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Implementing and Evaluating Empirically Based Family and School Programmes for Children with Conduct Problems in Norway

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This paper discusses the implementation and evaluation of two family and community based intervention programmes for children and young people implemented in Norway, namely Parent Management Training (PMTO) (Ogden and Amlund Hagen in press) and Multisystemic Therapy (Ogden and Halliday-Boykins 2004; Ogden and Amlund-Hagen 2006), and a school-wide intervention programme, PALS (Sørli and Ogden 2007). In PALS universal interventions are combined with treatment by offering PMTO to the parents of the high risk children. The Norwegian experiences and results also illustrate how evidence-based programs developed in the US have been transported across geographical and language borders, implemented nationwide, evaluated for their effectiveness in regular practice and examined for sustainability. This paper describes this national strategy, and the main components and immediate outcomes of the PMTO- and PALS-programmes in Norway.

Keywords : behaviour problems, intervention, PALS, PMTO, Norway

Introduction

In the last decade Norway has launched a national initiative to prevent and ameliorate conduct problems more effectively and to promote social competence in children and young people. Several empirically based programmes were implemented in the regular service systems, with the aim of building and maintaining social and emotional competence. The Norwegian initiative is based on the collaborative efforts of a national centre for programme training, implementation, dissemination and

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research, and the local child and adolescent service systems. In order to increase capacity and meet the challenges of large scale implementation, the *Norwegian Center for Child Behavioral Development* (NCCBD) was established at the University of Oslo. It is organized as a three-tiered organization with development departments for children, adolescents, and research. The national strategy further includes an extensive system of quality assurance, including programme-based training and supervision of professionals, and monitoring of programme and intervention adherence, and outcomes. An empirically and action-oriented approach focusing on risk reduction and promotion of protective factors are at the heart of all programs implemented by the centre.

The Oregon model of Parent Management Training (PMTO)

The Norwegian PMTO project was organized as a collaborative initiative between the Oregon Social Learning Center (OSLC) and the NCCBD in order to facilitate the implementation and monitor the effectiveness of the OSLC Parent Management Training model in Norway (Ogden et al. 2005). PMTO targets boys and girls aged 4-12 years old referred to the child and adolescent mental health services or the child welfare services for serious behaviour problems. In this intervention programme, parents are seen as the locus of change, and the interventions are resource-focused and action-oriented, with the use of specific therapeutic tools like role play, home assignments and troubleshooting (Askeland, Solholm and Christiansen 2004). Parents are trained, individually or as a couple, in five key parenting skills, namely positive involvement, skill encouragement, problem solving, monitoring, and effective discipline. Positive parenting include changing the pattern of communication through positive involvement and communication, reinforcing compliance, and teaching the child new skills through guidance, problem-solving and conflict resolution, positive consequences and tangible rewards. During the sessions, the parents also learn how to practice limit setting with consequent and contingent use of

moderate negative consequences like response cost, fines, chores and time out. In addition, PMTO promotes effective caregiver monitoring and the involvement of the school.

The implementation of PMTO in Norway started in 1999 and eight years after the introduction of the programme, more than two hundred therapists have been trained and certified at NCCBD. The therapist training programme lasts for 1.5 year and The Fidelity of Implementation system (Knutson, Forgatch, and Rains 2003) is used in the assessments of therapist competence and treatment adherence. PMTO therapists participate in supervisory groups and network meetings on a regular basis. The number of children and families receiving PMTO has increased over the years as more therapists have been certified. By the end of 2006, approximately 1500 families had participated in the programme.

PMTO outcomes

A randomised controlled trial has been carried out to investigate the effectiveness of PMTO (Ogden and Amlund-Hagen in press). One-hundred and twelve children and their parents were randomly assigned to either PMTO (n = 59) or regular services (RS) (n = 53). PMTO produced immediate positive clinical child outcomes compared to regular services. Higher scores were associated with increased parental positive involvement and effective discipline as well as with greater treatment satisfaction. Children with behaviour problems and whose parents received PMTO exhibited significantly fewer behaviour problems than did children in the regular services comparison group. They were also rated as being more socially competent than the latter as measured by teacher assessments.

The results from the effectiveness study showed that PMTO is an effective intervention for Norwegian families with children exhibiting conduct problems. Additionally, the results support the notion that an empirically based intervention programme can be generalised successfully to a new population crossing both geographical and language borders. The results also support the notion of

targeting parents as the locus of change in efforts to improve the behaviour of children with conduct problems.

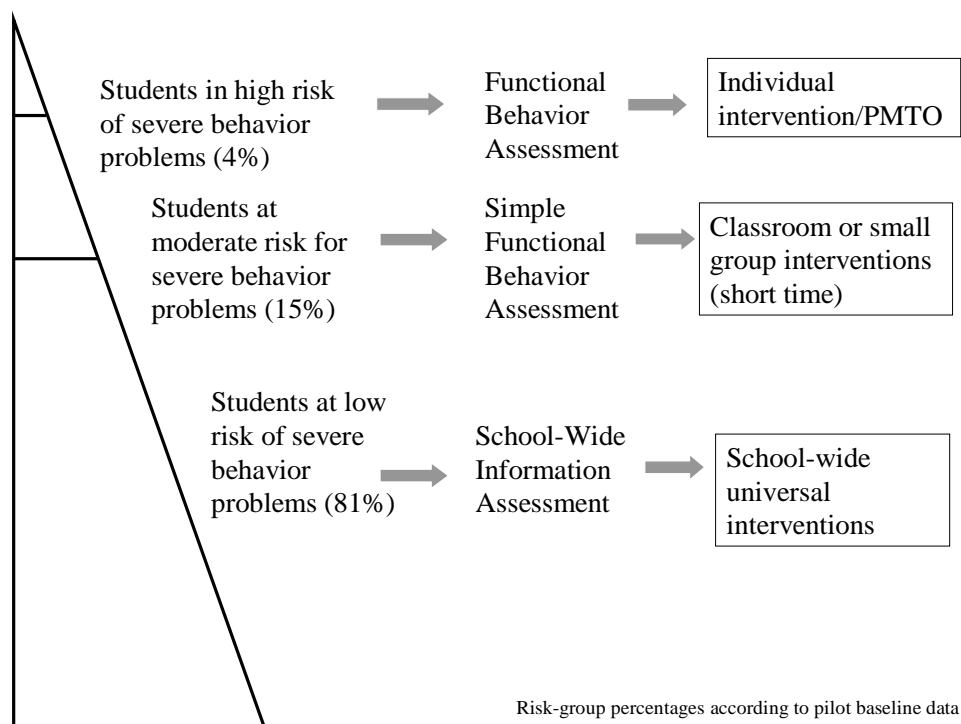
The PALS school-wide intervention model

‘Positive behaviour, interactions and learning environment in school’ (Norwegian acronym: PALS) is a school-wide intervention programme aimed at the prevention of behaviour problems and the promotion of social competence through positive behaviour support (Arnesen, Ogden and Sørli 2006). The model is an adapted and elaborated version of the School-wide Positive Behaviour Support model (Sprague and Walker 2005). It combines modification of the social learning environment with direct teaching and behavioural interventions implemented by the school staff. The programme has a multi-theoretical foundation drawing from the social interaction learning theory and coercion theory (Patterson 1982) and social ecological theory (Bronfenbrenner 1979). It also builds on theoretical principles of functional behaviour analysis and behaviour modification in school (O’Leary and O’Leary 1976; Greer 2002). PALS is established on an evidence-based platform. This implies that the included components and strategies explicitly match research related to the development of behaviour problems, risk- and protective factors, and effective approaches to the prevention and management of behaviour problems in school (Center on Positive Behavioral Interventions and Supports 2002; Arnesen, Ogden and Sørli 2006).

The model is typically implemented over a three year period. During this period training activities and supervision is offered on a school-wide basis and adapted to each school’s context and needs. Both staff and students are involved in training activities through proactive actions and skills-oriented learning activities. Based on a flexible multiple gating assessment procedure (for more details, see Scott et al. 2005; Sørli and Ogden 2007), pre-defined programme components (carefully described

in a hand-book) are implemented, with the interventions matched to the students' risk level. The innovative work is organized into three levels of intervention, namely universal selected and indicated.

Figure 1. The PALS Pyramid – a continuum of effective assessment and support



The universal intervention components focus on the enhancement of protective factors at a school-wide basis to keep low level behaviour difficulties from escalating into more serious problems. Students who do not respond to such interventions, would then need more individually tailored and intensive interventions. Appropriate interventions for students at the selected level typically include behavioural and/or academic support, and mentoring combined with social skills training applied on an individual or a short-time small group basis. For severely at-risk students interventions are comprehensive, intensive, and might include components targeting the child, the parents, teachers, and in some cases even peers. Priority is given to universal interventions in which positive behaviour

support for all students is emphasized in order to reduce the need for intensive individual and segregating interventions. The universal school-wide and classroom systems are emphasized during the first year of implementation. During the second year, universal interventions targeting all students and selected interventions targeting students at moderate risk are combined, while tailored interventions at indicated level become more evident in the third year.

In order to participate in PALS, a commitment to participation is required from at least 80% of the staff at the school, and also from the principal and the school administration. A PALS-team with participants from staff, administration, parents and school psychological services is organized at each school, and this team is responsible for the implementation process. Examples of team tasks are to plan and implement interventions, develop the school's own handbook, monitor the progress and outcomes, organize school-wide assessment of risk and protective factors, introduce PALS to parents and staff, and provide staff training on a weekly basis. The PALS-teams are individually trained and supported on a monthly basis by a trained PALS-coordinator, recruited from the local school psychological service. The implementation of the school-wide intervention model also makes provision for close cooperation with the child welfare and child and youth mental health systems to provide additional support to the parents of high-risk students when needed. As with the PMTO-programme, the NCCBD is responsible for the quality assurance of PALS implementation in schools, which includes a one year training and certification of PALS-coordinators and sustained supervision of schools. From the second year of the implementation period, and as long as the schools prefer, the PALS-team attend four regionally and one nationally organised booster sessions every year.

PALS outcomes

PALS was evaluated through a pilot project using a quasi-experimental design in four

elementary schools two years following implementation (Sørлие and Ogden 2007). An equal number of comparison schools were included in the study. These schools had initiated some form of school improvement projects to promote positive student behaviour and/or improve the learning conditions. Three teacher instruments were used to assess the prevalence of students' behaviour difficulties. The *Problem Behaviour in the School Environment Last Week* and the *Problem Behaviour in the Classroom Last Week* (Grey and Sime 1989) ask teachers to report problem behaviours observed during a randomly selected week in their classrooms and in other school areas like the hallways and the playground. In the *Behaviour Problem Students in Class this Year* (Ogden 1998) the teachers who are most familiar with the students, report the number of students who seriously hinder learning and teaching activities in class during the present year. Social competence was measured with Gresham and Elliott's (1990) *Social Skills Rating System* (SSRS). To assess the quality of the social learning context, a 22-item student version and a 14-item teacher version of the *Classroom Climate Scale* (Sørлие and Nordahl 1998) were used. Programme implementation quality was measured by the *Total Implementation Quality Scale* (TIQS) based on *The Effective Behaviour Support Survey* (Sugai, Horner and Todd 2000) and *The School-wide Evaluation Tool* (Horner et al. 2004). TIQS measures the integrity of interventions implemented at individual, school-wide and classroom levels. The *Collective Efficacy Scale* (CES) developed by Goddard and colleagues (2000) was used as a programme-independent indicator of how successful each school was in its efforts to establish consistent school-wide academic and behaviour policy and practice.

The study's participants included 735 students in 3rd to 7th grade (8 – 12 years of age) and 82 class teachers who spent at least half of their teaching time with the students. Significant time and intervention effects in teacher-observed problem behaviours were found on all three measures after two years of implementation, all favouring the PALS-schools (see Table 1).

Table 1. PALS main outcome variables: Mean, standard deviation and multivariate/univariate analyses of covariance by type of school condition

Variables	<u>P-schools</u> (N teacher = 48, N student = 354)		<u>C-schools</u> (N teacher = 34, N student = 350)		<u>Intervention</u> <u>Effect</u>		<u>Time</u> <u>Effect</u>	
	Pre <i>Mean (SD)</i>	Post <i>Mean (SD)</i>	Pre <i>Mean (SD)</i>	Post <i>Mean (SD)</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
Problem Behavior in School Environment last Week (teacher ratings)	25.74 (6.97)	21.08 (5.24)	22.37 (4.19)	21.76 (5.61)	6.79	.011	12.78	.001
Problem Behavior in Classroom last Week (teacher ratings)	37.17(10.04)	31.27 (7.93)	30.59 (5.71)	31.56 (7.83)	4.67	.034	11.18	.001
Behavior Problematic Students in Class last Year (teacher ratings)	1.68 (0.96)	1.35 (0.87)	1.19 (0.62)	2.01 (1.01)	9.17	.004	4.72	.035

The effects ranged from moderate to large, while the results based on student ratings of social competence and classroom climate were less encouraging. The positive behavioural changes observed in the PALS-schools were greater at the school than at the classroom level. This might be attributed to the importance placed on implementing school-wide rules and consistent rule enforcement. As expected, the effects were more evident for externalizing than internalizing problems. Perhaps more surprisingly, immigrant students in PALS schools had better outcomes on the social and academic domains than did both students with a Norwegian background and immigrant students in the comparison schools (Ogden, Sørliie and Amlund Hagen 2007). The improved social competence for immigrant students may be explained by the more explicit behavioural expectations and responses and the practical skills training opportunities in relation to what is considered normative pro-social behaviour in the Norwegian school context. Systematic social skills training were not universally included in this first programme version, which might explain the lack of intervention effects for all students. Furthermore, the analyses showed that the implementation quality and teacher collective efficacy were both significantly related to better

outcomes in the interventions schools.

Taken together, the results indicated that PALS is a promising intervention model for school-wide prevention of problem behaviour and for the promotion of social competence, positive learning conditions, and teacher collective efficacy. At a more general level, the PALS-model illustrates the value of systematic school-wide interventions to reduce and prevent behaviour problems in children. This implies a systematic high-quality implementation of empirically based and differentiated interventions in *all* aspects of the school, with the active participation of the whole staff. In the light of the encouraging outcomes from this pilot study, it was decided to launch the programme in Norwegian schools, targeting 51 schools in 2006 and 91 schools in 2007. Until now, the implementation staff consists of 2 national consultants, 4 regional coordinators and 45 local PALS-supervisors.

Conclusion

An examination of the indicators of long term sustainability of change and programme adherence reveals the limitations of the common “single-site” approach and highlights the importance of a national strategy for the implementation of evidence-based practices. Norway is one of the few countries that have implemented a national innovation policy with regards to children and young people with behaviour difficulties. No other country has to our knowledge implemented and evaluated empirically based family and school programmes on such a large-scale basis. The NCCBD plays a central role and has the national responsibility for the training, supervision, quality assurance, and research on selected empirically based intervention programmes aimed at the prevention and management of conduct problems as well as the promotion of social competence in children and young people. The Norwegian approach combines centralized dissemination (top down) with local implementation (bottom up) followed by effectiveness-oriented research, as illustrated by the PMTO and PALS-models. The school-

wide model illustrates the effectiveness of multi-dimensional and cross-systemic interventions based on the principles of matching interventions to risk level and high-quality implementation. The PALS model also illustrates how school-based prevention and home-based intervention (PMTO) can be successfully integrated leading to positive outcomes.

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