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# **Adaptation and Implementation of the German Social-Emotional Learning Program Papilio in Finland: A Pilot Study**

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## **Abstract**

This study investigated the cross-national adaptation and implementation of Papilio, a German social-emotional learning program, in Finnish early childhood education and care (ECEC) centers. Papilio is a developmentally focused, scientifically based intervention program focused on preventing behavioral problems and fostering social-emotional competence in children aged 3 to 7. The aim of this study was to investigate and evaluate the cross-national adaptation and cross-cultural adaptation and implementation of Papilio in the Finnish ECEC context. Results from qualitative interviews with one Finnish Papilio trainer, 11 early childhood education (ECE) teachers, 2 ECE special education teachers and 2 nursery nurses are supplemented with teachers' and nursery nurses' (N=75) questionnaire data. Qualitative thematic analysis revealed that cultural adaptations were necessary on four levels: accommodation of materials, adaptation of the contents of the materials, structure, and delivery. The materials and training contents were culturally adapted, whereas the delivery of the intervention was adapted according to Finnish ECEC practices. The structural adaptation included discarding timeout, due to opposition by some educators. The educators were committed to implementing the program as instructed and resolving the practical difficulties they encountered. Their motivation to implement Papilio increased as they observed improvements in the children's social-emotional competence during intervention.

Key words: cultural adaptation, early childhood education and care, preventive intervention, social-emotional competence



## **Introduction**

Finland has a need for effective, high-quality, and well-implemented preventive intervention programs to tackle the difficulties surrounding social-emotional competences. A recent review suggests that although Finnish educators are using different materials and methods to support children's social-emotional competences, the use of evidence-based intervention programs is infrequent and inconsistent (Määttä et al., 2017). Problems with emotion and behavior regulation are relatively common in early childhood (McLeod et al., 2016), with a prevalence of 10%–20% (Kato, Yanagawa, Fujiwara & Morawska, 2015; Pihlaja, Sarlin & Ristkari, 2015). The concept social-emotional competence involves both intrapersonal and interpersonal skills (e.g., self-awareness, self-management, social awareness, relationship skills, and responsible decision-making), and children need guidance, teaching, and modelling to learn and practice these skills (Weissberg, Durlak, Domitrovich & Gullotta, 2015). Research has demonstrated that social-emotional competence is associated with social, behavioral, and academic outcomes, and it is an important protective factor against negative outcomes and risk factors, (e.g., aggressive and violent behaviors and economic disadvantage) (Domitrovich, Durlak, Staley & Weissberg, 2017). Social-emotional and behavioral problems tend to persist and extend into adolescence (Domitrovich et al., 2017).

Early prevention of behavioral problems and support of social-emotional competence, therefore, is important. Teachers are encouraged to implement evidence-based intervention programs specifically designed to support children's social-emotional learning and development in ECEC. Such interventions can prevent long-term academic and behavioral problems as well as address existing ones (McLeod et al., 2016).

The current study examines the cross-national and cross-cultural adaptation of an early prevention intervention program, Papilio, an evidence-based treatment (EBT) developed and widely used in Germany. This developmentally focused, scientifically based intervention focuses on

## Papilio program in Finnish ECEC

preventing behavioral problems and supporting social-emotional competence and peer relationships in children aged 3 to 7 (Mayer, Heim, Peter & Scheithauer, 2016). The program components primarily target children aged 4 to 7, but some (e.g., free play and interactive story) are also offered to younger children aged 2 to 3. Although all children participate in the program, some measures are designed specifically to reduce risk factors (e.g. negative peer relationships), address the first signs of behavioral problems, and foster resilience and social-emotional competence. Although there are similarities with other social-emotional learning (SEL) programs (e.g. Incredible Years, Webster-Stratton, 2016), the benefit of Papilio is that it enhances SEL in the child's whole growth environment. This program has distinct effects on 1) the child himself and his peers at the day care center, via child-centered methods (e.g. interactive stories, songs, play and games) that strengthen the child's social-emotional skills at both the individual and group level; 2) pedagogical staff and the culture at ECEC centers, via training for program implementation and creating a positive classroom environment; and 3) the parents, via support for parenting methods and strengthening the educational partnership with ECEC. The program is designed to ensure high-fidelity, high-quality, sustainable implementation with structured, attractive materials, teacher training and follow-up quality management (Mayer et al., 2016).

Papilio's effectiveness in Germany has been proven through a large-scale, longitudinal intervention study (Augsburger Längsschnittstudie zur evaluation des präventionsprogramms Papilio, ALEPP; Scheithauer, Bondü, Hess & Mayer, 2016; Scheithauer, Bondü, Niebank & Mayer, 2007). The results of ALEPP, a randomized control trial in which children (n=627), ECE teachers, and parents participated, showed that compared to the waiting-control groups, children in the Papilio intervention groups displayed increased prosocial behavior and significantly decreased problem behavior (e.g., hyperactivity and inattention symptoms and emotional, conduct, and peer relationship problems) (Scheithauer et al., 2007). However, it is important to explore whether and how evidence-based intervention programs developed in one context can be adapted to other

cultural contexts. The current paper, therefore, describes the cross-national and cross-cultural adaptation of the German Papilio program to the Finnish ECEC context.

### **The German Papilio program**

Papilio aims to prevent early-onset behavioral disorders and to address existing problems by (1) reducing risk factors (e.g., behavioral and emotional problems); (2) fostering protective factors (e.g., positive peer interactions); and (3) helping children handle developmentally appropriate tasks in order to acquire social-emotional competence (Mayer et al., 2016). Papilio provides educators<sup>1</sup> with a curriculum and materials to promote social-emotional competence and SEL, address emotional and behavioral problems, and support the development of prosocial and interaction skills (Mayer et al., 2016). As (Määttä et al., 2017) found in the Finnish context of ECEC, the measures to support children's social-emotional competence in are often not implemented in a systematic or pedagogically appropriate manner; therefore, support is not consistently delivered to the children in most need. A structured and manualized program like Papilio can help to overcome this challenge. Of the Papilio program's different components, this study examined the teacher- and child-focused components rather than the parent-focused component.

The teacher-focused component constitutes the heart of the Papilio program. Educators are trained in important interaction and classroom management skills, such as creating positive teacher-child relationships, reinforcing positive behaviors, enforcing rules, dealing with challenging situations, supporting children's peer group processes, and constructing a supportive educational atmosphere (Mayer et al., 2016). Papilio teacher training consists of basic and advanced modules. In seminars, program principles are introduced and practiced, alongside the principles of learning

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<sup>1</sup> The Papilio teacher training participants in this study included ECE teachers, ECE special education teachers, nursery nurses, and teaching assistants. We use the term *educator* to refer to all the practitioners in the Papilio teacher training in Finland. However, to discuss the Papilio program, particularly the teacher-focused component and German practices, we prefer the term *teacher*, which is used in German culture.

theory. After completing the seminars, educators implement the program using standardized materials and later may qualify for certification.

Papilio includes three child-focused measures implemented in the classroom (Mayer et al., 2016):

(1) Toys on holiday (ToH): Once a week, children play without their usual toys and create their own play materials and engage in collaborative group play (e.g., role play and group games), which fosters interaction, creativity, group inclusion, and peer relationships.

(2) Box imp story (BIS) lessons: Children are introduced to an interactive story featuring four imp-like characters that each represent a basic emotion: sadness, anger, fear, and joy. Children learn to recognize, identify, and regulate these emotions through using different materials (e.g., pictures of the imps' faces, CD recordings of their voices, and songs about emotions) and practicing problem-solving skills (e.g., talking about what helps when you are sad).

(3) Mine-yours-ours game (MYOG): In this adaptation of the good behavior game, children learn to follow agreed-upon group rules, and they are divided in small groups and can earn points for following rules at specified times. When a small group earns enough points, it can choose a reward for the whole group. This component promotes group-oriented, prosocial, and task-oriented behavior and behavior regulation.

### **Cultural adaptation of preventive intervention programs**

Interest is growing in how to adapt preventive intervention programs across contexts (Castro, Barrera & Holleran Steiker, 2012; Ferrer-Wreder, Sundell & Mansoor, 2012), such as subgroups within a country and entire nations themselves. An important question is whether preventive interventions developed within particular linguistic and cultural contexts can be applied to groups with different languages and cultures (Bernal, Jiménez-Chafey & Domenech Rodríguez, 2009; Griner & Smith, 2006). Bernal et al. (2009) defined cultural adaptation as “the systematic

modification of an ... EBT or intervention protocol to consider language, culture, and context in such a way that it is compatible with the client's cultural patterns, meanings, and values" (p. 362).

If a program does not include elements required by the target cultural context, the intervention content and delivery may need to be modified and adapted to better match that culture (e.g., by including cultural values) (Castro, Barrera & Martinez, 2004). Though it is important to improve the effectiveness of interventions, such modifications should be limited and not touch important components, timings or structures, which could compromise fidelity (Castro et al., 2004; Griner & Smith, 2006). Adaptations limited to the surface structure (e.g., minor linguistic changes in materials) enable the feasibility of implementation, whereas the deep structure determines the program's impacts (Resnicow, Soler, Braithwaite, Ahluwalia & Butler, 2000).

The United Nations Office for Drugs and Crime outlined steps for cultural adaptation of preventive interventions, which this study followed: (1) setting a cultural advisory group; (2) assessing cultural groups' needs; (3) translating materials; (4) recruiting implementers from the target culture; (5) culturally adapting the training system; (6) making any cultural adaptations needed during implementation; and (7) continuously evaluating implementation quality and outcomes to maintain fidelity with the original program (Kumpfer, Magalhães & Xie, 2017). Cultural adaptation based on culturally informed theories and models achieves the strongest impacts (Castro et al., 2004), and it also demands cultural sensitivity, as interventions need to be modified to match the target group's characteristics and needs (Ferrer-Wreder et al., 2012).

### **Aims of the study**

The aims of the study were to (1) investigate the cultural adaptation of Papilio to the Finnish ECEC context and (2) describe its fit and implementation in Finnish ECEC centers. Typically, quantitative methods have been used to explore cultural adaptation. However, this study aims to gain important insights on the adaptation and implementation of the Papilio program from the participants' perspectives by using data obtained from qualitative interviews and questionnaires.



## **Method**

### *Participants and measures*

The primary data were drawn from semi-structured, qualitative, thematic interviews with 2 ECE special education teachers, 11 ECE teachers, and 2 nursery nurses (n=15), who all participated in the program's implementation, as well as one Finnish Papilio trainer. Of the interview participants, 14 were female. The participants were aged between 23 and 60 years (M=44.64; SD=10.97). Their working experience varied from 3 to 38 years (M=17.3; SD 12.11). The interviews, conducted by the second and third author as well as a PhD student, explored the participants' perspectives and experiences of Papilio training, implementation, and applicability. A Finnish Papilio trainer, who earned her qualifications in Germany, was also interviewed to understand the process of the cross-country transfer and cross-cultural adaptation of Papilio.

This main data were supplemented with questionnaire data from teachers and nursery nurses (N=75), of whom 73 were female. The participants were aged between 22 and 60 years (M=40.95; SD= 11.12). Their working experience varied from one year to 38 years (M=17.28; SD=12.09). Eight respondents had the training of early childhood special education teacher, 29 were kindergarten teachers, 31 were nursery nurses, and seven were assistant teachers. In Finland, ECE special education teachers receive five years of university education, and ECE teachers receive three years either in university or in university of applied sciences. Nursery nurses receive two years of college education.

### *Procedure*

The transfer of Papilio from Germany to Finland took several years. After the initial contact and negotiations, the Finnish Papilio trainer was trained in Germany. The translation of the Papilio training handbook for implementation began in 2014, when a Finnish advisory group for Papilio

was founded. Cultural accommodations and adaptations were done regarding language translation, training, and program structure to fit the Finnish ECEC system (Figure 1).

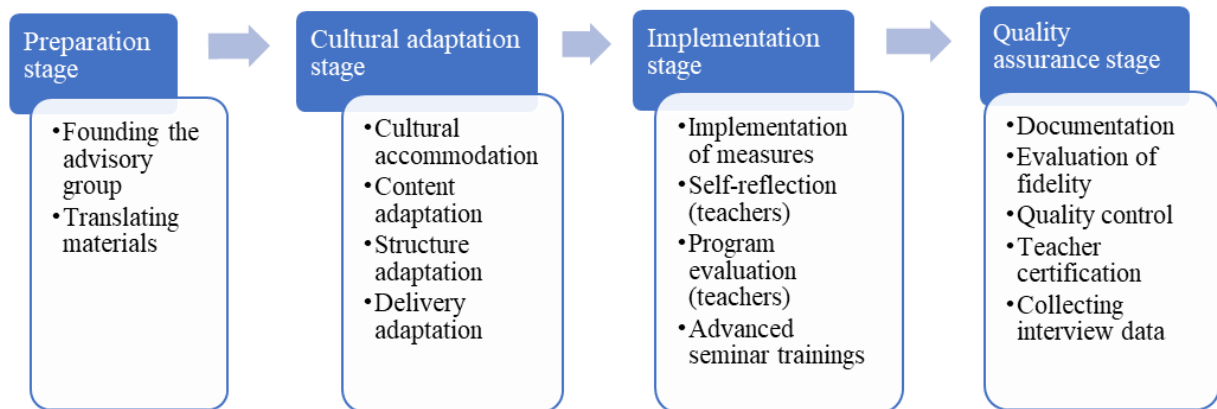


Figure 1. Stages of the cultural adaptation of the Papilio program to the Finnish ECEC

The Finnish educators participated in a four-day Papilio training program, as is customary in Germany. During implementation, the educators attended a two-day advanced seminar, which deepened their knowledge of implementation and helped them reflect on their experiences. Semi-structured interviews and questionnaires were administered after the first year of the implementation of Papilio. The key interview themes were the educators' experiences with the program and training, implementation of the program components, and self-reflection on their roles as implementers. Similar questions were administered in the questionnaires, using both open-ended and Likert-scale questions.

The first step in the data analysis was transcribing all the audio-taped interviews. Next, the transcripts were carefully studied, and the data were coded by the first and third author inductively, guided by the research questions. The unit of analysis was a meaningful phrase. Subsequently, the codes were combined thematically and categorized according to the literature (Kumpfer et al., 2017). The main themes identified through qualitative thematic analysis (Braun & Clarke, 2006) were cultural adaptation, implementation, and evaluation (Figure 2). Two researchers independently coded the data, and researcher triangulation was used to increase the credibility and reliability of

the study. Discussions resolved any disagreements in the analysis. To avoid research bias and ensure objectivity, the first author did not participate in conducting the interviews.

Cultural adaptation	Implementation	Evaluation
<ul style="list-style-type: none"> <li>• Cultural accommodations (manual and training contents)</li> <li>• Content adaptations (training contents and parents' evenings)</li> <li>• Structural adaptations (timeout)</li> <li>• Delivery adaptation (timing of ToH and division of BIS lessons to smaller units)</li> </ul>	<ul style="list-style-type: none"> <li>• Experience with program components (ToH, BIS, and MYOG)</li> <li>• Program benefits</li> <li>• Implementation challenges</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation of the program's applicability by educators</li> <li>• Self-evaluation by educators</li> <li>• Evaluation of implementation fidelity</li> </ul>

Figure 2. Main categories of the data

Six questions from the questionnaires (N=75), consisting of Likert scale and open-ended questions, served as complimentary data to the interviews, illustrating the participants' a) the experiences of implementation, b) the evaluations of their role as implementers, and c) the changes they observed in children's social-emotional competence during the intervention. The questionnaire data were analyzed by calculating frequencies and reporting them as percentages, and these were combined with the interview data.

Throughout the research process, the following ethical principles were considered. The informed consent was obtained from the participants, and they were informed about the voluntary nature of participation and their right to withdraw at any time; however, none did. Also, confidentiality, privacy, respect, and anonymity were adhered to throughout the research process.

## Results

The first aim of the study was to evaluate the process of culturally adapting the German EBT Papilio program to the Finnish ECEC context, which required careful consideration. The steps taken followed the cultural adaptation phases as outlined by Kumpfer et al. (2017). The first step was to form a cultural advisory group to make any necessary for transferring the program to the

Finnish ECEC context and culture. Second, the time-consuming process of translating the materials started. As the Finnish Papilio trainer explained: “The first translation was made by a translator, and it was a meticulous, direct translation, and, thus, the expressions were very German. Therefore, the translations needed to be modified in accordance with the Finnish language” (PTi<sup>2</sup>). Third, the preliminary translations were adapted to the Finnish ECEC context, and fourth, the ECEC centers were recruited and their needs assessed. This process matched steps 1–4 of the approach proposed by Kumpfer et al. (2017).

### *Cultural adaptation of Papilio for Finland*

The cultural adaptations of the Papilio program fell into four categories: cultural accommodations, content adaptations, structural adaptations, and delivery adaptations. Cultural accommodations included modifications of the Finnish-language program manual based on the Finnish ECEC context as well as adaptations of the culture-specific training contents (step 5 in the system of Kumpfer et al., 2017) by the German Papilio developer (GD) and the Finnish trainer:

“We worked with the GD on the training materials for five days. We translated them to Finnish. Some expressions in the German language were unsuitable for Finnish, so we discussed them. The GD provided alternatives and explained what the expressions meant, and we then chose the appropriate ways of expressing the ideas together.” (PTi)

This example shows the effort required to translate the training materials. More adjustments became necessary in the training phase, for instance, as the participants did not understand some assignments. Moreover, some training contents raised discussion and opposition, so the Finnish and German trainers had to adapt the training materials and exercises (e.g., additional linguistic adaptations,

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<sup>2</sup> In the extracts, the respondents are labelled with numbered codes. *PTi* represents the interviewed Finnish Papilio trainer, *Ti* the interviewed, and TQ ECEC the teacher questionnaires, *Ni* the interviewed nursery nurses and *ESTi* the ECE special education teachers. All the data quotes are translated from Finnish to English.

elimination of timeout, several exercises, and training for parents' evenings), which resulted in content adaptation.

The training content included the theoretical foundations of the program, the importance of supporting children's social-emotional skills, the prevention of aggression, and the implementation of principles and practices, along with several practical exercises to help educators learn the program content. Surprisingly, the timeout component raised cultural conflict and opposition. In Germany, educators use a timeout when a child cannot regulate their behavior despite the educator's requests and efforts. The child is left alone in a safe, familiar room for several minutes to calm down. Some Finnish educators reacted strongly and protested to the use of timeouts:

“First, they shouted, “I can't do this! I can't leave a child alone like this!” The GD explained that educators have to have confidence in themselves in executing timeouts. Due to the educators' strong resistance, the GD decided that we needed to discard timeout in Finland.

Timeouts are seldom needed because other Papilio components work.” (PTi1)

This example reveals a conflict over timeouts, which some Finnish educators viewed negatively and refused to use on ethical grounds. Consequently, after negotiations with the Finnish and German trainers, the timeout was eliminated in Finland. However, before this structural adaptation of the original program was made, the German Papilio developers evaluated the effect and determined that dropping the timeout would not compromise program fidelity. In Germany, the timeout is the very last of several options for handling challenging situations and is not often used.

Similar opposition arose to an advanced seminar on arranging parents' evenings to share knowledge about the program. The participants argued that the training was unneeded, as they had developed good practices for parent collaboration:

“This training day was not necessary. ... We have all arranged parents' evenings for years. ... As professionals, we do a great job with this [organizing]. Our customs are quite different than those in Germany, where the teachers pretty much give information to parents. In

Finland, we interact with parents during different activities and distribute knowledge, so the parents can experiment with different things through activities.” (ESTi1)

As this excerpt illustrates the educators’ viewed the existing Finnish practice for parents’ evenings better than the proposed German model. The training contents for parents’ evenings were thus culturally adapted to take into account the educators’ professional expertise and knowhow regarding collaboration with parents.

In the training, the educators received the first version of the Papilio handbook, a standardized manual for implementation. It was stressed that the translated manual was preliminary and would be adapted based on the participants’ experiences. Despite the efforts to translate and culturally adapt the manual, a few educators thought more was needed: “The program was designed for the German ECEC, German teachers, German children, and German parents. As I read the material, I can see cultural differences, for example, in instructions. ... One cannot bring it to Finland as such. It must be properly modified.” (ESTi1)

In addition, three educators wanted to receive more knowledge about the German ECEC in the training: “I would have liked to have information on what ECEC centers in Germany are like, what size the groups are, what the teacher training is—more information on how the program is used in Germany.” (Ti10) As these examples show, some educators thought the materials needed more linguistic and cultural adaptations and wished to see videos of German practices to better understand the program components. Despite these deficits in the materials, the majority of educators were committed to piloting the intervention and making the necessary adaptations:

“As we pilot the program, we can see there are things not ready from the Finnish perspective. Papilio does not necessarily work as in Germany, and that is why we will pilot the program and perhaps add some different things. I truly want to try out whether the program works the same way as it does in Germany.” (Ti3)

“My first thought was that the program is really great! I have encountered a lot of children with difficulties in emotion regulation and emotion awareness, so I thought that this new means to help children is great.” (Ti7)

The examples demonstrate the educators’ curiosity about piloting and implementing Papilio in Finland, as discussed next.

### *Implementation and evaluation of Papilio in Finland*

This section describes the implementation and adaptation of the program mostly for children aged 3 to 6 in Finland (step 6 in the model of Kumpfer et al., 2017). In Finland, similarly as in Germany, the child groups in the daycare centers typically consist of a) groups of children aged 0 to 3; b) children aged 2 to 5; and c) compulsory pre-primary education groups of 6-year-olds. In practice, the national core curriculum of ECEC (Finnish National Board of Education, 2017) addresses the core values and pedagogical principles (e.g., the subjective right of a child to ECEC and the principle of inclusion), regulates the quality of the education and care provided in the centers, and lays the foundation for holistic growth, development, and learning of the children. In addition to the curriculum, the Early Childhood Education and Care Act (540/2018) outlines the aims of ECEC and the ground rules for the municipalities for organizing and supervising ECEC in daycare centers.

Before starting to implement Papilio, the educators planned its implementation at their centers and shared knowledge about Papilio and practical steps. The first program component implemented was ToH, during which children did not have their regular toys but played interactive games and used their imagination to play with cardboard boxes, blankets, paper, and other available materials. The educator’s role was not to plan but to talk with children, support and facilitate play, provide materials, observe and participate in play, and intervene only when needed. Some groups found piloting ToH to be a challenge despite the training, whereas others reported positive experiences:

“Initially, ToH was chaos; loud noise; for the teacher, it was at first difficult not to intervene in the playing. The children who otherwise needed more support also caused difficulties.”

(TQ16)

“Without toys, our children have been able to invent incredible play! We were amazed! Initially, the children needed a lot of the educators’ help, but lately, they have started to play independently.” (Ni2)

These examples highlight the variations in the educators’ experiences and feelings regarding ToH. In most groups, the implementation proceeded smoothly (80%<sup>3</sup>), but in several (20%), the educators misunderstood their new role, which resulted in problems (e.g., restlessness during play, see next example). The Finnish and German Papilio trainers solved these problems when they visited the ECEC centers to assess the quality of implementation:

“We somehow started out implementation wrong ... We thought that the children could do whatever they wanted, except use toys. We understood only when the GT visited us and said that all the regular rules of the center apply in ToH. We have a lot of children with special needs and immigrant children without linguistic skills. Consequently, the day started out wrong and turned into a chaotic day as the children did not have enough activities.” (Ti1)

This example reveals that some educators struggled with their role in ToH. The trainers’ instructions eased these difficulties, but some educators held conflicting opinions about their role in implementing ToH. They felt confused over whether they were implementing the activity correctly but were certain that they should actively guide children’s play and be available, involved, and attuned to children’s needs.

Despite some initial difficulties, the educators were committed to implementing ToH by the book and meticulously followed the instructions. Soon, they observed positive changes in children’s

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<sup>3</sup> The reported percentages result from the questionnaire data. All of the interviewed teachers also responded to the questionnaires.



play, social relationships, and creativity. Children interacted more frequently and positively with each other (21%), exercised their creativity and imagination (46%), and learned to improve their play (50%), relationships, and social skills (38%). These results motivated the educators to continue implementation and to solve future problems. Some also considered the long-term benefits: “What we have heard from Germany, is that with the idea of ToH, in the future, children and young people will be able to refuse tobacco, drugs, and alcohol, as denial [of toys] can increase self-control. I see really big benefits.” (Ti3)

Despite these perceived benefits, the delivery adaptation of ToH was needed in one ECEC center. Due to limited staff resources, the educators could not implement ToH in the afternoons. This issue was discussed with the Papilio developers, who agreed that ToH could be delivered in the mornings. The German Papilio developers evaluated the effects and determined that shortening the time for ToH would not affect fidelity.

The next step was introducing the BIS and materials. The children learned about the child Paula, who found a trunk in her grandparents’ attic with four imp-like characters representing sadness, anger, fear, and joy. The handbook gave specific guidelines on how to deliver the story, the materials to use (e.g., pictures of the imps and a CD of their voices and songs), and the discussions and exercises to do with children. Most educators precisely followed the instructions:

“We read through the imp stories and songs, followed the order exactly, and divided the story into two circle times, as instructed.” (Ti2)

“As I tried to execute the BIS materials as instructed, I noticed that the children had to sit still for too long, so we decided to divide the entities into smaller bits, and we used more than two circle times.” (Ti8)

The educators executed the BIS lessons as instructed, which worked well for the older children, but delivery adaptation was needed for younger children and those with special needs. Thus, some educators divided the story into smaller sections, which helped children to concentrate. The majority

of educators (90%) stressed that the story and the materials worked well in Finland as such. The educators and children both related positively to the materials:

“Paula and the imps have been the most exciting part of Papilio. The story text was pretty difficult, so I decided to draw pictures to help comprehension. The CD and the imps were wonderful. The children chuckled as we listened to the stories, and they wished they could hear the stories again and again. Also, the songs were catchy and nice.” (Ti7)

“Paula was really important for children. And so were the imps. It was important for children to be able to help the imps, and the children loved the songs.” (ESTi1)

These examples underscore the positive responses to BIS materials, which the educators found motivated positive changes in the children, who learned to identify emotions (96%), become more empathetic towards others' emotions (89%), and talk more about their emotions (85%). According to the educators, the imp characters, in particular, taught children emotion regulation and reduced challenging behaviors.

The third component, the MYOG, concerned learning social rules. Divided into small groups, the children competed by following agreed-upon rules. Successful groups received points and could redeem five points for a group reward. Children were excited to play and learned to co-operate and regulate their emotions, for instance, when they did not get a point: “The MYOG has worked well. Children have succeeded in playing and been excited. It is difficult, however, when a group, despite its efforts and support, fails to gain a point. The skills learned through game have persisted surprisingly well.” (Ti7). As this example shows, the children liked to play the game, and the educators found that it was an effective way to teach the rules (81%). The game increased the children's self-regulation (83%), collaboration skills (89%), participation (89%), and helping each other (80%). The game motivated them to practice important skills.

The seventh and last step according to Kumpfer et al. (2017) was to continuously evaluate the implementation quality and outcomes to maintain program fidelity. In general, the intervention's

main components were executed meticulously, with minor modifications of delivery. The educators reported that the program components worked well in the Finnish ECEC. They perceived benefits from the program goals and components, which increased their commitment to careful implementation, thereby promoting program fidelity.

However, the two major cultural adaptations—timeout and training for parents’ evenings—required consideration. The adaptations made responded to the educators’ critical feedback and were approved by the German developers. The elimination of timeout was evaluated to ensure that it did not significantly influence program fidelity. The content modification of training for parents’ evenings stemmed from cultural differences. The training contents needed to be adapted to Finnish practices. The Finnish educators had more training than the German educators<sup>4</sup> (European Agency for Special Needs and Inclusive Education, 2017) and were used to collaborating with parents, as the Finnish National ECEC curriculum (2017) emphasized collaboration. In Germany, however, parents’ evenings were an uncommon practice, a national ECEC curriculum was lacking, and every federal state had its own curriculum, resulting in variations (European Agency for Special Needs and Inclusive Education, 2017). Evaluating the significance of the content adaptation of training for parents’ evenings required cross-country comparisons and analyses not possible in the present study.

Implementation quality was evaluated through trainer visits, consultations, educators’ documentation, and self-evaluations. Only after these quality assessment steps could the educators earn certification. The results indicate that the visits and quality control were crucial, especially early in implementation, to guide educators, increase their confidence, and ensure program fidelity.

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<sup>4</sup> In Finland, teachers either have three-year university training leading to a bachelor’s degree, or a BA in social sciences from a university of applied sciences, also of three-year duration. In Germany, however, only about 6% of educators have similar higher education qualifications, although the number is rising steadily (Oberhuemer, 2015).

## Discussion

Our results reveal that some adaptations were necessary for Papilio training and implementation in the Finnish ECEC centers. Before and during training, the German and Finnish trainers negotiated how to sensitively handle the Finnish cultural and ECEC context. Such considerations constitute the core of cultural adaptation (Bernal et al., 2009). Despite the adaptations, unforeseen cultural conflicts arose. First, the educators viewed timeout as unethical, possibly because the Finnish ECEC culture emphasizes socio-constructivist approaches rather than behaviorism. The strong opposition led to eliminating timeout. Evaluating whether such structural adaptations affect program fidelity is important. In this case, timeouts were the option of last resort, so it was doubtful that the modification influenced the results. Papilio is also being updated in Germany, and the new version will not include timeout. Second, the content of training for organizing parents' evenings was adapted due to opposition from the educators, who saw it as useless and claimed to have better practices. The adaptations of timeout and parents' evenings in could have affected the intervention's deep structure (see Resnicow et al., 2000), so the German developers carefully considered their effects on fidelity. Previous studies (see Castro et al., 2010) point to the direction that culturally adapted interventions are typically effective as the original evidence-based intervention. However, in-depth analysis of these adaptations' presumed effects would require cross-country comparisons between Finland and Germany.

Though significant, these cultural conflicts involved only minor program components and presumably had minimal effects on fidelity, as the main program components (ToH, BIS, and MYOG) were implemented meticulously. Importantly, the educators supported the program principles, structure, and components, and they enthusiastically wanted to implement the program and see whether it would have similar effects as reported in Germany. Although the educators reported some implementation difficulties, they had confidence in the program. Based on the results, it was crucial that the educators witnessed many positive intervention effects and decreased

behavioral problems in children, which increased their motivation to implement the program. These effects included improved emotion recognition and self-management skills, larger networks of social relationships, more socially responsible behavior, and fewer disruptive behaviors. These results accord with German research supporting the fidelity and effectiveness of Papilio (Scheithauer, Bondü, Hess & Mayer, 2016; Scheithauer, Bondü, Niebank & Mayer, 2007). However, more research is needed to verify the culturally and contextually divergent effects of adapted and non-adapted interventions (Castro et al., 2010).

Early in the implementation process, support and consultation from the Papilio trainers who visited the ECEC centers were important to solve difficulties. Earlier studies have suggested that supervising, coaching, and feedback help educators to implement new methods and, thus, to increase fidelity (Kumpfer et al., 2017). Furthermore, a functional relationship between practitioners' training (i.e., materials, feedback, and manual) and implementation of intervention is crucial.

### **Limitations**

This study has some limitations. First, broader cross-country comparative research using quantitative and qualitative methods is needed to evaluate the effects of the Finnish adaptations. Second, some interviewed educators expressed uncertainty about their role as implementers, and it can be questioned whether the implementation of the intervention achieved full effectiveness. However, the educators observed effects suggesting positive outcomes from the intervention, which should be explored in more detail. Longitudinal follow-up studies and empirical cultural comparisons, for instance, are needed to compare the influence of national curriculum guidelines on educators' pedagogical practices and intervention implementation. It, therefore, is important to more closely study the implementation process and the cultural and contextual effects of intervention programs (Castro et al., 2010; Ferrer-Wreder et al., 2012).

## **Conclusion**

This study provides evidence on the cross-country and cross-cultural adaptation and implementation of Papilio in Finland and contributes to the literature on the cultural adaptation process. Despite the many preventive intervention programs, research on the implementation of scientifically sound programs in practice is lacking. These study results add knowledge on the process and steps of cross-country adaptation, which match those proposed by Kumpfer et al. (2017). As the results show, the cultural adaptation process is complex, and despite efforts to plan and execute it sensitively, unforeseen challenges may emerge. Therefore, it is crucial that the target community's perspectives be considered in cultural adaptation. Moreover, it is imperative that program adaptation and modification do not compromise program fidelity, which should be assessed continuously (see Kumpfer et al., 2017). The study results show that sufficient resources for support and supervision are needed to improve the fidelity of implementation. Given the limited research in this area, there is a need for more qualitative and quantitative work analyzing the cultural adaptation process of intervention programs and evaluating their fidelity as well as their effects.

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