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# 4 Is Primary Care Triple P an addition to the primary care parenting support in the Netherlands?\*

## Abstract

The present study evaluated two primary care parenting interventions. First, we evaluated the most widely used Dutch practices for primary care parenting support. Second, we assessed the applicability of the Primary Care Triple P approach, which is now being utilized in a wide variety of primary care settings. Both interventions target parents of children with mild to moderate behavioral and/or emotional problems, with the aim of improving parenting skills and thereby decreasing child problems. We examined the interventions in pre-, post- and follow-up assessment, and compared results. Both interventions produced significant reductions in reported child emotional and behavior problems, that also remained after three months. For both groups, parenting styles were also found to have improved at both post-test and follow-up measurement. When compared to the regular Dutch parenting consultation practices, however, the Primary Care Triple P approach produced greater reductions in parental laxness and total parenting dysfunction, and greater improvement in total parenting competence at both post-test and follow-up. Primary Care Triple P may even — in light of the greater improvements in parenting skills and total parental competences in the Triple P group than in the regular Dutch parenting consultation group — produce better results in the long run concerning child behavior and emotional problems.

## 4.1 Introduction

Behavioral and emotional problems are quite common in children and adolescents. Several studies in Australia, Canada, Germany, New Zealand, United Kingdom and the USA, have shown that approximately 18% of all children experience behavioral or emotional problems at some point in their development (Sanders, Markie-Dadds, & Turner, 2003; Zubrick et al., 1995). Comparable research in The Netherlands shows that 15% of Dutch children (6-18 years old) have behavioral and emotional problems (Van der Ploeg, 1997). In another Dutch study, 21% of Dutch elementary and high school students experienced externalizing behavioral problems such as delinquent or aggressive behavior) and 19% of Dutch students have been found to experience internalizing problems such as withdrawn behavior, physical complaints, anxiety,

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or depressive complaints (Ter Bogt, Van Dorsselaer, & Vollebergh, 2003). In more recent studies it is shown that 5% of Dutch children aged 0 – 12 years experience severe emotional and behavioral problems (Zeijl, Crone, Wiefferink, Keuzenkamp & Reijneveld, 2005). While psychological problems appear less frequently in younger children, there is still a reported incidence of about 6% in Dutch babies (0-14 months) and 6% in Dutch toddlers (Zeijl et al., 2005).

The way in which a family interacts has a considerable influence on the psychological, physical, social, and economic welfare of children. Many social, mental health, and economic problems are linked to disturbed family functioning and the breakdown of family relationships (Chamberlain & , 1992, 1995; Patterson, 1982, 1992; Sanders & Duncan, 1995). Epidemiological studies further show such family risk factors as poor parenting, conflict, and marriage breakdown to strongly influence children's development (Cummings & Davies, 1994; Dryfoos, 1990; Robins, 1991). More specifically, the following have been found to increase the risk of the development of major behavioral and/or emotional problems on the part of children, including substance abuse, antisocial behavior, and juvenile crime: lack of a warm positive relationship with parents; insecure attachment; harsh, inflexible, rigid, or inconsistent discipline practices; inadequate supervision of and involvement with children; marital strife and/or breakdown; and parental psychopathology (particularly maternal depression) (Coie, 1996; Loeber & Farrington, 1998; Sanders et al., 2003). In light of the above, it should not come as a surprise that several interventions with a focus on family functioning and parenting have been developed to help children.

The psychological problems of children and adolescents, as well as dysfunctional parenting styles, can vary in severity, which means that the help for such children and their families is organized at different levels. The focus of the present study is on the provision of primary care aimed at the parents of children with mild to moderate behavior and emotional problems. The Dutch primary care system differs from the primary care systems of other countries in that a variety of methods can be used to improve parenting, child behavior problems, and child emotional problems. The effectiveness of most of the methods has yet to be tested, however.

In 2006, a trial implementation to the Triple P – Positive Parenting Program was conducted in The Netherlands. In a one-year period, interventions of different levels of the Triple P program were implemented in two regions in The Netherlands. The objective of the trial implementation was to implement those interventions in two pilot regions and to prepare a scenario for a broad implementation.

Triple P is a behavioral family intervention that is based upon the principles of social learning (e.g., Patterson, 1982). Behavioral family intervention has the strongest empirical support of any intervention for children, and has been found to be particularly effective for children with conduct problems (Kazdin, 1987; Sanders & Markie-Dadds, 1996; Taylor & Biglan, 1998; Webster-Stratton & Hammond, 1997). Triple P aims to enhance family protective factors and reduce those risk factors known to be associated with severe behavioral and emotional problems on the part of preadolescent children. This is achieved by increasing the knowledge, skills, and

confidence of parents. The program was developed by Sanders and colleagues at the Parenting and Family Support Centre of the School of Psychology at the University of Queensland in Australia (Sanders, Markie-Dadds, Tully, & Bor, 2000; Turner, Sanders, & Markie-Dadds, 1999). Triple P incorporates five levels of intervention of increasing intensity for parents of children between the ages of 0 and 16 years. In The Netherlands, Primary Care Triple P (level 3) — which entails a parenting skills training via the primary care system — was implemented. Primary Care Triple P targets children with mild to moderate behavior problems, and includes active skills training for the parents in a four-session format. Although the overall Positive Parenting Program has a substantial empirical foundation, which includes a large number of randomized controlled trials in which the efficacy and effectiveness of the program have been demonstrated (De Graaf, Speetjens, Smit, De Wolff & Tavecchio, 2008a; De Graaf, Speetjens, Smit, De Wolff & Tavecchio, 2008b; Sanders et al., 2003), the effectiveness of Primary Care Triple P has been less well studied (Nowak & Heinrichs, 2008; Turner & Sanders, 2006; Winkler, 2006). Furthermore, Eisner (2008) argued that in Triple P research a bias might be the cause of positive results. Because the evaluator was also the program developer, a conflict of interest between the role of researchers as objective truth finders and their role as enthusiastic advocates of the program appears to possibly be the case. Thus, independent studies are needed to obviate this conflict of interest.

Professionals in youth health care, social work, family care, and parenting centres were asked to participate in the pilot study. They were asked to replace the regular parenting consultation into the Primary Care Triple P intervention, and share their experiences with the research group. No evaluations of those regular primary care consultations have yet been conducted.

In the present study, both the regular Dutch practices of primary care parenting consultation and the Primary Care Triple P approach were evaluated. While randomized controlled designs are the most stringent method of efficacy evaluation, there was no opportunity for randomization in this effectiveness evaluation of service delivery in different settings, and the introduction of a new approach in some sites. The main aim of the implementation trial was to determine whether Triple P was a valuable addition to the Regular Dutch primary care consultations. However, part of the implementation process is to evaluate the effects of the innovation. To know whether one intervention is preferable over the other, we examined both interventions in a quasi-experimental research design. We examined the effects of the different approaches on parenting skills and child behavior and emotional problems. The objective of this study was thus twofold: First, to evaluate the most widely used Dutch practices for primary care parenting support for, as far as we know, the first time. Second, to assess the applicability and efficacy of the Primary Care Triple P approach, which is already being used in a wide variety of primary care settings.

## 4.2 Method

### Participants

Table 1 presents an overview of the socio-demographic characteristics and baseline scores for the two groups of parents. The mean age of the children was 6.2 years. Mostly mothers completed the questionnaires (95.6% of the parents). Of the children, 65% were male. Of the parents, 79.5% were either married or cohabiting; 20.2% were single. The parents in the Primary Care Triple P group reported significantly lower levels of education. Completers of the interventions did not differ from non-completers on any of the baseline variables, which showed loss to follow-up to be completely at random in each group. However, the rates of attrition differed significantly between the groups at post-assessment ( $\text{Chi}^2 = 6.39$  ( $df = 1$ );  $p < 0.05$ ). No significant differences were found at follow-up assessment.

Table 1. Baseline Information on the Participants

Socio-demographic background characteristics and questionnaire results	Regular Dutch parenting consultation <sup>a</sup>	Primary Care Triple P <sup>b</sup>
Age of target child (M, SD)	6.8 (3.8)	5.5 (3.8)
Target child is male (N, %)	28 (66.7)	55 (63.2)
Parent is female (N, %)	39 (95.1)	83 (95.4)
Low level of education (N, %)	2 (4.8) *	18 (20.7) *
Marital status (N, %)		
Married/cohabiting	31 (75.6)	73 (83.9)
Single	10 (24.4)	15 (16.0)
Disability child (N, %)	6 (14.3)	16 (18.4)
Social security benefit (N, %)	6 (14.6)	18 (20.7)
Paid employment (1 or 2 parents) (N, %)	42 (100)	81 (93.1)
Number of children (M, SD)	2.07 (0.9)	2.01 (0.7)

<sup>a</sup> Number of respondents varies from 40 to 42. \* =  $p < 0.05$ .

<sup>b</sup> Number of respondents varies from 81 to 87 because not all respondents answered all questions.

### Design overview

Primary Care Triple P was implemented and evaluated in two regions in The Netherlands in 2006. Parents were asked to participate in this research project by practitioners who were trained to apply Primary Care Triple P. The regular Dutch primary care parenting consultations were monitored in comparable regions and in the same type of institutions. Parents who received regular Dutch primary care from institutions whose employees were not trained to apply Triple P were asked to complete the same questionnaires as the parents who received Triple P.

First, to be sure that the selected locations for both groups were comparable, they were matched with the following factors: income of the parents, mean age of the

parents, percentage of one-person households, number of inhabitants, and urbanization grade. Matching by income was the most important factor, as low income is considered one of the greatest risk factors for many family problems (Mayer, 1997; Zeijl et al., 2005). Secondly, to ensure that the parents who received either regular Dutch primary care consultations or Primary Care Triple P were comparable, we instructed the professionals who offered Dutch primary care consultations to select families that received advice, information or parenting training because of behavioral or emotional problems of their child. Furthermore we instructed these institutions to select families for the regular primary care consultations if the child has only a mild behavior or emotional problem.

Several institutions participated in this study. Participating institutions in both the Triple P and the care-as-usual group were institutions in youth health care, social work, school social work (school counselors), parenting centers, youth care, and day care. In the care-as-usual group, an extra institution participated: the Parenting Shop. In the Parenting Shop employees of social, youth health and family care institutions give advice, information and help to parents in cases of mild child behavior problems. Therefore this 'shop' was selected as a care-as-usual institution.

In the Triple P group, parents came from the following institutions: 15 (17.2%) from social work and school social work, 67 (77%) from youth health care, and 5 parents (5.8%) from other organizations (e.g., day care, a youth care institute or a parenting centre). The parents in the regular primary care group came from: 3 (7.1%) (school) social work, 12 (28.6%) from youth health care, and 27 (64.3%) from the Parenting Shop. In total, 26 practitioners were trained in Triple P, and 100% of the participants were female.

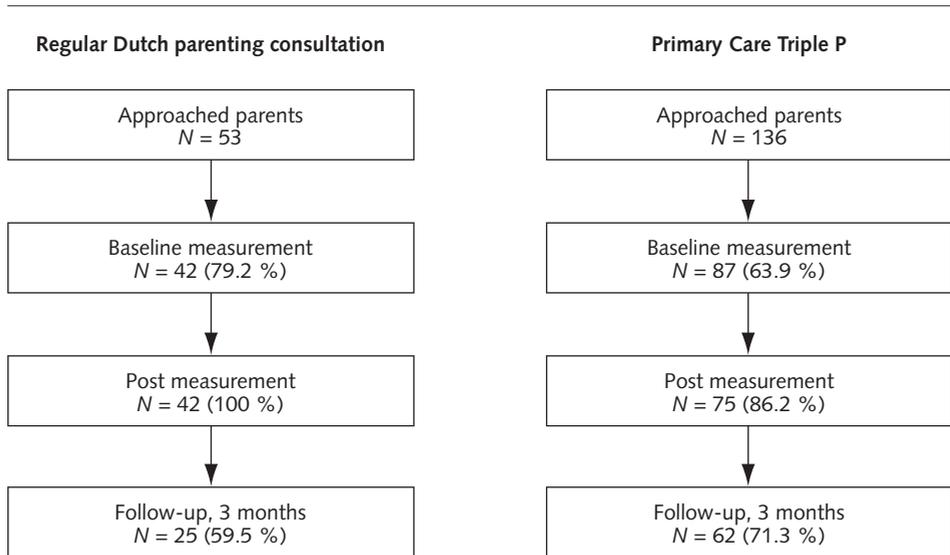
In Figure 1, the various steps in the study are outlined. During the one-year period of recruitment, a total of 189 participants were approached and 129 parents agreed to participate; 42 families (32.6%) participated in regular Dutch parenting (i.e., care as usual), while 87 families (67.4%) participated in Primary Care Triple P.

Although either mothers as well as fathers could complete the questionnaires administered as part of the study, in most cases the mothers did this (95.4% of the Triple P group and 95.1% of the regular Dutch parenting consultation group). The questionnaires were administered immediately prior to intervention at t0 (i.e., pre-test), immediately after completion of the intervention at t1 (i.e., post-test), and three months following completion of the intervention at t2 (i.e., follow-up). After completion of the intervention (i.e., at post-test), 117 (90.7%) of the original 129 participants also completed the questionnaire: 42 (100%) of the care-as-usual group and 75 (86.2%) of the Triple P group. At follow-up 87 (67.4%) of the original 129 participants completed the questionnaire: 25 (59.5%) of the care-as-usual group and 63 (71.3%) of the Triple P group. At post- and follow-up assessment, respectively 13.8% and 28.7% of the parents in the Triple P group and 0% and 40.5% of the parents in the care-as-usual group dropped out.

The effects of regular Dutch parenting consultations and Primary Care Triple P consultations were examined. In order to perform this, parenting behavior and parenting

competence/satisfaction and child emotional and behavioral problems were assessed prior to intervention (t0), at the end of the intervention (t1), and three months following completion of the intervention (t2). The results for the two conditions were then compared.

**Figure 1. Flow of Participants through the Study**



## Interventions

Both regular primary care Dutch parenting consultations and the Primary Care Triple P approach target those parents who report mild or relatively discrete concerns about their child's behavior and/or development (e.g., toilet training, tantrums, problems sleeping, disobedience). The children generally do not meet the diagnostic criteria for such clinical disorders as an oppositional defiant disorder, conduct disorder, or ADHD. There may, however, be clearly sub-clinical levels of problematic behavior.

### *Regular Dutch parenting consultation*

The regular Dutch parenting consultations examined as part of the present study involved a variety of methods and associated theories. The methods largely drew upon the principles of social learning theory (Bandura, 1969; Bandura & Walters, 1963), humanistic psychology (Gordon, 1970), or Video Home Training (Janssens & Kemper, 1996). In social learning models of behavior, the focus is on how social interactions in the family influence the development of children and how they learn new behaviors by imitation and reinforcement. Both desirable and problem behavior is reinforced by positive or negative consequences. From this concept, practitioners advise parents to pay more positive attention to the behavior they want to encourage

and to be more consistent in setting limits to behavior of which they do not approve. The focus of approaches that draw upon the principles of humanistic psychology is on communication between parents and children (Gordon, 1970). The aim of such approaches was originally to improve the relations between parents and children, and this later developed into a general method of communication for the improvement of relationships. Such an approach emphasises effective communication and conflict resolution, using 'win-win strategies'. The key skills in which parents are educated in this type of parent support is the use of 'active listening' and 'I messages' as opposed to 'you' messages. In the video home training approach (Janssens & Kemper, 1996), the interactions between parents and their children are videotaped in the home and then analysed with the parents. The focus in this form of video feedback is exclusively on selecting and reinforcing positive parent child interactions and promoting a more sensitive way of responding to children's initiatives. Besides theories on child development and family interactions, most services recognise the importance of an early detection of risk factors and the promoting of protective factors. There is consensus concerning the fact that family support and strengthening of parenting skills can increase the wellbeing of children.

In practice, the above mentioned approaches and different theoretical concepts are often mixed in the consultation to parents. The content of advice to parents can vary from one practitioner to another, and often is based more on popular knowledge concerning child-raising. Another characteristic is that there is no fixed number of sessions. The intensity and length of an advisory trajectory can vary between 1 and 5 sessions.

The consultations are conducted by different professionals, such as social workers, school counsellors, public health nurses, family counsellors, or educational psychologists working in a specific parenting centre. Most of these practitioners have had some training in parent consultation and issues concerning child development. In a regular parenting consultation, the parents are generally provided with information about the developmental phases and some practical tips concerning how to handle difficult behavior. When the consultation is more than one session, support is given on how to bring a parenting plan into practice. The enhancement of self-confidence and feelings of competence on the part of the parent(s) is one of the main goals of short term parent consultation in The Netherlands. All professionals share agreement on the importance of empowerment of parents and positive parenting practices for the wellbeing of children. The support is flexible and not greatly standardised. There can be great differences between practitioners in the way they support parents, and the knowledge, experience, and personal insights of the particular professional are of obvious importance.

In the Parenting Shop, much attention is given to the relationship between a practitioner and a parent and the quality of the interaction and support. Standardised criteria are formulated to examine a successful advisory consultation. Generally the intervention consists of 1 to 3 contacts. The method is called 'Dialogue Focused Working', based on the principles of empowerment. The focus is more on the process of supporting parents and fine-tuning of the expectations of parents rather than on the content of the consultation itself.

### ***Primary Care Triple P***

Primary Care Triple P involves three to four 20-minute sessions that incorporate active skills training and the selective use of parenting tip sheets for common developmental and behavioral problems. In the first session, the history and nature of the presented problem is clarified via interview and direct observation; the goals of intervention are negotiated, and a baseline monitoring system to track the occurrence of problem behaviors is set up. In the second session, the initial problem is reviewed with the parent to determine whether it is still current; baseline monitoring results are discussed together with parental perceptions of the child's behavior, and information on the nature of the problem and the possible etiology of the problem is shared with the parent (i.e., the diagnostic formulation). In addition, a parenting plan using a tip sheet is drawn up. The formulation of the parenting plan may entail the introduction of specific positive parenting strategies via discussion, modeling and behavioral rehearsal, and/or the viewing of video fragments. The second session also involves identification and countering of any obstacles to implementation of a new routine with the development of a personal coping plan for each of the parents. The parents then implement the program. In the third session, the family's progress is monitored, any implementation problems are discussed, and additional parenting strategies may be introduced. The aim of the session is to refine implementation of the agreed routine and to encourage ongoing efforts. In the fourth and final session, progress is reviewed, trouble-shooting is conducted for any difficulties the parent may still be experiencing, positive feedback and encouragement are provided, and the contact is terminated. If no positive results have been achieved within the course of several weeks, the family may then be referred to a higher level intervention (Sanders et al., 2003).

Besides the social learning theory of Patterson (1982), information from the following sources has been incorporated into the program: research on child/family behavior therapy, developmental research on parenting in everyday social information-processing models of behavior (e.g., Bandura, 1977), research from the field of developmental outcomes in children (e.g., Emery, 1982; Grych & Fincham, 1990; Hart & Risley, 1995; Rutter, 2008), and public health perspectives on family intervention (e.g., Biglan, 1995; Mrazek & Haggerty, 1994; National Institute of Mental Health, 1998). Central to Triple P care is enhancement of the parent's capacity for self-regulation, which involves the teaching of parenting skills that enable parents to become independent problem solvers (Sanders et al., 2003).

When Turner and Sanders (2006) compared Primary Care Triple P used with the parents of pre-school aged children in Australia with a waiting list control condition as part of a randomized control trial, those parents who received Triple P care reported significantly lower levels of disruptive child behavior, dysfunctional parenting, and anxiety and stress when compared to the waiting list parents. These short-term effects were largely still present at six month follow-up. The sample size of 30 parents was not large and the children were quite young (i.e., 0-4 years), but the results of this study nevertheless show Primary Care Triple P to effectively improve parenting skills and reduce problematic child behavior. In Germany, three studies have been

conducted to date on combined level 2/3 Triple P interventions, and consistently showed positive effects on parenting and child behavior (Neumann, 2004; Nowak & Heinrichs, 2008; Winkler, 2006).

## **Integrity**

### ***Regular Dutch parenting consultation***

For the regular Dutch parenting consultations, the relevant methods were learned during professional education prior to entering this line of work. Everyone has minimally a bachelor's degree in youth health care, social work or educational work, which means that they have completed four years of education. Some practitioners working in the Parenting Centers have a university degree in pedagogic, which means they completed six years of university education. Parenting support consists of one module during their education. The bachelors in pedagogy followed mostly an apprenticeship in parenting support. The age of the practitioners participating in this trial-implementation was between 30 and 40 years. The experiences of the practitioners in giving parenting support differed very much, from 2 years to 20 years. The parenting support was not only focused on behavioral and emotional problems in children, but more on developmental problems in children. The time spent on parenting support in preventing problem behavior in children varied between 2 to 16 hours per week for professionals in the youth health care, and full time for the practitioners in the parenting centers. Here it should be noted that the practitioners in youth health care, social work and parenting centers have different tasks. In the youth health care, parenting consultation is a part of their job. Besides giving parenting consultation they provide for example periodical medical screening of children and vaccinations, or participate in public mental health interventions. Social workers also give support with regard to financial problems, relationship problems, coping with stress, and participating in care-networks. The main task for pedagogic practitioners is in giving parenting support or participating in care-networks. The average number of sessions of parenting consultation in youth health care and social work ranged between three and five sessions; no exact number is available. The average sessions of parenting consultation in the Parenting Shop was around two, and the average minutes per session of parenting consultation in the Parenting Shop was 54.3 minutes ( $SD = 7.5$  minutes).

### ***Primary Care Triple P***

All Triple P professionals must attend a two-day training program and meet the competency-based accreditation criteria before certification. Supervision sessions are also held among Triple P professionals in The Netherlands for the discussion of specific cases, review of session content, and to help with process issues. In total, 26 practitioners were trained in Primary Care Triple P, and had on average 10.25 years' experience and on average 7.91 hours spent per week in parent consultation relating to child behavior. These participants reported a significant overall increase in

adequacy of training to conduct parent consultations concerning child behavior from pre- to post- and follow-up assessment, and significant increases in self reported confidence in conducting parent consultations concerning child behavior. Participants also reported significant improvements in proficiency in parent consultation skills after completing Triple P training. In total, 20 practitioners (76.9%) completed the accreditation, and all indicated satisfaction through to extreme satisfaction with the accreditation process. The number of Primary Care Triple P sessions ranged from 1 to 5, with a mean of 3.4 ( $SD = 1.6$ ) sessions, and the average time per session was 47 minutes.

## Measures

*Family Background Questionnaire:* Family demographic data was collected using the Family Background Questionnaire (FBQ). The FBQ has been used in several Triple P studies to date (Zubrick et al., 1995). Information is collected on: the child's age and gender, parental marital status, exact relation of the questionnaire respondent to the child, educational background and current employment status of the parent, family composition, and parental level of income and government support.

*Strengths and Difficulties Questionnaire:* The 25-item *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997) is a behavioral screening questionnaire that measures parental perceptions of prosocial and difficult behaviors in children aged 3 to 16 years. Scores are computed for five scales by summing the five items constituting each scale (emotional problems ( $\alpha = .68$ ), conduct problems ( $\alpha = .62$ ), inattention/hyperactivity problems ( $\alpha = .84$ ), peer problems ( $\alpha = .57$ ), and prosocial behavior ( $\alpha = .57$ )). A total difficulties score ( $\alpha = .81$ ) is also calculated by summing the scores for all of the scales with the exception of the prosocial behavior scale. SDQ scores have been found to discriminate between low- and high-risk samples (Goodman & Scott, 1999). SDQ scores indicative of child behavior problems fall into the clinical range as follows: 5-10 for emotional problems, 4-10 for behavior problems, 7-10 for hyperactivity, 4-10 for problems with peers, 0-4 for prosocial behavior, and 17-40 for total difficulties (Goodman, 1997; Goodman & Scott, 1999).

*Parenting Scale:* The original 30-item Parenting Scale (PS; Arnold, O'Leary, Wolff, & Acker, 1993) measures three dysfunctional styles of disciplining: laxness (i.e., permissive discipline), over-reactivity (i.e., authoritarian discipline, displays of anger, meanness, irritability), and verbosity (i.e., overly long reprimands or over-reliance on talking). Adequate internal consistency has been found for the total PS score ( $\alpha = .84$ ) in addition to the subscale of laxness ( $\alpha = .83$ ) and the subscale of over-reactivity ( $\alpha = .82$ ). Modest internal consistency has been found for the verbosity scale ( $\alpha = .63$ ). Prinzie, Onghena and Hellinck (2007) could not replicate the verbosity factor found by Arnold et al. (1993), nor did we in our study. Therefore this subscale was omitted in the analyses in this study. We conducted factor analyses and reliability analyses in order to test whether the alternative subscales of Rhoades and O'Leary (2007) were more appropriate for our sample, however, this was not the case. In addition, the PS has been found to discriminate between the parents of

children referred to clinical settings and parents of children in the general population (Arnold et al., 1993).

*Being a Parent Scale:* The 16-item Being a Parent Scale (BPS; Johnston & Mash, 1989) is a questionnaire that has been used to stipulate the extent to which parents feel competent about the parenting of their own children. Parents are asked to indicate the degree to which particular propositions apply to them. The response possibilities range from 1 (=strongly disagree) to 6 (=strongly agree). The BPS is divided into two subscales that measure satisfaction with one's own efficacy (i.e., satisfaction,  $\alpha = .75$ ) and judged problem-solving effectiveness (i.e., efficacy,  $\alpha = .76$ ). A total BPS score can also be calculated and is shown to have adequate internal consistency ( $\alpha = .79$ ).

## Analyses

Not all respondents returned the post-test and follow-up questionnaires. In order to compensate for the accompanying loss of power, most of the missing values were imputed using the regression imputation procedure as implemented in Stata 9.1 (StataCorp, 2005). The missing values were replaced when at least one of the follow-up assessments was completed, otherwise the respondent was omitted from any further analysis.

Since both primary care parenting strategies were being evaluated for the first time in The Netherlands, we first examined the changes in parenting skills and child behavior for both groups separately. Repeated measures ANOVAs were used to analyse whether the assessed child behaviors and parenting skills significantly improved over time. When significant time effects were observed, we conducted paired t-tests in order to identify whether significant change was obtained between pre-test and post-test, between pre-test and follow-up or both. Furthermore, we calculated the individual standardised effect sizes (Cohen's  $d = (M_{\text{pre-test}} - M_{\text{post-test}}) / SD_{\text{pre-test}}$ ) for all significant changes in order to gain an impression of the magnitude of change. An effect size of 0.50 shows the mean of the post-test to be half a standard deviation larger than the mean of the pre-test. According to Lipsey and Wilson (1993), an effect size of .56 to 1.2 can be interpreted as a large effect; an effect size of .33 to .55 as moderate; and an effect size below .32 as small.

In addition, we were interested in any differences in progress resulting from the different primary care parenting strategies. Therefore, we also conducted 2 (condition: regular Dutch parenting consultation, Primary Care Triple P) x 2 (education: low, other) x 3 (time: pre-test, post-test, follow-up) repeated measures ANOVAs to test for significant condition x time interactions. The between-subjects factor education was included in the analyses because of a significant difference in educational level between both samples. Type IV sums of squares were selected to take the unbalanced design into account. When significant time effects were observed we conducted independent samples t-tests in order to identify whether significant change was obtained between pre-test and post-test, between pre-test and follow-up or both. Furthermore, we calculated incremental standardized effect sizes (Cohen's  $d = (M_{\text{regular}} - M_{\text{Triple P}}) / SD_{\text{regular}}$ ) in order to gain an impression of the magnitude of the effect.

**Table 2. Descriptive Statistics and Repeated Measurements ANOVAs for Time Effects in both Primary Care Parenting Strategies separately and the Interaction of Treatment Condition and Time**

	Regular Dutch Parenting Consultation				
	Pre-test	Post-test	Follow-up	Time	
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>F (p)</i>	
<b>SDQ</b>					
Emotional*	4.23 (2.90)	3.43 (2.48)	3.15 (2.24)	10.52(.000)	
Behavior	3.05 (2.17)	2.45 (1.65)	2.25 (1.47)	6.54 (.004)	
Hyperactive	5.13 (2.73)	4.77 (2.33)	4.97 (2.25)	1.14 (.319)	
Peers	3.00 (2.27)	2.23 (0.82)	2.35 (1.69)	7.65 (.003)	
Total	15.4 (6.46)	12.9 (5.48)	12.7 (5.22)	14.80(.000)	
Pro-social*	6.30 (2.55)	6.58 (2.09)	6.76 (2.06)	1.54 (.220)	
<b>PS</b>					
Laxness	2.58 (0.52)	2.58 (0.62)	2.48 (0.53)	1.85 (.170)	
Over-reactive	3.41 (1.19)	3.08 (0.94)	3.11 (0.90)	7.15 (.001)	
Total	3.21 (0.63)	3.06 (0.58)	2.99 (0.52)	7.37 (.001)	
<b>BPS</b>					
Satisfaction*	38.8 (6.48)	39.3 (6.51)	39.4 (6.53)	0.33 (.690)	
Efficacy*	27.4 (3.39)	27.3 (3.32)	28.5 (2.98)	3.07 (.061)	
Total*	66.3 (7.89)	66.6 (8.47)	67.8 (8.53)	1.42 (.249)	

\*  $p < 0.05$ : differences between conditions at baseline-measurement.

## 4.3 Results

Table 2 presents the effects in both Regular Dutch Parenting Consultation and Primary Care Triple P separately and the differences between conditions.

### Regular Dutch Parenting Consultation

*Child Behavior:* Respondents reported a significant reduction of emotional problems in their children,  $F(2,68) = 10.52$ ,  $p < 0.001$ , both from pre-test to post-test ( $t = 3.12$ ;  $p < 0.05$ ;  $d = 0.29$ ) and from pre-test to follow-up ( $t = 3.82$ ;  $p < 0.001$ ;  $d = 0.39$ ). Behavioral problems also decreased over time,  $F(2,68) = 6.54$ ,  $p < 0.05$ . Again there was a significant reduction from pre-test to post-test ( $t = 2.34$ ,  $p < 0.05$ ;  $d = 0.31$ ) and from pre-test to follow-up ( $t = 3.12$ ,  $p < 0.05$ ;  $d = 0.42$ ). Furthermore, respondents reported a significant reduction of problems with peers,  $F(2,61) = 7.65$ ,  $p < 0.01$ , both from pre-test to post-test ( $t = 3.073$ ,  $p < .01$ ;  $d = 0.34$ ) and from pre-test and follow-up ( $t = 2.84$ ,  $p < 0.01$ ;  $d = 0.29$ ); and total problems,  $F(2,63) = 14.80$ ,  $p < 0.001$ , again both from pre-test to post-test ( $t = 4.141$ ,  $p < 0.001$ ;  $d = 0.40$ ) and from pre-test and follow-up ( $t = 4.21$ ,  $p < 0.001$ ;  $d = 0.42$ ). No significant time

Primary Care Triple P				Condition x Time
Pre-test	Post-test	Follow-up	Time	
<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>F (p)</i>	<i>F (p)</i>
2.90 (2.70)	2.44 (2.29)	2.31 (2.09)	5.75 (.008)	0.97 (.381)
3.11 (1.82)	2.44 (1.46)	2.26 (1.51)	16.54(.000)	0.07 (.935)
5.38 (2.71)	5.29 (2.55)	5.06 (2.57)	1.23 (.294)	1.12 (.331)
2.25 (1.89)	2.03 (1.79)	2.04 (1.81)	2.02 (.147)	2.06 (.132)
13.6 (5.80)	12.3 (5.77)	11.8 (5.69)	11.24(.000)	1.21 (.303)
7.03 (1.96)	7.62 (1.73)	7.51 (1.85)	6.60 (.002)	0.70 (.500)
2.75 (0.87)	2.49 (0.84)	2.43 (0.85)	16.37(.000)	5.16 (.010)
3.26 (0.87)	2.79 (0.73)	2.73 (0.85)	31.48(.000)	2.10 (.134)
3.18 (0.65)	2.82 (0.63)	2.77 (0.68)	34.18(.000)	3.80 (.029)
40.0 (6.65)	42.1 (5.56)	42.4 (6.10)	14.31(.000)	1.97 (.142)
27.8 (3.72)	28.7 (3.56)	29.8 (3.14)	18.23(.000)	2.12 (.123)
67.7 (8.25)	70.7 (6.95)	72.2 (7.51)	26.59(.000)	3.48 (.038)

effects were found for hyperactivity,  $F(2,71) = 1.14$ ,  $p = 0.32$  and pro-social behavior,  $F(2,82) = 1.54$ ,  $p = 0.22$ .

*Parenting Styles:* Respondents demonstrated a significant reduction in over-reactive parenting,  $F(2,82) = 7.15$ ,  $p < 0.001$ , both from pre-test to post-test ( $t = 3.78$ ,  $p < 0.001$ ;  $d = 0.36$ ) and from pre-test to follow-up ( $t = 2.66$ ;  $p < 0.05$ ;  $d = 0.33$ ), and in overall inadequate parenting (total score Parenting Scale),  $F(2,82) = 7.37$ ,  $p < .001$ , also from pre-test to post-test ( $t = 2.68$ ,  $p < 0.05$ ;  $d = 0.24$ ) and from pre-test tot follow-up ( $t = 3.37$ ,  $p < 0.01$ ;  $d = 0.35$ ). There was no significant change in laxness over time,  $F(2,82) = 1.85$ ,  $p = 0.170$ .

*Parental Sense of Competence:* There was no significant improvement in parental satisfaction,  $F(2,71) = 0.33$ ,  $p = 0.690$ , parental efficacy,  $F(2,69) = 3.07$ ,  $p = 0.061$  or overall parental sense of competence,  $F(2,69) = 1.42$ ,  $p = 0.249$ .

### Primary Care Triple P

*Child Behavior:* Respondents reported a significant reduction of emotional problems,  $F(2,133) = 5.75$ ,  $p < 0.01$ , both from pre-test to post-test ( $t = 2.22$ ,  $p < 0.05$ ;  $d = 0.17$ ) and from pre-test to follow-up ( $t = 2.9$ ,  $p < 0.01$ ;  $d = 0.21$ ). Behavioral problems also decreased over time,  $F(2,158) = 16.54$ ,  $p < 0.001$ . Again there was a significant

reduction from pre-test to post-test ( $t = 4.22, p < 0.001; d = 0.35$ ) and from pre-test to follow-up ( $t = 4.92, p < 0.001; d = 0.44$ ). Furthermore, respondents reported a significant reduction of total problems,  $F(2,172) = 11.24, p < 0.001$ , both from pre-test to post-test ( $t = 3.09, p < 0.01; d = 0.22$ ) and from pre-test to follow-up ( $t = 4.08, p < 0.001; d = 0.29$ ); and pro-social behavior,  $F(2,159) = 6.60, p < 0.01$ , from pre-test to post-test ( $t = -3.32, p < 0.001; d = 0.26$ ) and from pre-test to follow-up ( $t = -2.52, p < 0.05; d = 0.29$ ). No significant time effects were found for hyperactivity,  $F(2,161) = 1.23, p = 0.29$  and problems with peers,  $F(2,137) = 2.02, p = 0.15$ .

*Parenting Styles:* Respondents demonstrated a significant reduction in lax parenting,  $F(2,142) = 16.37, p < 0.001$ , both from pre-test to post-test ( $t = 3.98, p < 0.001; d = 0.30$ ) and from pre-test to follow-up ( $t = 4.80, p < 0.001; d = 0.37$ ), in over-reactive parenting,  $F(2,130) = 31.48, p < 0.001$ , again both from pre-test to post-test ( $t = 5.52, p < 0.001; d = 0.52$ ) and from pre-test to follow-up ( $t = 6.59, p < 0.001; d = 0.59$ ), and overall inadequate parenting,  $F(2,145) = 34.18, p < 0.001$ , also from pre-test to post-test ( $t = 5.87, p < 0.001; d = 0.59$ ) and from pre-test to follow-up ( $t = 7.09; p < 0.001; d = 0.68$ ).

*Parental Sense of Competence:* Respondents reported a significant improvement in parental satisfaction,  $F(2,149) = 14.31, p < 0.001$ , both from pre-test to post-test ( $t = -4.07, p < 0.001; d = 0.31$ ) and from pre-test to follow-up ( $t = -4.36, p < 0.001; d = 0.35$ ), in parental efficacy,  $F(2,170) = 18.23, p < 0.001$ , also from pre-test to post-test ( $t = -2.28, p < 0.05; d = 0.22$ ) and from pre-test to follow-up ( $t = -6.16, p < 0.001; d = 0.53$ ), and in overall parental sense of competence,  $F(2,153) = 26.59, p < 0.001$ , also from pre-test to post-test ( $t = -4.37, p < 0.001; d = 0.32$ ) and from pre-test to follow-up ( $t = -6.59, p < 0.001; d = 0.49$ ).

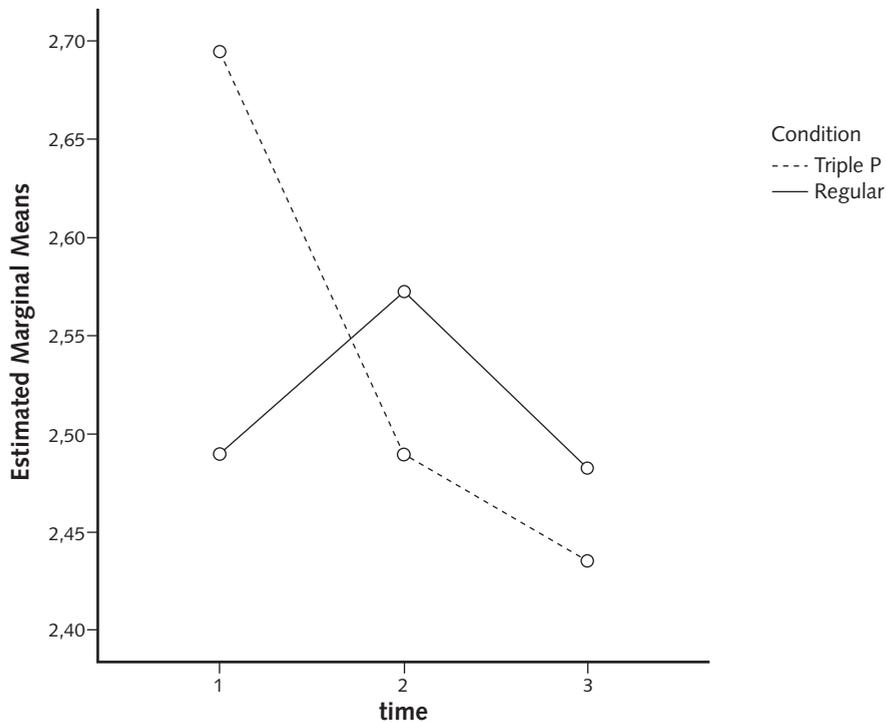
## **Differences between Effects of Regular Dutch Parenting Consultation and Primary Care Triple P**

*Child Behavior:* As could be expected from the results of the analyses of both primary care parenting strategies separately, most of the repeated measures ANOVAs on child behavior demonstrated a significant main effect over time, indicating that both samples reported a reduction of child problem behavior (with the exception of hyperactivity). The analyses also revealed a significant main effect for condition in emotional problems,  $F(1,126) = 6.55, p < 0.05$ , and pro-social behavior of the children,  $F(1,126) = 7.09, p < 0.01$ , which indicated that the respondents in the regular parenting consultation group experienced more emotional problems and less pro-social behavior in children than in the Primary Care Triple P group at baseline measurement. We did not find a significant main effect for condition on the other measures of child behavior, nor did we find a significant main effect for education. The condition x time interactions were never significant, indicating that both interventions yielded a similar course of problem behavior.

*Parenting Styles:* The repeated measures ANOVAs on parenting styles demonstrated a significant main effect for time in the reduction of over-reactive parenting and overall inadequate parenting. Main effects for both condition and education were

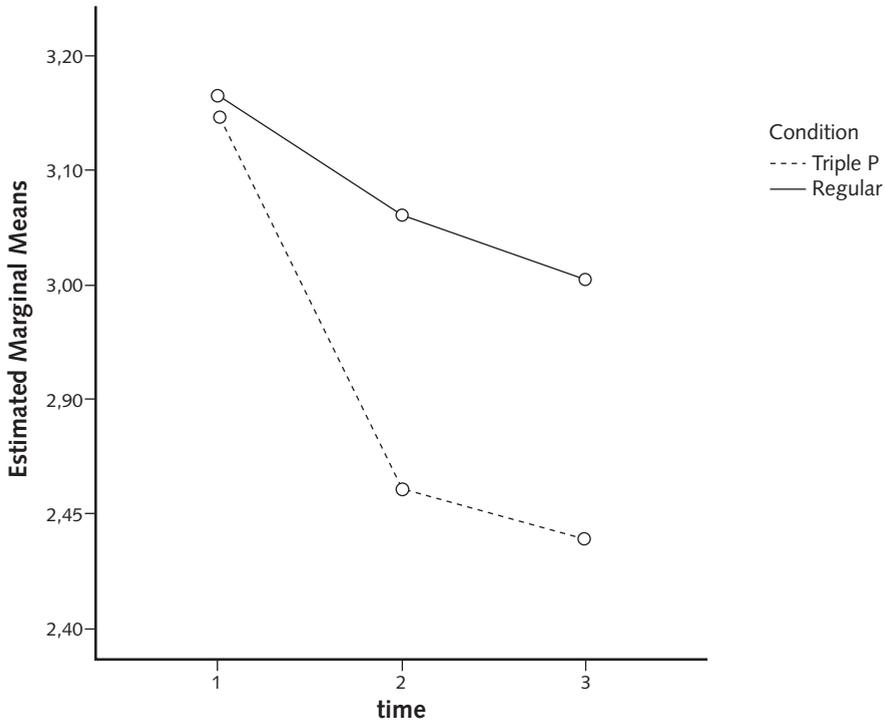
not significant. We did find significant condition x time interactions for both laxness,  $F(2,212) = 5.16, p = 0.01$ , and overall inadequate parenting,  $F(2,221) = 3.80, p < 0.05$ , indicating that Primary Care Triple P resulted in more improvement in parenting styles. Parenting styles were significantly more improved from pre-test to post-test (laxness:  $t = 2.42, p < 0.05; d = 0.30$ ; total score:  $t = 2.09, p < 0.05; d = 0.32$ ) and this effect was maintained at follow-up (laxness:  $t = 2.39, p < 0.05; d = 0.25$ ; total score:  $t = 1.99, p = 0.05; d = 0.39$ ). The observed difference in effects was in a small to moderate range (Lipsey & Wilson, 1993). This difference in effects is also shown in Figure 2 and Figure 3.

**Figure 2. Changes in Laxness in both the Regular Dutch Parenting Consultation and the Primary Care Triple P Condition\***



\* Controlled for baseline level of education.

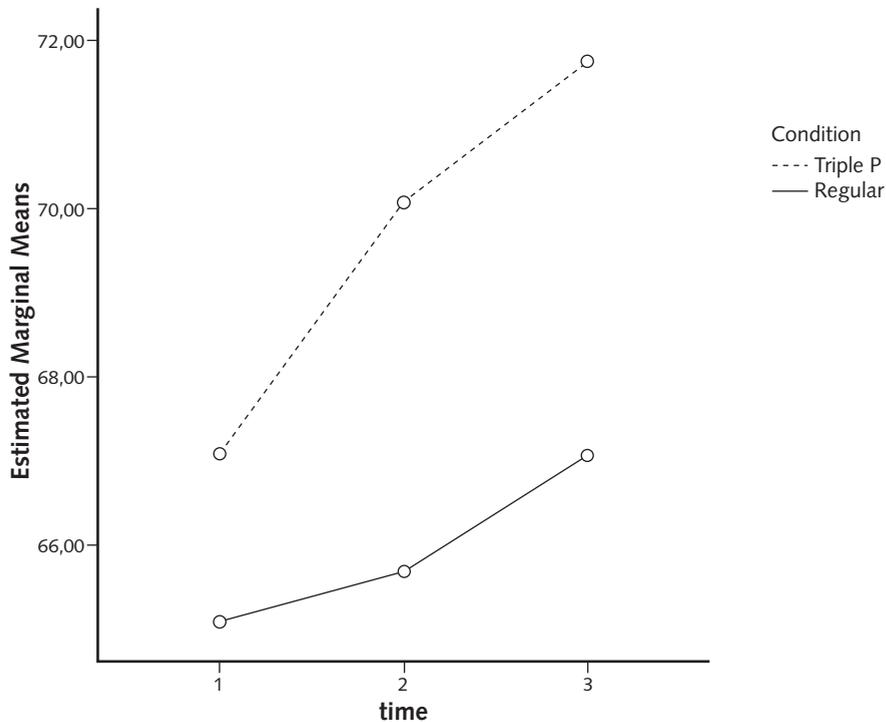
Figure 3. Changes in inadequate parenting in both the Regular Dutch Parenting Consultation and the Primary Care Triple P condition\*



\* Controlled for baseline level of education.

*Parental Sense of Competence:* All repeated measures ANOVAs on parental sense of competence demonstrated a significant main effect for time in improving parenting sense of competence. In addition, all main effects for condition were significant, indicating that respondents in Primary Care triple P condition experienced more parental competence on all measurements at baseline. Main effects for education were not significant. Neither were the condition x time interactions for both subscales: satisfaction and efficacy. The condition x time interaction for the total score was, however, significant  $F(2,220) = 3.48, p < 0.05$ , indicating that respondents reported more improvement in parental competence when they were offered Triple P. This effect was significant from pre-test to post-test ( $t = 2.10, p < 0.05; d = 0.28$ ) and from pre-test to follow-up ( $t = 2.37, p < 0.05; d = 0.32$ ), which is considered small (Lipsey & Wilson, 1993). This result is also presented in Figure 4.

Figure 4. Changes in Parental Sense of Competence in both the Regular Dutch Parenting Consultation and the Primary Care Triple P Condition\*



\* Controlled for baseline level of education.

### Changes in Clinical Child Problems

For both the regular Dutch parenting consultations and Primary Care Triple P, the number of child problems qualifying as clinical at baseline, post-test, and follow-up was assessed using the SDQ. Results are presented in Table 3. At baseline measurement the percentages of prosocial behavior in children and problems with peers were significantly higher in the regular Dutch parenting consultation than in the Primary Care Triple P group (respectively  $\text{Chi}^2 = 4.42$  ( $df = 1$ ),  $p < 0.05$  and  $\text{Chi}^2 = 8.12$  ( $df = 1$ );  $p < 0.01$ ). No significant differences were found in emotional and behavioral problems, and hyperactivity at baseline measurement. The percentage of the total problems for the children at baseline was 41% in the regular Dutch parenting consultation group and 24% in the Primary Care Triple P group (not significant,  $\text{Chi}^2 = 3.64$  ( $df = 1$ );  $p = 0.06$ ). For both groups, significant reductions in not only the total number of child problems falling within the clinical range but also the number of child problems falling within the clinical ranges for most of the subscales were found. Higher levels of child behavior problems are associated with larger effect sizes due to the greater responsiveness of severely distressed parents coping with difficult to manage children (Chamberlain et al., 2008; Nowak & Heinrichs, 2008).

**Table 3. Participants with Clinical Problems in the Regular Dutch Parenting Consultation and Primary Care Triple P Groups at Pre-test, Post-test, and Follow-up**

	Regular Dutch Parenting Consultation SDQ (N = 42)			Primary Care Triple P SDQ (N = 87)		
	t0 N (%)	t1 N (%) Diff. t0-t1	t2 N (%) Diff. t0-t2	t0 N (%)	t1 N (%) Diff. t0-t1	t2 N (%) Diff. t0-t2
Emotional problems	15 (36%)	13 (31%)	12 (29%)	21 (24%)	16 (18%)	12 (14%)*
Behavioral problems	15 (36%)	9 (21%)*	6 (14%)*	28 (32%)	18 (21%)*	15 (17%)**
Hyperactivity	14 (33%)	8 (19%)	9 (21%)	33 (38%)	26 (30%)	25 (29%)*
Problems with peers	16 (38%)	10 (24%)*	11 (26%)	18 (21%)	14 (16%)	17 (20%)
Prosocial behavior	12 (29%)	7 (17%)	6 (14%)*	8 (9%)	5 (6%)	8 (9%)
Total difficulties	17 (41%)	10 (24%)*	7 (17%)**	21 (24%)	18 (21%)	17 (20%)**

\* =  $p < .05$ ; \*\* =  $p < .01$ ; diff. = difference between t0-t1 and t0-t2.

## 4.4 Discussion

In this evaluation study, significant reductions in reported emotional and behavioral problems of children were found to occur and remain over time for both a regular Dutch parenting consultation group and a Primary Care Triple P group. For both groups, parenting styles were also found to have improved significantly at both post-test and follow-up, except for laxness in the regular Dutch parenting consultation group. The main goals of both the regular Dutch parenting consultation and the Primary Care Triple P groups were to produce reductions in the emotional and behavioral problems of children via improved parenting and these goals appear to have been reached. In both groups, substantial numbers of child problems that qualified as clinical were present at baseline but found to decrease significantly at post-test and follow-up. These results show parenting support provided in a primary care setting to be sufficient to diminish child problems that are normally treated in youth care or mental health settings. For the regular Dutch parenting consultation group, medium effects sizes were detected for parental over-reactivity and overall inadequate parenting. For the Triple P group, a large effect size was found for overall inadequate parenting, with medium to large effect sized for over-reactivity and a medium effect size for laxness. In addition, a medium effect size was found for overall parental sense of competence, and small to medium effect sizes for the subscales of parental satisfaction and efficacy.

When compared to the regular Dutch parenting consultation group, the Triple P group showed significantly less dysfunctional parenting styles (in laxness and overall inadequate parenting) and a higher total BPS score at both post-test and follow-up.

Parenting style and parenting skills clearly relate to child behavior (Baumrind, 1971; Janssens, 1994; Olson, Bates, Sandy, & Lanthier, 2000; Prinzie et al., 2003; Wolfradt, Hempel, & Miles, 2003). Lack of support, an authoritarian parenting style, and negative communication all correlate with higher child behavior problem scores. Similarly, parents with low self-efficacy tend to simply assume that they will not be successful at parenting, and therefore do not make the investment of time and energy in competent parenting that parents with higher levels of self-efficacy have been found to make. The result is parents who use more shouting and smacking (Donovan, Leavitt, & Walsh, 1990), and more problematic child behavior as a consequence of such parenting (e.g., Coie, 1996; Loeber & Farrington, 1998). Parents have also been found to feel less competent to the extent that their children have greater behavior problems (Coleman & Karraker, 2003), which emphasizes the importance of improved parenting skills and improved self-efficacy as part of any parenting program. Given the importance not only of improved parenting skills but also of improved parental self-efficacy, our expectation is that the behavior problems of the children in particularly the Primary Care Triple P group will further improve over time. Of course, new research is needed to confirm this possibility and the capacity of parents receiving Triple P care to become independent problem solvers (i.e., improve their capacity for self-regulation), which is one of the main tenets of the program.

### **Implications for future research**

The results of the present study are promising for both regular Dutch primary care parenting programs and Triple P care. Further research is nevertheless necessary, including randomized controlled trials. Studies with longer follow-up times are also needed to investigate the associations between improved parenting styles and self-efficacy, and long-term reductions in child behavioral problems.

The regular Dutch parenting consultation programs should be studied more extensively. Effectiveness and efficacy studies have rarely been conducted, and integrity checks have yet to be integrated into the programs.

The parents of children with problems that qualify as clinical were clearly helped in both of the primary care groups studied here. Additional research should nevertheless be undertaken to develop more detailed selection criteria for inclusion in primary care parenting programs and the parenting/child problems that are best targeted by such programs.

### **Implications for policy and practice**

The results of the present study show both regular Dutch primary care parenting programs and Primary Care Triple P to reduce the mild to moderate emotional and behavioral problems of the children studied here. The most important reason for implementation of the Triple P approach in the primary care setting in The Netherlands was for the provision of a more integrated, highly structured, well-documented, evidence-based parenting program across all Dutch primary care settings. While Primary Care Triple P is just one level of a multilevel program, and the other levels of

the Triple P program are currently being implemented in parts of The Netherlands, the regular Dutch primary care parenting programs were also found to produce clearly positive results, to improve parenting styles, and to reduce reported child emotional and behavior problems. Given that the Primary Care Triple P approach produced *better* results for parenting skills and parental feelings of self-efficacy, however, it is possible that the emotional and behavioral problems of the children may decrease even more in the long term and thereby make at least Primary Care Triple P the preferred program. Only time — and additional research — will tell.

In the present study, those child problems classified as clinical also clearly decreased as a result of parental involvement in one or the other of the primary care programs. Given that primary care provides less intense, less expensive, shorter and easier access youth care, the referral system for the parents of children with clinical-level emotional or behavioral problems should probably be inspected. It is possible, for example, that the help provided in a primary care setting is sufficient for at least some parents and at least some children.

In the present study, the regular Dutch parenting consultations were conducted mainly by professionals who are specialized in the provision of parenting support (i.e., the support of parents is their core occupation). In the Triple P group, the training was conducted by mostly nurses and social workers for whom parenting support is only *part* of their daily work (i.e., the support of parents is *not* their core occupation). Having said this, it can thus be concluded that a two-day training program such as the Primary Care Triple P for nurses and social workers, who were not specialized in parenting consultation, appears to be sufficient for the provision of effective and careful parental support that may even — in light of the more improved parenting skills in the Triple P group than in the regular Dutch parenting consultation group — produce better results in the long run.

## Limitations

The present study has several limitations that should be noted. First, the results are based on self-report measures. Questionnaires were administered only to the parents of the children, and self-reports of parents can be biased. Second, the number of respondents at three month follow-up in particularly the regular Dutch parenting consultation group was quite small ( $n = 26$ ). This makes it particularly difficult to draw conclusions concerning the maintenance of the effects for this group. Third, diverse methods and associated theories were used in the regular Dutch parenting consultation group, which makes it difficult to pinpoint the exact variables responsible for the effects that were found or — for that matter — not found. Fourth, the results of the comparisons for the two primary care parenting interventions must be treated as tentative due to the absence of a randomization of the respondents, objective inclusion/exclusion criteria for participation in the study, and also the extent of the pre-test differences in the background characteristics and baseline scores of the children in the two primary care interventions. The final limitation is the lack of precision in the exact number of contact occasions in the regular primary care Dutch parenting consultations.

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