 85.8\%$, SD = 8.18) in the participating schools.

To scrutinize grade levels, pupils receiving CICO support were divided into two categories: early elementary education and grades 3–6. This was done because in Finland, basic education is divided into (i) early elementary (grades 1–2), (ii) grades 3–6, and (iii) upper-level elementary education (grades 7–9). In early education, the focus is on establishing a foundation for learning and developing skills for learning and interaction (FNAE 2014). Teachers responsible for early education in Finnish schools specialize in teaching in grades 1 and 2.

The pupils were divided into categories based on their special educational needs and whether they had been identified as having a disability that is defined by characteristics of behavior and affects behavior. Pupils who were *identified as having specific needs* were identified by school personnel as having special educational needs and attended regular special education before the start of CICO support. Pupils with *neuropsychiatric disability* had behavior-related disabilities identified by health services: participants' diagnoses included ADHD, autism spectrum disorder (ASD), and Tourette syndrome. Because the sample was small, the diagnoses were treated as a single entity.

Procedure

School personnel responsible for implementing CICO participated in CICO training between 2019–2021. Training was conducted by members of the research team. Most of the intervention providers were already familiar with CICO before the project started, and for that reason they had no need for follow-up training. The schools' personnel who were unfamiliar with CICO received follow-up coaching in delivering and organization of CICO support in their own school. All participating schools used the CICO manual (Karhu *et al.* 2017) to guide the implementation. CICO support was started immediately after the selection process, and the duration of the support period typically ranged from 5–10 weeks. Schools could use two ways for ending CICO phase, quick ending and ending with self-monitoring. The group responsible for implementing CICO was also responsible for determining when ending phase of the support starts. The decision was made based on DRC scores so that either (i) the goals set were achieved or (ii) CICO support had lasted at least 10 weeks and there had not been clear change in DRC scores for three weeks.

In CICO support (Hawken *et al.* 2021), pupils start their day with a check-in meeting with a CICO coach, who are typically paraprofessional school personnel, and receives their DRC. The CICO coach provides encouragement for the day and reminds the pupil of behavior expectations. After every lesson, the teacher gives feedback on whether the pupil met these behavior expectations on their DRC. In the afternoon check-out meeting, the CICO coach calculates the percentage of points earned for the day. Parents sign the DRC, and pupils return it the next day to the CICO coach. CICO support ensures that a pupil who needs additional behavior support gets feedback not only from DRC practices but also from positive adult contact each day when entering and leaving school and from increased behavior-specific praise in the classroom.

Measures

Social validity

The social validity questionnaire contained five items examining the feasibility (three questions; e.g. *CICO support is easy to implement*) and experienced effectiveness (two questions; e.g. *CICO support reduced pupils' problem behaviors*) of CICO support. The scores ranged from 1–6, with 1 indicating *fully disagree* and 6 indicating *fully agree*. The questionnaire showed good reliability: Cronbach's alpha for overall social validity was 0.85, with 0.77 for feasibility and 0.95 for experienced effectiveness. The teachers were asked to complete the social validity questionnaire twice, first during the CICO support and then again after the support processes ended. The mean value of these two measurements was used as an indicator of social validity. In cases where the assessment information was missing, a value of one measurement point was used.

Analysis

To test the differences in social validity between pupils with or without specific needs for individual pedagogical support and those with or without neuropsychiatric disabilities, a univariate ANOVA was used. In the first model, the pedagogical support plan was set as the within-subjects factor, and the social validity scores (overall social validity, feasibility, and experienced effectiveness) were set as the between-subject factor. In the second model, the neuropsychiatric disability was set as the within-subjects factor, and the social validity scores were set as the between-subject factor. In order to examine possible differences in the number of neuropsychiatric disability diagnoses between the two pedagogical support groups, a chi-square analysis was used.

Results

In the primary schools participating in this study, CICO support was provided to pupils in elementary school (grades 1–6, Table 1). However, the use of CICO

Table 1. Gender and grade-level distribution of pupils in CICO support.

Grade	Number of pupils	Proportion	Need for individual pedagogical support	Behavior-related disability
1st	11	22.0	8	6
2nd	11	22.0	6	3
3rd	10	18.0	6	2
4th	10	20.0	5	3
5th	3	6.0	1	1
6th	6	12.0	5	2
Gender				
Girls	6	11.8	4	3
Boys	45	88.2	27	14
n	51		31	17

Note. One participant had missing information on special education and 8 for the disability.

Table 2. Distribution of needs of for individual pedagogical support and behavior-related disabilities among participants.

		behavior related disability		
		No	Yes	Total
individual pedagogical support	No	15 (88.2 %)	2 (11.8 %)	17 (35.4 %)
	Yes	16 (51.6 %)	15 (48.4 %)	31 (64.6 %)
	Total	31 (64.6 %)	17 (35.4 %)	

Table 3. Social validity, feasibility, and experienced effectiveness evaluations by teachers across grade levels.

	Social validity, total		Feasibility		Exp. effectiveness		
Grade level	M	SD	M	SD	M	SD	n
1st and 2nd grades	4.54	0.66	4.60	0.78	4.46	0.88	19
3rd–6th grades	4.68	0.69	4.85	0.66	4.42	0.97	24
Univariate	F (1, 41) = 0.41, p = 0.526, p^2 = 0.01		F (1, 41) = 1.29, p = 0.262, p^2 = 0.03		F (1, 41) = 0.02, p = 0.879, p^2 = 0.00		

Note. Eight participants were missing information on social validity. Grade levels were recoded into two groups: 1st and 2nd grades and 3rd–6th.

support was used more with the younger age group: 44% of the participating pupils were in 1st or 2nd grade. The gender difference among those participating in support was clear, as 44 (88.2%) of the 51 participants were boys.

Two-thirds of pupils who received CICO support had already been identified as needing individual pedagogical support before CICO support started (Table 2). In addition, one-third of the pupils receiving CICO support had a behavior-related disability that had been identified by health services. Nearly half of the pupils who had been identified as needing individual pedagogical support also had a behavior-related disability (Table 2). The number of diagnoses was statistically significantly higher among pupils with individual identified special education needs and pupils with no special education needs ($\chi^2 = 6.44$, $p = 0.011$).

Social validity evaluations did not vary significantly between schools; therefore, a single-level analysis was applicable. Overall social validity, including its subdivisions (feasibility and experienced effect of CICO support), did not vary according to pupils' grade levels (Table 3). There were no statistically significant differences in teacher-rated overall social validity (feasibility or experienced efficacy) between pupils with or without identified special education needs or behavior-related disabilities. However, for experienced effectiveness, the analysis approached statistical significance (see Table 4), suggesting that the experienced effectiveness of CICO support might be higher ($_p^2 = 0.08$) in pupils with no identified need for pedagogical support.

Discussion

The findings of the study showed that in the participating Finnish elementary schools, CICO support was provided to pupils in all grade levels (1–6) and almost entirely for boys. Altogether, 82.4% of participating pupils were from grades 1–4, a clearly higher proportion than that of pupils from grades 5 and 6. The result concerning gender difference is in accordance with previous findings. Boys are more prone to externalizing problems; therefore, their problematic behaviors are easier to recognize, and they are provided support more readily (Owens 2016). The results also revealed that large proportions of pupils for whom CICO support was offered had been identified as having specific needs for pedagogical support or disabilities before CICO support was started.

These findings raise some questions: Is CICO support used mainly as early preventive support? Is structured behavior support considered a part of the flexible special educational support in Finnish schools, or is it regarded

Table 4. Social validity, feasibility, and experienced effectiveness evaluation comparisons between pupils with or without identified needs for pedagogical support and behavior-related disabilities.

Need for individual pedagogical support	Social validity, total		Feasibility		Exp. effectiveness		
	M	SD	M	SD	M	SD	n
No	4.81	0.54	4.86	0.56	4.74	0.88	18
Yes	4.48	0.75	4.66	0.83	4.21	0.93	24
Univariate	F (1, 40) = 2.55, $p = 0.118$, $p^2 = 0.06$		F (1, 40) = 0.79, $p = 0.380$, $p^2 = 0.02$		F (1, 40) = 3.50, $p = 0.069$, $p^2 = 0.08$		
Behavior related disability							
No	4.62	0.66	4.79	0.69	4.36	0.94	24
Yes	4.56	0.74	4.62	0.83	4.46	0.88	14
Univariate	F (1, 39) = 0.07, $p = 0.787$; $p^2 = 0.00$		F (1, 39) = 0.49, $p = 0.488$, $p^2 = 0.01$		F (1, 39) = 0.11, $p = 0.735$, $p^2 = 0.00$		

as an additional support if other approaches fail? Responding to the first question, we can conclude that, in the elementary schools participating in this study, CICO support is most widely used in the first four grade levels and could thus be regarded as an early and preventive support method just as in previous studies (Commisso *et al.* 2019, Hawken *et al.* 2014). Regarding the second question, we can conclude that structured behavior support, such as CICO, seems to be secondary to other pedagogical supports. Consequently, despite the implementation of the inclusive PBS approach in a school, the systematic early prevention of individual behavioral problems might be missing, and pupils may not be getting the individual support they need early enough, which can exacerbate behavior problems.

This conclusion is also supported by the observation that an unexpectedly low number of pupils were offered CICO support in the participating schools. While it is estimated that approximately 10–15% of children experience behavior problems in school (Drevon *et al.* 2019, Mitchell *et al.* 2011) and 20–30% of pupils in Finland receive some kind of special education support at some point during their elementary school years (Björn *et al.* 2016), the proportion of pupils receiving CICO support was much lower (0.03–4.18%). This may indicate that school personnel do not easily start the systematic support targeted specifically at behavior problems and support may be started only after aggravation of the problems. It must be borne in mind that an especially low number of pupils from grades 5 and 6 were provided CICO support, which may indicate that school personnel's readiness for implementing systematic behaviour support may be even lower for pupils in these grades. Although it cannot be directly defended by our data, another possible interpretation of this latter finding may be that some pupils in grades 5–6 have already been transferred to more intensive supports, such as special classes. One contextual factor behind these findings may be that although Finnish schools have flexible support systems for academic problems, such as difficulties in reading, writing, or mathematics, behavioral problems are treated differently. A recent review (Närhi *et al.* 2021) of the curricula of Finnish teacher education and special teacher education programs revealed that there were hardly any courses on behavior management specifically in teacher education degree programs. The few courses that were found were part of special education teacher training degree programs and mostly emphasized behavior problems as individual problems requiring intensive individual support. Thus, there seems to be a need to increase understanding of the early prevention of behavior problems in teacher education.

The social validity data of this study suggests that CICO is an acceptable method for providing additional support for elementary school pupils with behavioral problems. Overall social validity estimations for CICO support were high and did not vary across grade levels. In accordance with previous findings (Wolfe *et al.* 2016), overall social validity estimations were equally high between pupils with or without the need for pedagogical support and neuropsychiatric disabilities. Although the results did not show statistically significant differences between groups in the overall social validity of CICO support, experienced effectiveness seemed higher for pupils with no identified need for pedagogical support. Inspection of the pupils' support plan information revealed that nearly all pupils with identified pedagogical support needs had comorbid behavior problems, learning difficulties in basic academic skills, and special educational needs for both learning and behavior. Therefore, overlapping difficulties may be negatively related to the experienced effectiveness of CICO support. The reason for this is not clear, but one explanation may be that the undertaken special educational support may have only targeted academic skills, and behavior support was not included in the early and preventive supports. The provision of structured behavior support after and during the times behavior problems are exacerbated may result in limited positive effects. In these cases, a longer support period could be advisable for pupils, and in some cases,

support should be intensified and include functional behavior assessment-based individual interventions.

Limitations

This study has some limitations. Given the small sample size and exploratory nature of the study, the results should be interpreted with caution. In addition, the small sample size, together with the partially missing social validity data, limited the power of the analyses. Data describing fidelity of implementation was not available, and therefore, it was not possible to investigate interaction between implementation fidelity and social validity. The outcome measures of social validity were also limited to questionnaire assessments completed by school personnel. Information collected from caretakers could provide a broader view of the feasibility and effectiveness of CICO, as caretakers are involved in the implementation processes of CICO support. Furthermore, interviews could have revealed information that could not be achieved by using questionnaires and ratings as assessment methods. Pupils' DRC data and social validity evaluations regarding implementation and effectiveness of CICO support could not be included into this paper, which is a limitation. DRC data could have shown if the variation in DRCs was connected to teacher ratings of effectiveness of CICO support. Similarly, including pupils' social validity evaluations would have revealed how unanimous evaluations pupils and teachers had.

Implications and future directions

In sum, CICO support seems feasible (as evaluated by school personnel) and applicable to all grade levels. In addition, experienced effectiveness was regarded as high, although effectiveness seemed somewhat lower for pupils with a specific need for pedagogical support. Altogether, the results of this study support the usefulness of CICO.

However, it was surprising how small a proportion of pupils were offered CICO support. It is possible that in Finnish schools, the idea of using manualised evidence-based behavior support methods is not yet well accepted. In the Finnish context, the lack of teacher training in behavior management could contribute to this situation. A clear implication of this finding is the need to offer courses on behavior management to teachers, both as pre-service and in-service training, with the emphasis on the evidence based methods on antecedent classroom management approaches and on how to swiftly launch additional supports, like CICO. As behavior problems are often seen as the biggest obstacle for inclusive education, having effective supports in mainstream education is very likely to enhance successful implementation of inclusive education.

Perhaps a Finnish version of CICO that would be more easy to launch should also be developed. One solution could be to make the starting phase of the support more straightforward. The Finnish application reported here included a simplified behavior assessment procedure to identify individual behavioral needs and related individual behavior goals (Karhu *et al.* 2017). The starting phase of CICO support would be more straightforward if, for example, goals were directly related to the existing universal behavior expectations of the school and the classroom. Previously this kind of procedure has been widely used in implementations studies, in particular, in USA (Hawken *et al.* 2014, Wolfe *et al.* 2016). This would require schools to have a solid implementation of PBS, including formulated behavior expectations and more concrete behavior instructions that could be applicable to various school situations.

In conclusion, although preliminary, the data suggest a need for further research on the relationship between comorbid learning and behavioral difficulties and positive behavioral outcomes. Furthermore, while structured behavior support seemed to be secondary to other pedagogical supports, it is recommended that behavior support be started earlier as a preventive measure. If an adequate response is not received, it could be combined with practicing learning and executive skills with the aim of supporting positive school behavior, learning outcomes, and school engagement.

Compliance with ethical standards: Funding

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Disclosure statement

No potential conflict of interest was reported by the authors.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed consent

Written informed consent was obtained from all legal guardians of the children and from the teachers included in the study.

Location of the study

Finland

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