Papilio-3to6* – Preventing Behavioural Disorders and Promoting Social-Emotional Competence in Preschool Children

Tackling the Risks for Violence and Addiction

Papilio-3to6 is a developmentally focused intervention programme for preventing early-onset behavioural disorders (like aggressive behaviour or social withdrawal) and enhancing social-emotional competence in preschoolers.

The methods of the programme are based on scientific evidence, and the effectiveness of the programme has been proven by a controlled longitudinal study, the Augsburg Longitudinal Evaluation Study of the Programme Papilio-3to6 (ALEPP).

Papilio-3to6 includes three intervention components: child intervention, kindergarten teacher intervention, and parent intervention.

Main project aims

Papilio-3to6 is designed as a developmentally focused intervention to prevent early-onset behavioural problems in preschool children. This main prevention goal is pursued

- by reducing the impact of important risk factors for negative development (especially children's behavioural problems),

- by fostering those factors that are believed to protect children from maladaptation and to enhance their resilience, and

- by helping children to complete the developmental tasks that are relevant at preschool age.

The Three Levels of Intervention

To achieve the preventive goals mentioned above, Papilio-3to6 has been designed as a comprehensive programme consisting of three levels of intervention: child-focused, teacher-focused, and parent-focused.

1. Child-focused intervention (for children aged 3 to 7 years)

Preschool teachers regularly implement three educational procedures that are mainly aimed at promoting children's social-emotional competence, group-orientated and prosocial behaviour, and integration into their peer group:

1. a) "Paula and the pixies in the box" ("Paula und die Kistenkobolde")

Within an interactive story a child character named Paula gradually introduces four pixies, each representing one of the basic emotions (sadness, anger, fear, and happiness). With the help of the interactive story, the children learn how to recognize basic emotions by interpreting gestures, facial expressions and bodily reactions, and how to control and to communicate those emotions. To support this learning process, additional materials are used (e.g. pictures of the pixies' faces, a compact disc with recordings of the pixies' voices and songs referring to feelings). The children are also encouraged to empathize with each other's feelings and to provide help.

1. b) "Toys-go-on-holiday day" ("Spielzeug-macht-Ferien-Tag")

Once a week, the toys, that are usually available in the classroom, are put away, and the children must think of interactive activities and games that they can engage in and play together (e.g. group and role-playing games). By observing the class on "toys-go-on-holiday day", the teachers can detect and support the children who have difficulties in becoming engaged in a group activity or in making contact with other children (e.g. shy or rejected children). This procedure is mainly aimed at promoting children's integration into their peer group, children learn to solve conflicts without aggression, and they are also encouraged to interact with other children and to initiate new relationships.

1. c) "Mine-yours-ours game" ("Meins-deins-unser-Spiel")

This procedure is an adaptation of the "Good Behaviour Game" and is based on principles of learning theory. Within different activities, children must follow a social or group rule that they have agreed upon previously (e.g. "we speak to each other quietly" or "we remain sitting while we eat"). They are divided into small teams, each of which can win a group reward if the members have followed the rule during the activity for a specified time. Positive behaviour (e.g. following the rule) is rewarded, whereas, for ethical reasons, negative behaviour (e.g. infringing the rule) is not punished directly. This procedure is mainly aimed at promoting children's group-orientated and prosocial behaviour, and at reducing impulsive, disruptive or deviant behaviour, as they are encouraged to propose rules for the whole group and to regulate their own behaviour according to the group rules.

2. Teacher-focused intervention

This intervention includes methods to support preschool teachers in their classroom management skills, and in their ability to interact and communicate positively with children. Preschool teachers are provided with information about topics relevant to the programme's goals, like the early prevention of behavioural problems, the principles underlying behaviour regulation, social interaction, and interpersonal communication, as well as information about topics related to child development. In addition, teachers are trained in several methods (based on principles of learning theory) of strengthening their classroom management skills.

3. Parent-focused intervention

This intervention consists of regular sessions at a preschool centre in which teachers introduce parents to the educational procedures of child-focused intervention and support them in their educational skills.

All preschool teachers complete a 5-day training workshop for Papilio-3to6 and spend 4 half-days on learning the practical implementation of the intervention in their classrooms. To assure the integrity of the intervention, the teachers receive standardized materials comprising a manual detailing the programme content, a manual presenting concrete instructions for implementing the intervention procedures, and additional materials for the child-focused intervention. Supervision meetings of teacher groups with the trainers also take place regularly. Thus, the programme is implemented by means of a certified train-the-trainer system.

Prevention Theory: Developmental Model of Behavioural Disorders and Substance Abuse

Scientific Cooperation Partner for the development and evaluation of the programme is Prof. Dr. Herbert Scheithauer, Freie Universität Berlin.

The findings from numerous longitudinal studies suggest that early onset conduct problems (e.g. oppositional defiant and aggressive behaviours) in preschool and school age children constitute an important risk factor for more serious problems during adolescence and adulthood, like antisocial behaviour, delinquency, and substance abuse. The probability of entering such a negative developmental pathway increases with the accumulation of further risk factors that are related to the child itself, and to the family, school and community contexts surrounding the child. Children with persistent aggressive behaviour are at a higher risk of developing substance abuse, violence, and antisocial personality disorders during adolescence and adulthood if persistent aggressive behaviour in childhood appears to be comorbid with attention deficit hyperactivity disorder, if dissocial and delinquent behaviours add to these problems at school age or during adolescence, and if other psychosocial risk factors emerge.

Webster-Stratton and Taylor (2001) propose that the risks of adolescence substance abuse, violence, and delinquency increase if, in addition to the early conduct problems, any of the following factors are present:

- parenting factors (e.g. harsh parenting, ineffective parenting, and low cognitive stimulation),
- child factors (e.g. poor conflict management, poor social skills, impulsivity, and attention deficits),
- contextual factors (e.g. poverty and life stressors), and
- school and peer factors (e.g. ineffective teacher responses and peer rejection).

Because of the risks of problems becoming chronic over time and escalating to more serious problems with the accumulation of further risk factors, the prevention of child conduct problems should start during early developmental stages, for example at preschool age.

The development of Papilio-3to6 is based on these results. That is: Papilio starts-3to6 at preschool age. In this sense, the programme is designed as a developmentally focused intervention to prevent early-onset behavioural problems in preschool children. This main prevention goal is pursued

- by reducing the impact of important risk factors for negative development (especially children's behavioural problems),

- by fostering those factors that are believed to protect children from maladaptation and to enhance their resilience, and

- by helping children to complete the developmental tasks that are relevant at preschool age.

Evaluation Study

The effectiveness of the programme Papilio-3to6 was evaluated using a randomized controlled trial with three assessment phases and a sample of 3- to 6-year-olds (n = 645) receiving preschool education in Germany, with about 1,200 parents and 100 kindergarten teachers, the Augsburg Longitudinal Evaluation Study of the Programme Papilio-3to6 (ALEPP). ALEPP evaluated the effects of the programme on children's behaviour during a 1-year-intervention trial, using a randomized allocation design with a waiting-list control group. Several measures of children's behaviour, as rated by parents and teachers, were recorded at three assessment phases. Additionally, children receiving the intervention were interviewed to provide a measure of peer acceptance.

Evaluation Study results – Overview

Children

In comparison to the control group, children in the Papilio intervention group

- showed a greater decrease in their overall problem behaviour and for example in their hyperactivity and attention deficits,

- a greater increase in prosocial behaviour, and

- better social-emotional skills as rated by their teachers.

These positive changes were observed not only 4 months after the beginning of the programme implementation, but also at the end of the 1-year intervention period.

Kindergarten teachers

- Papilio kindergarten teachers report of less stress

- Papilio kindergarten teachers report higher self efficacy
- Papilio kindergarten teachers demonstrate higher job satisfaction

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*The prevention programme used to be just called 'Papilio'. Now that we have created further programmes for under three year olds and for the transition to primary-school, we have given the kindergarten programme the more precise name of Papilio-3to6.