

A LITERATURE REVIEW ON THE POSITIVE PARENTING PROGRAM (TRIPLE P)

by

Nigar Hasanaliyeva, MD

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Approved by: _____

[Redacted Signature]

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Abstract

This literature review starts out by discussing the relevancy of Triple P (Positive Parenting Program) as an approach to address mental health issues in children and adolescents and child abuse in societies. It then goes to illustrate the Triple P Model which will describe the target parent group, the practitioners best suited to each level and delivery format. Then the review will demonstrate the results of important studies. After looking at the results of the studies, the review will address key considerations such as the need to develop, implement and evaluate parenting interventions that can be disseminated on a large scale in a cost-effective manner. For such an effort to be effective a public health approach is needed.

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Introduction and Background

Behavioral and emotional problems are common in children. However, high rates of mental health problems in children are source of great concern for health professionals. About 15% of boys and 14% of girl's 4-12 years of age have a clinically significant emotional or behavioral problem (1). These problems do not occur in isolation and are often associated with a range of other difficulties, such as low self-esteem, poor peer relationships, and academic difficulties. (2, 1) Early behavioral and emotional difficulties increase the risk of severe adjustment difficulties and significant psychopathology in adolescence and adulthood. (3, 4)

There are many risk factors that increase emotional and behavioral problems in children: poor parenting, family conflict and marriage breakdown, lack of warm, positive relationship with parents, insecure attachment, harsh, inflexible discipline practices, parental psychopathology (depression). (5, 6) One of the important factors that impacts child development is quality of parenting. There is substantial evidence from behavior genetics research as well as epidemiological, correlational and experimental studies supporting this claim (7).

Parents of children who are at risk of developing emotional or behavioral problems are often less confident in their parenting role, find parenting to be stressful, demanding and depressing, and experience more conflict with relationship partners over parenting. (8) There is substantial evidence that parenting programs based on social learning models are effective, particularly in the management of early onset conduct problems. (9) However, these programs reach relatively few parents, and consequently, many children continue to develop potentially preventable problems. (10)

To improve access to evidence-based parenting programs, Sanders and colleagues from the Parenting and Family Support Centre in the School of Psychology at the University of

Queensland, Australia developed a multilevel parenting and family support initiative known as the Triple P, short for Positive Parenting Program. (11)

Triple P is a comprehensive population- level system of parenting and family support. It is one of the most effective evidence-based parenting programs in the world, using a public health strategy to promote better parenting and is supported by more than 30 years of ongoing research.

The Triple P program is used in 25 countries. It consists of a multilevel system of parenting training and support. The intervention at each of five levels matches the needs of parent and child. The goal is to enhance the knowledge, skills and confidence of parents, reduce the prevalence of behavioral and emotional problems in children and adolescents and prevent child maltreatment.

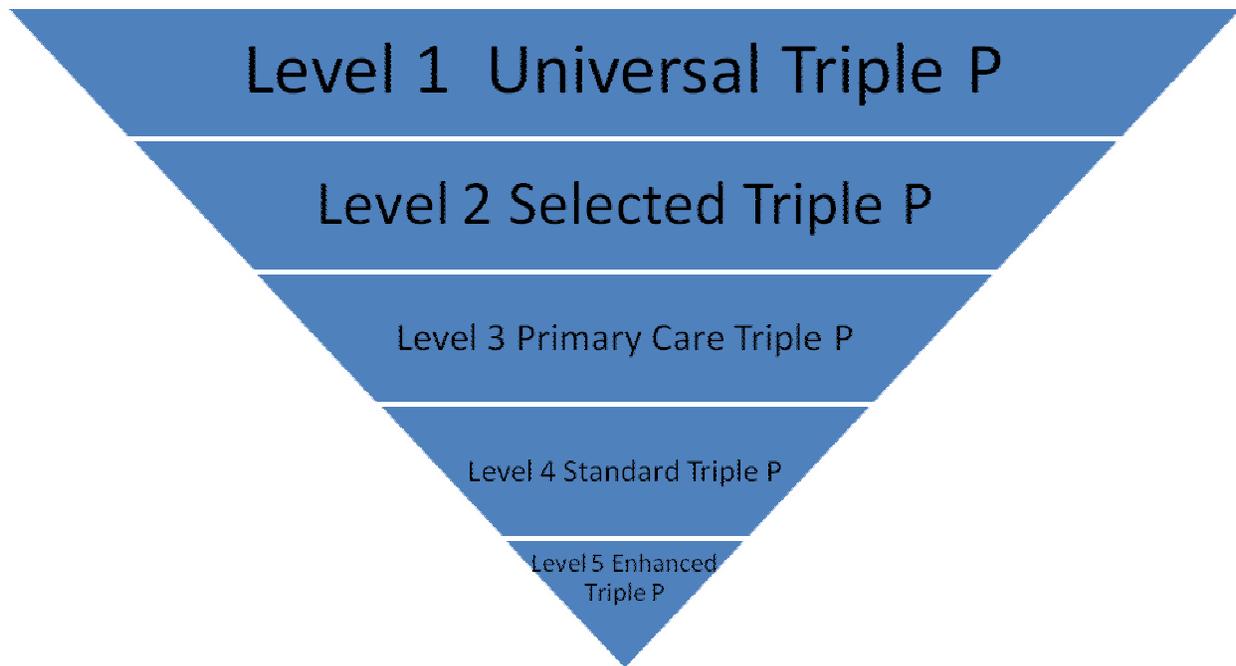
Principles of Triple P - Positive Parenting Program

Triple P is based on five key principles of positive parenting:

- 1) Ensuring a safe, interesting environment where children can explore, experiment and develop their skills
- 2) Creating a positive learning environment by being available when children need help, care or attention
- 3) Using assertive discipline by being consistent and acting quickly when children misbehave
- 4) Having realistic expectations for children and parents
- 5) Taking care of yourself as a parent and ensuring personal needs are met (11)

Triple P Levels

Triple P consists of five levels. Each level is described below.



The aim of Universal Triple P is to facilitate parents' access to information about how to promote their child's development and deal with commonly encountered behavioral problems, many of which may be part of normal development. Universal Triple P disseminates information about child development using radio, local newspapers, television, print and other electronic media, mass mailings to family households and websites. (12)

Selected Triple P has two delivery formats: brief consultation with individual parents and parenting seminars with large groups of parents. First delivery format involves one to two brief 20 minutes consultations. The consultations are designed for parents whose child has relatively minor and fairly discrete problem behaviors that do not require a more intensive level of intervention. Consultation can be provided in the settings where parents have routine contact with providers, like well-childcare, day care and preschool settings. The second delivery format, called the Triple P Seminar Series, is designed for delivery to large groups of parents. It involves

three 90 minute sessions. The seminar series includes specific seminars on the following topics: The Power of Positive Parenting; Raising Confident, Competent Children; Raising Resilient Children.

Level 3 (Primary Care Triple P), like Selected Triple P, is appropriate for managing discrete child problem behaviors that are not complicated by other major behavioral difficulties or significant family dysfunction. The difference is that provision of advice and information alone is supported by active skills training for parents who require it to implement the recommended parenting strategies. Level 3 involves a series of four 20 minute consultations that incorporate active skills training and the selective use of parenting tip sheets covering common developmental problems of preadolescent children.

Level 4 (Standard Triple P) is indicated for children who have detectable problems, but who may or may not yet meet diagnostic criteria for a behavioral disorder and parents who are struggling with parenting challenges. Standard Triple P provides information, active skills and support. It also teaches parents how to apply skills to a broad range of target behaviors in both home and community settings.

Level 5 (Enhanced Triple P) focuses on parents of children with concurrent child behavior problems and family dysfunction such as parental depression or stress or conflict between parents. It is an intensive individually- tailored program with modules including home visits to enhance parenting skills, mood management strategies and skills for coping with stress, and partner- support skills.

Benefits of Triple P- Positive Parenting Program

Triple P has several benefits. (11) One of the benefits of Triple P is the breadth of its target population. Triple P targets an entire population from birth to 16 years with a pre-birth and

postnatal program to prepare parents for the first year of parenting. In addition to targeting behavioral and emotional problems, there are also special programs for parents of children with a disability, parents of children with health or weight concerns and parents going through divorce or separation. Triple P offers a distinct multi-level system- a set of programs of increasing intensity, each addressing a different level of family need.

Another benefit of the Triple P program is its flexibility in delivery. The program takes into consideration parents' needs and programs are delivered in different settings ranging from personal consultation, group courses, and public seminars to self-help interventions.

Cost effectiveness is another benefit of Triple P. Because of its distinct multilevel system and the way the program itself promotes self-regulation and self-sufficiency in parents, Triple P can be a cost-effective strategy. It can also be a strategic investment in early intervention, reducing costs across a number of areas and budgets, including mental health and child welfare. Self-regulation is one of the main principles of Triple P. Triple P encourages parents to set their own goals and choose the types of strategies that will work within their homes. In this way, parents are encouraged to become independent problem-solvers, who can confidently adapt Triple P strategies to address the problems they confront now and in future. This relieves pressure on agencies and practitioners, who may not be able to continue providing clinical support to the parents who have completed Triple P. Triple P offers a set of programs of increasing intensity. This protocol prevents redundancy or gaps in services. In other words, parents with few minor problems can receive a brief intervention rather than participating in a more intensive intervention designed for parents with significant problems. Similarly, parents at risk of maltreating a child can undergo a specific Triple P program that would address the parent's acute needs. Economic analyses have shown that Triple P can reduce costs associated with conduct

disorder (psychological disorder when rights of others or basic social rules are violated), child abuse and out of home placement. (11) The success of Triple P can be monitored on both a personal level and across a population. Triple P provides tools for practitioners to measure “before” and “after” results with parents.

Triple P also has flexibility in who can be trained to deliver the program. Practitioners represent a wide range of professions and disciplines and include family support workers, doctors, nurses, psychologists, counselors, teachers, police officers, social workers, child safety officers.

Triple P Studies

A compelling number of studies have found that Triple P programs are effective.

One of the first studies of Triple P was conducted by Sanders et al. (8) in southern Brisbane communities, Australia. The study examined the impact of all five levels of Triple P on mental health outcomes in children during the transition to school period. The evaluation involved 10 intervention communities in southern Brisbane that implemented all five levels of the TPS.

These communities were compared to 10 non-randomly assigned *care as usual* (CAU) communities; five in Melbourne and five in Sydney. A total of 6003 surveys were conducted.

Household survey interviews were conducted via telephone. The follow-up surveys were conducted 3 years later. At post-intervention, there was significantly greater reduction in the Triple P system communities in the number of children with clinically elevated and borderline behavioral and emotional problems compared to the CAU communities. Similarly parents reported a greater reduction in prevalence of depression, stress and coercive parenting. (8)

Although individual studies have previously shown that Triple P interventions improve some forms of parental depression (13), no studies have shown an impact on parental depression at a population level. Hence, Sanders et al. findings that parental reports of depression decreased by

26% while the CAU group showed no change and the CAU reported significant increases in stress while the TPS group reported no change are encouraging. (8) There was a 32% reduction in coercive parenting in the Triple P communities. Although there was a reduction in coercive parenting in both TPS and CAU group, there was 14% greater reduction in the Triple P communities than in the CAU. The intervention effect was for overall psychosocial and emotional difficulties, but not for conduct problems, hyperactivity or peer relationship difficulties. The major implication from this large scale implementation of Triple P as a public health intervention targeting parents of young children is that a relatively small increase in parental exposure to an evidence-based program was associated with a significant population level reduction in problems with children and reduced parental distress at the transition to school period. These population level effects had not been previously demonstrated and point to the value of further trials using cluster randomization to replicate and extend these findings and to rule out alternative explanations for change. One of the limitations of the study is that communities were not randomized to conditions. Second, all outcome measures were based on household survey data. Also telephone interviews typically do not reach parents who do not speak English, do not have a phone and indigenous parents.

Several other studies showed an impact of Triple P not only on behavioral and emotional problems in children, but also an effect on child maltreatment. Higher levels of depression, conduct disorder, social deficits and other internalizing and externalizing disorders occur in adolescents who have been physically abused as a younger child. (14, 15) A wide range of serious adolescent risk behaviors are associated including early sexual activity, pregnancy, eating disorders, emotional disorders such as anxiety and depression, suicide attempts, and drug and alcohol abuse. (5, 6)

Wiggins et al. evaluated Triple P Level 5 impact on quality of parent-child relationship and child emotional and behavioral problems. This case-control study focused on parents having specific concerns about the relationship with their child. (12) The participants were 60 parents of child aged between 4 and 10 years old. Eligibility was determined by phone interview to determine if they met the study inclusion criteria. Parent-child relationship was assessed by Parenting Relationship Questionnaire (attachment, involvement, parenting confidence, relational frustration scales). Following the screening interview, eligible families were randomly allocated into intervention or control groups. Assessment packages were mailed that parents completed prior to the intervention. There was no significant difference between groups on demographic and dependent measures before intervention. Case group participants completed questionnaires again after the intervention. Parents also completed the 3 month follow-up assessment by mail. The intervention consisted of 9-week group program with weekly 2-hour sessions. Parenting scale measures 3 dysfunctional discipline styles: laxness, over reactivity, verbosity. Parent's attribution for child's behavior measure (16) assesses parents' negative attribution style for children's problem behavior. The Child behavior checklist (17, 18) measures parent perception of child emotional and behavioral problems (researchers focused on scales of externalizing and internalizing behavior). Strengths and Difficulties Questionnaire (19) measures parent perceptions of the extent of prosocial and difficult behaviors. The results of the study showed significant increase for intervention group on parenting confidence, attachment and involvement, significant reduction in the use of dysfunctional parenting practices for intervention group, significant reduction of blame and intentional attributions for the intervention group and significant reduction of externalizing behavior problems for intervention group. (Table 1)

This study has some limitations which are reliance on parent perceptions of parent-child relationship quality and most of the parents were mothers and highly educated.

The first study that randomized geographical areas and showed preventive impact of Triple P on child maltreatment at population level using evidence-based parenting interventions US Triple P System Population Trial (TPSPT) were conducted by Prinz et al. It was designed to test the extent to which the implementation of Triple P system can reduce the prevalence of child maltreatment at a population level: rates of substantiated child abuse, child out-of-home placements, ER visits due to child injuries. (20) They did stratify random assignment of 18 medium-sized counties to intervention or control groups, controlling for population size, poverty and child abuse rate. The intervention was for a 2- year period. There was no Triple P exposure before trial. The participants were families with at least one child under 8 years of age. After randomization, recruitment of service providers and organizations took place in 9 Triple P system counties. Substantiated child maltreatment was recorded by Child Protective Services. Child out-of-home placements were recorded through Foster Care. Child ER visits due to child maltreatment injuries were recorded by medical staff. There were no significant differences in indicators between groups before intervention.

The results of the study showed that Triple P counties had significant positive improvements for all three outcomes.(Table 2) In a county with 100,000 children under 8 years of age, improvement would roughly correspond to 688 (22%) fewer child maltreatment cases, 240(16%) fewer out-of-home placements, 60(17%) fewer children with injuries requiring hospitalization and ER treatment.

This study had several limitations: 1) measures of child maltreatment outcomes probably underestimate the true prevalence of harmful parenting practices; 2) effects observed following

exposure to parenting intervention may not last for a long period of time; 3) spillover effects from intervention to control counties.

Child maltreatment is a high priority public health problem in Japan. (21) Even after the enactment of the Child Abuse Protection Law in Japan, the number of cases reported to the Child Guidance Center, which is similar to the Child Protective Services in the UK or US, has increased dramatically by 40 times, from 1101 cases in 1990 to 40639 cases in 2007. (21) It is unknown whether this growth is due to a real increase in the number of children being maltreated or because of an increase in the number of cases being reported. In any case, other statistics reveal that a number of Japanese mothers are distressed about their parenting skills. One study, for example, found that 65% mothers in Japan do not have confidence in their parenting abilities, 33% of mothers find parenting difficult, and 18% of mothers believe that they maltreat their children. (21) According to this report, the types of abusive behaviors exhibited by parents vary, including emotional abuse (80%), physical abuse (49%), excessive discipline (17%), and neglect (0.4%). (21). To address this situation, it is necessary to adopt prevention strategies comprising those that are population-based and those that focus on high- risk families. (22) While there is ample research-based evidence indicating the effectiveness of Group Triple P in reducing disruptive behavior among Western children (23, 24), little research has been conducted on its effectiveness with regards to children raised in an East Asian culture. Of the studies conducted with East Asian subjects, Leung et al. (2003) investigated the effectiveness of Group Triple P on families living in Hong Kong. These researchers found that Group Triple P reduced parental reports of conduct problems in children, suggesting the acceptability of Group Triple P in East Asian cultures. (25) In addition, Matsumoto et al. (2007, 2010) reported the effectiveness of

Group Triple P for Japanese families living in Australia and acceptability in Japanese society.
(26, 27)

Fujiwara et al. investigated the effectiveness of Group Triple P in reducing behavioral problems in children, changing dysfunctional parenting practices, and influencing parenting adjustment among families in Japan. Participants were recruited from mothers visiting health clinics for mandatory health check-ups for their 3-year old children. It was carried out in 3 areas in Kawasaki city. Flyers were used to find mothers whose child had behavioral problems. Control groups were recruited along with those of the intervention group, during the same health check-ups. In total, 91 mothers participated in the intervention group, while 24 mothers participated in the control group. The intervention consists of 8 sessions over an 8 week period and is conducted in groups of 10-12 parents. The researchers only focused on mothers. The intervention group was asked to complete the questionnaires (The Strength and Difficulties Questionnaires which measures parents' perceptions of pro-social and difficult behaviors in their child, Parenting Style that measures dysfunctional discipline styles in parents (laxness (permissive discipline), over-reactivity(authoritarian discipline, displays of anger and irritability) and verbosity) and Depression-Anxiety- Stress Scales (assesses symptoms of depression, anxiety and stress in adults), Parenting Experience Survey. The Questionnaires were also mailed to control group. After 8 weeks, the participants received the Questionnaire again. There was no statistically significant difference between the average ages of the children in the two groups. Mothers' average age and also other variables were not statistically different between intervention and control groups. There were differences in residential area and gender of the children. The intervention group showed 2.1 point reduction in terms of the SDQ difficult behavior score, significant reduction in the use of dysfunctional parenting strategies, significant reduction in

DASS depression subscale, significant effect on mother's perception of difficult behavior of their children, significant increase in parent's confidence. This study has the following limitations. It is a non-randomized design and it used subjective measurements. There was no direct observation of child-parent interaction. The strength of this study is that mothers were recruited via the regular child health service which is the most feasible way of introducing parent training in Japan. The study clearly showed the effectiveness of Group Triple P in reducing conduct problems and hyperactivity as measured with the SDQ.

There is a substantial evidence base supporting the efficacy of the Triple P system of intervention. Four different meta-analyses have confirmed that children and parents demonstrate significant improvements in child behavior and parenting practices after participating in the intervention. (28-31). Whereas most studies have focused on the more intensive levels of (Levels 4 and 5), relatively fewer studies have examined the efficacy of brief parenting interventions designed for delivery within the primary care system. Primary care settings are potentially useful venues for delivering parenting programs because of the high prevalence of behavioral and emotional problems in children (32, 33), inadequate resourcing of specialist mental health services (34, 35), and resistance to attending mental health services due to perceived social stigma and lack of service availability. (36) However, evidence concerning the efficacy of Primary Care Triple P is limited. Turner and Sanders (37) conducted the only randomized trial of Primary Care Triple P to date and found that parents reported significantly fewer conduct problems after intervention than parents in the waitlist control group. Although these findings are promising, further research is needed. The generalization effects of parenting interventions, such as PCTP, are important but understudied. There is little evidence about the generalization of parenting skills to settings that differ considerably from the training environment. Behavior

problems that arise in different parenting settings, like home, neighborhood or community, may require parenting skills specific to that setting. Therefore, success of the generalization of parenting skills depends on environment. Applying the same contingencies whenever the problem behavior occurs, regardless of time, place, or situation may not be effective. For example, while changes in parent behavior after home training generalize to an observer-absent home setting, like family breakfast, parents are less effective in applying contingencies in community settings. (38) In addition, contingencies may not be effective in modifying child behavior if they are not applied predictably, like time out may be suitable in home setting but very difficult to apply during traveling or shopping. As a result children's behavior may deteriorate or remain unchanged from pre-intervention levels.

Boyle et al. analyzed the maintenance effects of Primary Care Triple P for parents of preschool-aged children with disruptive behavior. (21) The study extends existing research on PCTP through the use of intra-subject replication design. Parents of preschool-aged children with moderate severity of conduct problems (the target group for the intervention) were sequentially introduced to PCTP in a multiple probe format. A four-session behavioral intervention was introduced to each of 9 families and reached 10 children ages 3-7 years old. The results were subjected to visual inspection of individual families' graphical data within a multiple probe format across families. The statistical analysis consisted of a series of repeated measures ANOVAs and follow-up t-tests. Independent observations of parent-child interaction in the home supported the efficacy of the intervention. Findings from the study showed the following: low levels of the child disruptive behavior both in a target-training setting and in various generalization settings. Parent data also confirmed significant reduction in child disruptive behavior, an increase in task-specific parental self-efficacy, improved scores on Parent

Experience Survey, and high levels of satisfaction. (Table 3) All short-term intervention effects were maintained at four-month follow-up. This study has several strengths that include the use of intra-subject replication design, the use of independent observational measures, multi-informant assessment and measurement of follow-up. However, since all participating parents had at least college degree findings of the study cannot be generalized to minority and low- income families.

McConnell et al. in Alberta, Canada also aimed to determine if implementation of Level 2 and 3 of the Triple P system designed for primary care settings enhances parent, child and family outcomes compared with typical services. (39) In 2007, Alberta and Children Youth Services implemented a pilot of level 2 and 3 of the Triple P system in 19 Parent Link Centers in three Child and family Services Authorities: Calgary and Area, Edmonton and Area, and North Central Alberta. The primary study hypothesis was that a higher percentage of parents receiving Triple P would report their needs were met compared to parents who receive only typical PLC services. The second hypothesis was that parents receiving Triple P intervention would report lower levels of parenting stress, more positive parenting behaviors, improved family functioning, and fewer child problem behaviors. The study employed quasi experimental, single-blind and post-test only design. A survey was administered to a sample of 1296 parent. A total of 923 parents responded, including 172 parents who received Triple P (Level 2 and /or 3) intervention during the previous 12 weeks. There was a significant interaction between participation in group –based parent education program and receipt of triple P. Parents who were involved in a group-based program, and received Triple P intervention, reported higher levels of need satisfaction than parents who participated in group-based program, but did not receive triple P. But there was no significant difference between Triple P and typical services on any secondary outcome measures including parenting stress, positive interaction, family functioning and child problem

behaviors. This study has two key limitations. The first limitation is that the participants were not randomly assigned and consequently, the groups that participated in Triple P and those that had typical services may not be equivalent. A second limitation is that the researchers used only post-test design which has less statistical power. (39)

Meta-analysis

A meta-analysis assessed the effectiveness of Triple P level 4 interventions in the management of behavioral problems in children aged 2 to 12 years old. De Graaf et al. pooled the evidence from relevant literature that included level 4 Triple P interventions. (40) In this meta-analysis an overall effect size for level 4 Triple P interventions worldwide was calculated as well as the variability in the set of studies. Because most of the relevant Triple P studies that were identified concerned level 4 of the triple P system, the researchers restricted the meta-analysis to level 4 only. The first meta- analysis assessed the effectiveness of Triple P on behavioral problems of children compared to the control group as measured directly at the end of the intervention. The second meta-analysis assessed the degree to which post intervention effects were maintained over time in the intervention group.

Several additional meta-analyses were also conducted to examine whether effects were moderated by the: age of children (younger than 4 years vs. older), gender of the children, self-directed versus practitioner assisted, individual versus other studies, group versus other studies, and behavior problem scores of the children on the Eyberg Child Behavior Questionnaire (problems at pretest in the clinical range vs. nonclinical range).

Main Findings

Level 4 of Triple P has moderate to large effects on behavior problems of children. This effect lasts in follow-up measurements of 6 to 12 months.¹ A large effect size was found at both post intervention and long-term follow-up assessment of the child behavior.² Meta-analysis also revealed a few significant moderators. Studies with a higher proportion of girls have larger long-term effect sizes than do studies with fewer girls ($d = 1.08$ vs. $d = 0.37$). In the long term, the effects in the seven studies with scores in the clinical range on behavior problems at the start of the intervention were larger than in the nine studies with lower scores ($d = 0.36$ vs. $d = 1.08$). These findings suggest that Triple P can be successfully used with a diverse range of families, types of problems, delivery formats, and ages of children.

Limitations of meta-analysis

The present meta-analysis has several limitations. First, the number of participants in several studies was small. (In 73% of the randomized studies 10 to 50 respondents were included). Second, in the long-term analysis sometimes other studies were used as in the post-intervention analysis. Consequently, a longitudinal comparison of those effect sizes must be conducted with caution. Third, in this meta-analysis the child was taken as the “unit of analysis” because mothers and fathers report about the same child. But it would be interesting to analyze both parents separately to see if they report differently. Fourth, because strict methodological criteria for inclusion were conducted ten effect studies were not included in this meta-analysis. Despite these limitations, this meta-analysis suggests that the level four system of Triple P intervention is

¹ The standardized difference between the means of two groups (experimental and control) measured by Cohen’s d was 0.88, with a 95% confidence interval of 0.50-1.27.

² Cohen’s d was 1.00, with a 95% confidence interval of 0.55-1.46. At six months follow-up an overall mean effect size of $d = 1.07$ was found ($Z=3.49, p < 0.001$). In the meta-analysis of the four studies on the twelve months follow-up studies an overall mean effect size of $d=0.84$ ($Z=2.59, p < 0.001$).

a worthwhile intervention to both prevent and treat for behavior problems in children. At the same time, due to the above-cited limitations, further research is necessary.

Conclusion

The high prevalence of both child problems and ineffective or inadequate parenting, coupled with growing community concerns about children's behavioral and emotional problems in schools points to the need to develop, implement and evaluate parenting interventions that can be disseminated on a large scale in a cost-effective manner. For such an effort to be effective a public health approach is needed. (10) The Triple P –Positive Parenting Program is one of few public health models of parenting with sufficient evidence to justify large-scale application. (8) The Triple P system meets essential criteria considered important for a public health approach to parenting to be effective. First, it includes a clearly articulated public health theoretical framework. (46) The Triple P comprises five levels of intervention of increasing intensity and narrowing population reach including a media and communication strategy, a large group positive parenting seminar series, brief primary care interventions, more intensive small group and individual programs, and enhanced family intervention for parents who require more intensive intervention services. Second, a substantial evidence base exists concerning the efficacy and effectiveness of the parenting advice used and the different levels and delivery modalities used in the program. (8) Third, the use of a self-regulation framework for working with parents encourages parents themselves, in consultation with service providers, to determine their own goals and the kinds of behaviors, skills and values they desire to promote in their children. (47) The self-regulation approach is particularly relevant to population level applications in culturally diverse communities, as these goals are informed by parents' cultural beliefs. Parents differ in their self-regulatory capabilities due to many factors such as mental

health problems, drug and alcohol problems, and relationship conflict. However, an empowerment model that promotes parental self-regulation encourages all parents to take responsibility for their own parenting decisions and has the advantage of being able to be used in universal as well as more tailored and targeted interventions. (8) Fourth, the use of an existing multidisciplinary workforce and established networks and referral pathways to deliver the program (GP, psychologists, social workers, nurses, counselors, teachers, guidance officers) as well as different delivery formats (media, groups, seminars, and individual face to face or phone consultations) ensures that sufficient numbers of local service providers are trained and able to deliver the program. Fifth, a variety of service delivery contexts, including GP practices, schools, preschools, childcare centers and mental health services are used. The rationale for using many different settings to deliver parenting advice is that parents often report that the advice they receive from different services is confusing and sometimes contradictory.(8) Finally, there is evidence concerning the cross-cultural acceptability and effectiveness of Triple P. Several trials have documented the beneficial effects of Triple P with culturally and linguistically diverse parents including indigenous parents (48), Chinese parents (25), Japanese parents (26), and African American parents and service providers (20). Continued research and application of the Triple P precepts is warranted.

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Appendix

Table 1

Dependent Measures at Pre- and Postintervention for Each Experimental Group and at 3-Month Follow-Up for the Intervention Group

Measure and group	Preintervention		Postintervention		Effect Size Partial η^2	3-month follow-up Intervention $M (SD)$
	Intervention $M (SD)$	Control $M (SD)$	Intervention $M (SD)$	Control $M (SD)$		
PRQ						
Attachment	35.2 (11.5)	39.5 (11.1)	43.9 (9.8)	41.7 (11.8)	.126*	43.6 (9.6)
Involvement	39.5 (11.7)	42.1 (10.9)	45.5 (10.5)	42.9 (10.0)	.126*	46.0 (11.1)
Parenting	36.0 (8.1)	35.2 (10.4)	45.1 (7.2)	37.2 (9.1)	.220*	45.7 (8.7)
Confidence						
Relational frustration	74.7 (9.8)	73.2 (14.8)	64.9 (10.4)	68.8 (11.3)	.058	63.7 (9.9)
CBCL						
Internalizing Problems	59.1 (9.5)	59.8 (10.2)	53.3 (9.5)	58.0 (12.4)	.084*	53.4 (10.8)
Externalizing Problems	64.8 (9.6)	65.5 (10.0)	57.7 (9.7)	63.4 (10.4)	.128*	56.2 (14.0)
PACBM						
Blame and intentional	37.2 (8.3)	36.1 (8.1)	29.4 (11.7)	37.0 (7.1)	.294*	30.1 (11.4)
Stable	14.3 (5.5)	16.8 (7.0)	11.8 (4.7)	15.9 (6.5)	.028	12.2 (4.6)
Internal	17.4 (7.5)	18.1 (7.1)	13.7 (6.9)	17.7 (7.1)	.051	14.5 (7.3)
PS						
Laxness	2.9 (0.9)	2.9 (1.0)	2.3 (0.7)	3.0 (1.2)	.210*	2.2 (0.8)
Overreactivity	3.9 (1.0)	3.6 (0.8)	2.8 (0.8)	3.5 (0.9)	.213*	2.8 (1.0)
Verbosity	3.9 (0.7)	3.9 (1.0)	3.0 (0.8)	4.1 (1.1)	.311*	3.0 (1.0)

Table 2

Table 3 Child maltreatment-related population outcomes for Triple P System versus Control conditions

	Rates per 1,000 children (birth to 8 years of age)				<i>t</i>	<i>df</i>	Signif.	Effect size
	Triple P system counties		Control counties					
	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention				
Substantiated CM cases	10.86	11.74	11.12	15.06	2.09	16	<i>p</i> <0.03	1.09
Out-of-home placements	4.27	3.75	3.10	4.46	2.60	16	<i>p</i> <0.01	1.22
Child CM injuries (hosp & ER)	1.73	1.41	1.41	1.69	2.36	16	<i>p</i> <0.02	1.14

Notes: The *t*-tests compared the two conditions with respect to pre-post difference scores. The effect size is Cohen's *d* statistic



Table 3

Table 2 Scores for all families on the measures of Child Disruptive Behavior (CDB), Parent Aversive Behavior (PAB), Eyberg Child Behavior Inventory (ECBI), Parenting Tasks Checklist (PTC), and Parenting Experience Survey (PES)

Measures	Pre		Post		Follow up		<i>F</i>	<i>p</i>	<i>d</i> ^a
	Mean	SD	Mean	SD	Mean	SD			
CDB target	37.21	14.87	16.66	9.68	19.17	15.51	10.99	.001	1.64
CDB generalization	26.98	12.53	13.94	7.07	14.26	9.65	14.80	.000	1.28
PAB	1.95	2.37	0.59	0.69	0.74	0.91	2.86	.106	0.78
ECBI intensity	137.30	27.85	na	na	83.50	17.30	59.35	.000	2.32
ECBI problem	17.10	4.12	na	na	6.90	3.45	181.47	.000	2.68
PTC	54.98	12.33	84.23	10.11	88.83	9.89	41.78	.000	2.59
PES	37.35	3.84	42.62	4.90	na	na	22.77	.000	1.20

na Families were not required to complete this measure at that time point

^a Effect size calculation based on pre- to post treatment. In the event post-treatment scores weren't taken, follow up scores were used