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ORIGINAL PAPER

Stages of Parental Engagement in a Universal Parent Training Program

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Abstract This paper reports findings on parental engagement in a community-based parent training intervention. As part of a randomized trial, 821 parents were offered group-based Triple P as a parenting skills prevention program. Program implementation was conducted by practitioners. The intervention was implemented between Waves 1 and 2 of a longitudinal study, with a participation rate of 69% and a retention rate of 96%. The study finds that a practitioner-led dissemination can achieve recruitment and completion rates that are similar to those reported in researcher-led trials. Second, the study found that different factors are associated with the various stages of the parental engagement process. Family-related organizational and timing obstacles to participation primarily influence the initial stages of parental involvement. The strength of neighborhood networks plays a considerable role at the participation and completion stages of parental engagement. The general course climate and the intensity of program exposure predict the utilization of the program several months after the delivery.

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Introduction

Widely considered to be a promising universal prevention strategy, community-based parent-training continues to be plagued by low participation and high attrition rates. Typical initial participation rates are in the range of 20–30% of the target population, and a considerable proportion of those recruited does not complete a meaningful part of the program (Cohen and Linton 1995; Heinrichs et al. 2005; McTaggart and Sanders 2003; Myers et al. 1992; Spoth et al. 2000; Webster-Stratton et al. 2001). However, there is still a scarcity of studies that examine parental engagement in community-based parent training, especially when the intervention is delivered by practitioners rather than researchers (for reviews, see, e.g., Morawska and Sanders 2006; Reyno and McGrath 2006; Spoth et al. 2007; Spoth and Redmond 2000).

The present study contributes to the literature in two ways: First, we consider parental engagement as a multistage process and examine the extent to which different factors predict each stage of engagement (McCurdy and Daro 2001). For example, the perceived need for treatment and organizational or time barriers may be mainly relevant for the initial decision to enroll in a program. However, during the engagement process, parents process new information on the

program, other participants, and the program provider, which may affect subsequent decisions such as the completion of course (Spoth and Redmond 1994). At the same time, some characteristics probably operate similarly at various stages of the engagement process. Thus, parents with fewer educational resources may be both less likely to enroll and more likely to drop out during the program.

Secondly, we extend the analytic perspective beyond the stages of recruitment and retention by adding *technique utilization* to the empirical analysis. Technique utilization can be defined as the sustained and competent application of the taught parenting principles in daily interactions with the child. It is a core component of the program theory of parent trainings, which can only reduce child problem behavior if parents act as change agents and "deliver" the program in daily interactions (e.g., Dane and Schneider 1998; Domitrovich and Greenberg 2000; Moncher and Prinz 1991; Mowbray et al. 2003). Failure to consider technique utilization may thus result in a biased specification of the children to whom the treatment was effectively delivered.

Methods

The Study

The data for this investigation derive from the Zurich Project on the Social Development of Children (*z-proso*), a longitudinal study of children that entered primary school in Zurich, Switzerland, in 2004 (for a more detailed overview, see Eisner and Ribeaud 2005). Embedded in the longitudinal study, the municipal school department implemented two prevention programs, namely the parenting program Triple P (Positive Parenting Program; see, e.g., Sanders 1992, 1999) and the school-based social skills program PATHS (Promoting Alternative Thinking Strategies; see, e.g., Greenberg et al. 1998; Kusche and Greenberg 1994). The two interventions were combined in a factorial design whereby schools were randomly allocated to treatment conditions. The parent training program was implemented between Waves 1 and 2 of the longitudinal study.

The sampling frame was formed by all 90 public primary schools in the City of Zurich. Sampling was based on a cluster randomized approach with schools as the randomization units. Schools were first blocked by school size and socioeconomic background of the school district, and then a stratified sample of 56 schools was drawn. The target sample of the full longitudinal study comprised 1,675 children who had entered primary school on 2004. The target sample in those 28 schools that were randomly selected to receive Triple P was 821 families. In these schools, the study participation rate of the parents at Wave 1 was 69%. The retention rate until Wave 2 was 96%.

The Family Support Intervention

The intervention offered to parents was Triple P (Positive Parenting Program). Triple P was developed in Australia by Sanders and colleagues as a parenting and family support strategy that comprises varying levels of intensity (Sanders 1992, 1999; Sanders et al. 2003). In the present study, group-based Level 4 Triple P was implemented, which is comprised of a parent training program of four 2–3 h sessions, video elements, a parent workbook, and up to four 20-min phone contacts after the course.

Recruitment into Triple P

Recruitment into Triple P was managed by the implementation team of the Municipality of Zurich. In October 2004, about 2 months after the start of the school year, the schools sent an information package to the parents. Participation in the program was free of costs. Also, Triple P providers introduced Triple P during the first parent–teacher meetings of Grade 1.

Courses were offered in all school districts, at different times of the day, and across all days of the week. Also, a free childcare service was offered to participants. Special efforts were made to motivate families with an immigrant background to participate. Thus, Triple P International translated the program into Albanian, Portuguese, and Turkish. In Zurich, these languages are spoken by significant minorities who experience substantial social disadvantage (Eisner and Ribeaud 2007). Further, bilingual Triple P providers contacted all Turkish-, Albanian-, and Portuguese-speaking parents personally to motivate them to participate.

Courses were delivered by licensed Triple P providers selected in collaboration with Triple P

Switzerland amongst a pool of applicants. For the Albanian, Turkish, and Portuguese programs, new providers were recruited by the implementation team and trained by Triple P Switzerland.

Descriptive Data

Forty-one Triple P courses were delivered between May and July 2005. Thirty-three were held in German, three in Albanian, two each in Portuguese and Albanian, and one in English. The number of participants per course varied between 5 and 12. On a five-point scale, participant overall satisfaction with the program was 4.33 ($SD = 0.89$), and provider competency was rated at 4.65 ($SD = 0.73$). Furthermore, course providers estimated that 93% of the full course material was delivered during the sessions.

Figure 1 displays the recruitment, participation, and utilization process for all 821 families in the Triple P condition. It presents separate data for the parents participating in the longitudinal study ($n = 568$) and those who refused participation ($n = 251$).

Overall, 31.3% ($n = 257$) of the families enrolled in the course. Twenty-six point eight percent attended at least one session, and 18.6% completed all four course units. The criterion for course completion used was stricter than most previous studies that have defined completion as attendance of more than 50–75% of the program units (e.g., Baydar et al. 2003; Haggerty et al. 2006; Heinrichs et al. 2005). We believe that completion of a densely packed 4-session program required exposure to all components.

In Wave 2, all primary caregivers were asked about whether and when they had attended a Triple P course. Respondents who reported participation in a Triple P course were administered a questionnaire with 13 items on parenting techniques that feature prominently in the Triple P program. For each item respondents were asked to report whether they used the respective technique.

The mean number of Triple P techniques reported as being used was 6.84 out of a maximum of 13 ($SD = 3.23$). A sum scale was computed to measure the number of used Triple P techniques. The internal consistency had a Cronbach's α of .80. Because no natural cut-off point exists for effective utilization of Triple P, it was decided to dichotomize the utilization scale such that parents who used 7+ techniques were coded as *Triple P users*. Of those who had attended at least one session, 59.2% were coded as Triple P users.

Dependent Variables

We distinguished four stages of parental engagement, namely, enrollment, participation, completion, and utilization. Binary contrasts were computed for those respondents who participated in Waves 1 and 2 of the longitudinal study and for whom complete data were available on all predictor variables. Contrast 1 ("enrollment") compared the 223 parents who enrolled to the 308 who did not enroll. Contrast 2 ("participation") contrasted no shows ($n = 27$) to those who attended at least one session ($n = 196$). Contrast 3 ("completion") compared parents who attended all four course units ($n = 136$) to those who dropped out prematurely ($n = 60$). Contrast 4 ("technique utilization") contrasted 103 users to 82 non-users amongst those who attended at least one session. It excluded cases ($n = 11$) where one parent had participated in the program, but a different parent had responded in the parent interview. Finally, Contrast 5 ("overall effect") compared technique users to all other respondents and thus examined the combined effect of all stages of parental engagement.

Independent Variables

The analyses comprised five groups of predictors, namely, two variables on the perceived level of problems, three measures of the family structure, three measures on barriers and resources, one measure of neighborhood integration, and one variable on the course climate.

Perceived Parenting Difficulties

The Alabama Parenting Questionnaire was administered to the primary caregiver in the first wave (Shelton et al. 1996). It comprised five main scales, namely, Positive Parenting, Parental Involvement, Parental Supervision, Erratic Discipline, and Corporal Punishment. The scores for each scale were first dichotomized at the median and then recoded so that a value of 1 represented the presence of parenting problems on each dimension. Subsequently, a sum

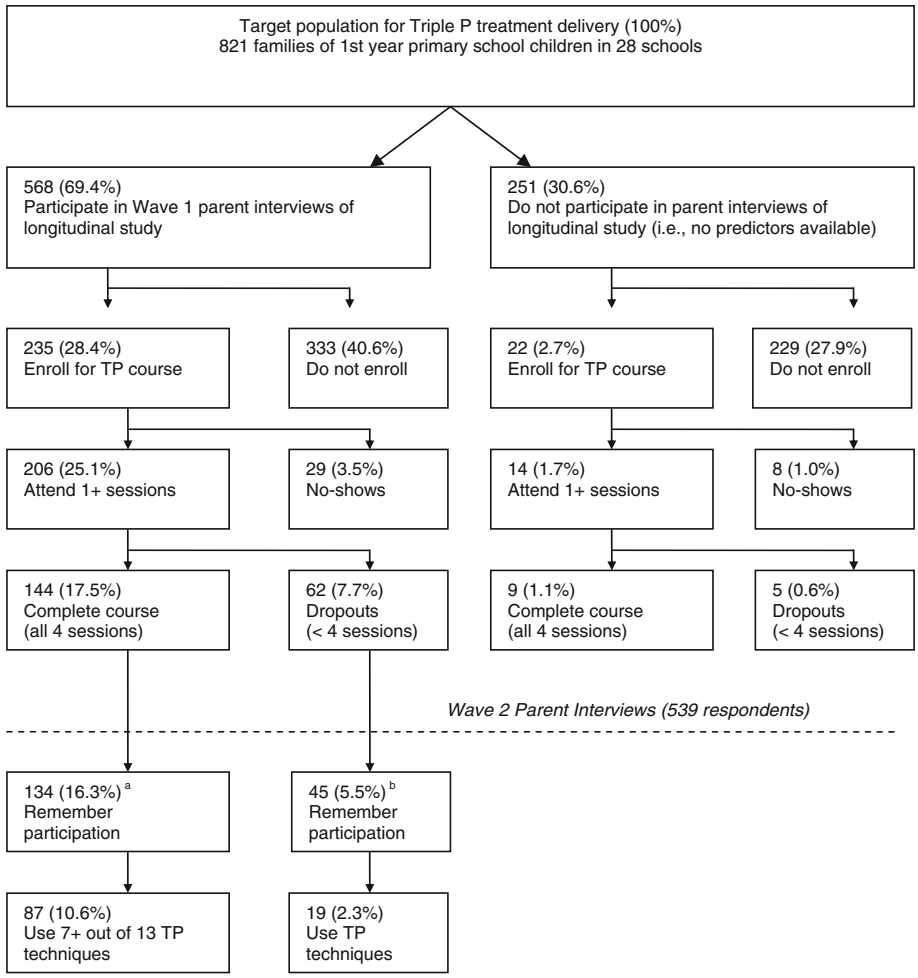

Fig. 1 Flow of Study Participants through Levels of Triple P Participation. [a] Amongst the 144 "completers," $n = 4$ were not available for interviews at Wave 2. In 6 cases, the respondent in Wave 2 was not identical to the participant of the Triple P sessions. All available respondents remembered course participation. [b] Amongst the 62 "dropouts" (<4 sessions attended), $n = 1$ was no longer available for interviews at Wave 2. In 6 cases, the respondent in Wave 2 was not identical to the participant of the Triple P sessions; $n = 10$ respondents did not remember the course

index was computed that measured the variety of problematic parenting practices.

Externalizing Problem Behavior

The primary caregiver's perception of the child's problem behavior at Wave 1 was measured with the Social Behavior Questionnaire developed by Tremblay et al. (1991). The Externalizing Problem Behavior subscale comprised 30 items on aggressive and non-aggressive problem behavior as well as on hyperactive behavior and attention deficits. The internal consistency of the scale had a Cronbach's α of .87.

Single Parent

Seventeen point one percent of households were classified as "single parent" at the time of the first parent interview.

Dual-Earner Family

Thirty-five point six percent of households with two primary caregivers were classified as "dual-earner" families based on whether both parents were employed 50% or more.

Number of Children

Information about the number of children living in the household was used to construct a dummy variable for family size. Twenty-five point nine percent of the target children lived in a household with three or more children.

Language

Information about the mother tongue of the primary caregiver was recoded into three groups: (a) speaking Native German or Swiss German, (b) speaking one of the other languages in which Triple P was offered (i.e., Albanian, Turkish, Portuguese, or English), or (c) speaking any other language not covered by the study. Forty-one point seven percent were native German speaking, 21.7% spoke one of the languages offered as part of the intervention, and 35.6% spoke another mother tongue.

Socioeconomic Status

Information on the parents' occupation was used to create an International Socio-Economic Index of Occupational Status (ISEI) score, an internationally standardized measure of occupational status (Ganzeboom and Treiman 1996). Final household scores were based on the average of both primary caregivers.

Previous Service Utilization

In the second wave, primary caregivers were asked about their usage of general, non-therapeutic parenting services. Respondents were shown a list of 34 services and asked to indicate any service they had used since the birth of the target child. Forty-one percent of the respondents reported previous utilization of parenting services.

Neighborhood Networks

Respondents were asked five questions on how often they interact with other people in their neighborhood. Questions referred to, for example, "[helping] a neighbor with a minor problem" or "[talking] to neighbors about personal things." Responses were given on a 4-point Likert scale. The internal consistency for this scale had a Cronbach's α of .82.

Course Climate

For each course, the providers completed a 15-item questionnaire on the course climate. It comprised items that ask providers to assess on a 5-point Likert Scale, for example, whether "parents actively participated in the lessons" or whether "parents paid attention." The internal consistency of this scale had a Cronbach's α of .92.

Statistical Approach

The data were analyzed using a random effects logistic regression with a random intercept assumed at the school level (Guo and Zhao 2000). Random intercept models explicitly model variation in the dependent variable that is associated with the group level, in this case the 28 schools (Snijders and Bosker 2004, pp. 38ff). Following the recommendations by Farrington and Loeber (2000), all predictor variables were dichotomized. Though this resulted in some loss of information, it had the advantage that effect sizes could be compared across predictors and models, thus facilitating the interpretation of results.

Results

Table 1 shows the results for all four stages of the parental engagement process. In order to facilitate interpretation, the table displays the results as odds ratios rather than logistic regression coefficients.

We first consider the parents' decision to return the sign-in forms for participation in the Triple P course. Results show, first, that neither the perceived level of problematic parenting practices nor elevated levels of child externalizing problem behavior had an impact on enrollment.

Structural family characteristics were associated with the likelihood of enrollment. Dual-earner families were less than half as likely to enroll ($OR = 0.46$, $p < .001$). In addition, the odds of enrollment were reduced by half amongst parents with three or more children ($OR = 0.50$, $p < .01$).

In respect of the native language of the primary caregiver, the findings suggest, first, that the specific strategies to recruit parents from Albanian, Turkish, and Portuguese backgrounds had been successful. Their likelihood of enrollment did not differ from

Table 1 Logistic regressions for five levels of parental engagement with random intercept

	Contrast 1		Contrast 2		Contrast 3		Contrast 4		Contrast 5	
	Enrollment (1) versus non-enrollment (0)		Participation (1) versus no-show (0)		Completion (1) versus participation (0)		Utilization (1) versus participation (0)		Utilization (1) versus all others (0)	
Predictors	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Perceived problems										
Parenting problems	1.25	[0.85, 1.86]	0.40	[0.14, 1.12]	0.74	[0.33, 1.64]	1.48	[0.75, 2.93]	1.19	[0.73, 1.94]
Child externalizing problem behavior	1.03	[0.69, 1.54]	0.65	[0.22, 1.92]	1.35	[0.60, 3.08]	1.22	[0.60, 2.48]	1.26	[0.76, 2.08]
Family characteristics										
Single parent	0.82	[0.48, 1.40]	0.84	[0.13, 5.38]	2.44	[0.83, 7.17]	1.44	[0.60, 3.44]	0.99	[0.54, 1.81]
Dual-earner family	0.46***	[0.29, 0.73]	0.23*	[0.06, 0.80]	1.79	[0.63, 5.12]	0.99	[0.39, 2.54]	0.31***	[0.16, 0.60]
Large family (3+ children)	0.50**	[0.30, 0.81]	0.19*	[0.05, 0.75]	2.09	[0.67, 6.48]	3.06*	[1.09, 8.62]	0.88	[0.49, 1.57]
Barriers and resources										
Native-German speaking (reference group)										
Non-German	0.90	[0.50, 1.62]	0.15*	[0.03, 0.70]	0.62	[0.19, 2.07]	0.51	[0.16, 1.62]	0.34**	[0.14, 0.81]
Non-Triple P language	0.46**	[0.28, 0.75]	0.27+	[0.07, 1.13]	0.18***	[0.07, 0.45]	0.43+	[0.18, 1.05]	0.28***	[0.14, 0.53]
High SES	2.15***	[1.38, 3.35]	2.27	[0.68, 7.53]	3.25**	[1.34, 7.85]	0.69	[0.29, 1.66]	1.81*	[1.03, 3.17]
Parent services used	0.99	[0.64, 1.52]	0.79	[0.23, 2.65]	1.97	[0.86, 4.53]	2.38*	[1.15, 4.92]	1.71*	[1.02, 2.86]
Neighborhood integration										
Neighborhood social networks	1.58*	[1.05, 2.37]	4.32*	[1.30, 14.3]	3.07**	[1.38, 6.79]	1.73	[0.79, 3.78]	2.30**	[1.37, 3.88]
Program involvement										
Course climate	–		–		2.48*	[1.38, 6.79]	2.45*	[1.20, 5.03]	–	
Completed all four sessions	–		–		–		1.46	[0.62, 3.41]	–	
Model chi-square(*df*)	56.43***	(521; 10)	28.11**	(214; 10)	42.93***	(182; 12)	31.68**	(173; 12)	73.60***	(510; 10)
Log likelihood	−322.29		−57.80		−86.34		−105.04		−208.96	
Level 2 statistics										
Empty model										
Intra-class correlation (28 schools)	0.091		.114		0.067		.056		0.067	
Likelihood ratio test χ^2	12.97***		2.10	n.s.	1.47	n.s.	1.20	n.s.	4.79*	
Random intercept statistics in full model										
Random intercept	0.42*	[0.20, 0.87]	0.56	[0.13, 2.47]	0.18	[0.00, 6.79]	0.17	[0.00; 510.0]	<0.01	
Likelihood ratio test χ^2	3.83*		0.73		0.01		0.02		0.00	
N	531		223		196		185		520	

$+p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

native German speaking parents ($OR = 0.90$, n.s.). In contrast, parents from other non-German speaking backgrounds were less than half as likely to enroll in the course ($OR = 0.44$, $p < .01$). Like several previous studies, we found that socioeconomic status was significantly associated with the likelihood of signing up to program participation ($OR = 2.15$, $p < .01$). Post-hoc bivariate analyses showed that 53.1% of those with an above-median SES signed up for participation in the program in comparison to 30.5% of the parents with a lower SES, $\chi^2(1, n = 531) = 27.9$, $p < .001$.

Finally, parents who had intensive networks with their neighbors ($OR = 1.58$, $p < .05$) were more likely to enroll. Post-hoc analyses show that 51.6% of parents with high neighborhood networks signed up to the program in contrast to 33.7% of those with a lower density of neighborhood networks, $\chi^2(1, n = 531) = 17.4$, $p < .001$.

Model 2 examined the likelihood of attending at least one class amongst those who had enrolled for the program. Results first show that the perceived level of problems did not affect the likelihood of attendance. The effect of structural family characteristics on attendance was similar to the effects for enrollment. Parents from dual-earner families and parents from large families were significantly less likely to attend. For example, 26.0% of dual-earner families compared to 8.0% of all other families, $\chi^2(1, n = 223) = 11.81$, $p < .001$, never attended any sessions despite having returned the sign-up form. No significant differences could be found for single parents.

Although the extensive recruitment efforts had been successful in enrolling parents of Albanian, Turkish, and Portuguese background, they were significantly more likely not to attend. Post-hoc examination of the bivariate relationship showed that 32.6% of this group never attended a parenting class in comparison to 7.2% amongst all other enrolled parents, $\chi^2(1, n = 223) = 21.11, p < .001$. Similarly, parents of other minority language backgrounds were less likely to attend, though the coefficient was only marginally significant ($OR = 0.27$, $p = .073$).

Finally, the strength of neighborhood networks was found to be a strong predictor of attendance ($OR = 4.32$, $p < .05$). Bivariate analyses supported the multivariate findings. They showed that only 3.9% of the enrolled parents with strong neighborhood ties did not attend the program in comparison to 22.9% of parents with poor neighborhood integration, $\chi^2(1, n = 223) = 18.70$, $p < .001$.

Model 3 displayed the results for the prediction of course completion amongst those who attended at least one meeting. It first showed that neither the level of perceived problems nor any of the family structural characteristics were related to course completion. Also, Albanian-, Portuguese-, and Turkish-speaking parents were as likely as German-speaking parents to complete the course once they had attended at least one session. In contrast, parents to whom the program could not be offered in the native language were significantly more likely to drop out during the course (58.1 vs. 23.4%, respectively), $\chi^2(1, n = 197) = 18.70$, $p < .001$.

Further findings suggest that educational resources may play a significant role at the completion stage of parental engagement. Parents with a high SES score were considerably more likely to complete the course ($OR = 3.25$, $p < .05$). Post-hoc analyses show that 79.4% of high-SES parents completed all four sessions in comparison to 45.9% of low-SES parents, $\chi^2(1, n = 197) = 22.12$, $p < .001$. In contrast, previous use of parent services, which was more likely among high-SES parents, was not predictive of course completion.

Neighborhood integration was also associated with the likelihood of course completion ($OR = 3.07$, $p < .01$). Parents who had more extensive networks with their neighbors were significantly more likely to complete the course once they had enrolled than those who were less well integrated (81.1 vs. 50.0%, respectively), $\chi^2(1, n = 197) = 20.03$, $p < .001$.

Finally, the model for this stage of parental engagement (Model 3) also comprised the course climate, as assessed by the program provider. Findings suggest that the course climate was significantly related to the likelihood of program completion ($OR = 2.48$, $p < .05$) in that parents who attended a more constructive class with high parental involvement were more likely to complete all four sessions.

In the fourth step, we examined the utilization of Triple P techniques amongst those who attended the course. Like the previous model, this model also comprised a variable that measured the extent of exposure to the program (i.e., course completion). Again, the level of perceived problems was unrelated to technique utilization. Also, being a single parent or a

dual-earner family did not affect technique utilization. In contrast, findings suggest that program participants with three or more children were more likely to use the Triple P techniques than others ($OR = 3.06, p < .05$). Furthermore, parents who could not attend a course in their native language were less likely to use the taught techniques. A bivariate post-hoc analysis revealed that 35.0% of these parents as compared to 67.8% of the native-German-speaking parents used at least 7 of the techniques taught during the program, $\chi^2(1, n = 185) = 13.7, p < .01$. In addition, parents who had previously used parent services were more likely to use the taught techniques than others ($OR = 3.07, p < .01$).

Finally, technique utilization was also predicted by aspects of the parents' experience with the program. First, parents were more likely to use the techniques if they had attended meetings characterized by a supportive and engaged course climate, as assessed by the course providers (67.4 vs. 43.6%, respectively), $\chi^2(1, n = 185) = 10.3, p < .01$. Furthermore, they were significantly more likely to use Triple P techniques if they had attended all four sessions. In fact, subsequent bivariate analyses revealed an almost linear relationship between the number of sessions attended and the proportion of technique users, rising from 0% (1 session) to 20.0% (2 sessions), 55.2% (3 sessions), and 64.2% (four sessions), $\chi^2(3, n = 195) = 31.38, p < .001$.

Model 5 compared the parents who used Triple P techniques to all other study participants. Findings suggest that six variables are significantly associated with the likelihood of program utilization. Dual-earner families ($OR = 0.31, p < .01$) and parents from immigrant minority backgrounds ($OR = 0.34$ for Non-German speaking Triple P course offered; $OR = 0.28$ for other languages) were significantly less likely to be among the technique users. In contrast, high SES ($OR = 1.81, p < .05$), previous utilization of parent services ($OR = 1.71, p < .05$), and high neighborhood integration ($OR = 2.30, p < .05$) were associated with a higher likelihood of technique utilization.

Discussion

The goal of this study was to examine the factors that that predict different stages of parental engagement in a dissemination trial with little direct involvement of the researchers.

At the most general level, we found that the practitioner-led recruitment into a parent training can achieve enrollment and participation rates that are comparable or better than to those reported in researcher-led trials (Heinrichs et al. 2005; Spoth et al. 2000; Webster-Stratton et al. 2001). However, participation rates overestimate effective program dissemination as technique utilization is the critical causal mechanism implied in the program theory of parent trainings for prevention effects to occur. In this study, about 60% of those who had attended the course reported using a significant proportion of Triple P techniques 3 months after program exposure. We do not know whether this is typical of universal parent trainings, as comparable data were not collected in previous studies.

This study also found that the level of problematic parenting practices and of perceived behavior problems were unrelated to parental engagement. This finding adds to contradictory findings on whether community-based parent trainings attract an over-proportion of at-risk parents. Some of the contradictory findings may result from using different predictors. Most studies find that the perceived need for support is predictive of actual enrollment. In contrast, weaker or no effects are found when risk exposure is used as a predictor. However, contradictory findings may also be related to differences in communication and motivation strategies. Finally, the lack of effects in this study could be because of countervailing influences of variables that were not included in this analysis. For example, a history of behavior problems in the parents could undermine their ability to effectively use a parenting program even if they perceive a need for support.

Two important predictors of recruitment and participation relate to family-related barriers. Thus, parents in dual-earner families and parents with a large number of children were less likely to enroll and to attend the first meeting. However, once they had attended at least one meeting, they were equally as likely as others to complete. This finding suggests that organizational and timing constraints have an impact on the initial stages of parental involvement rather than on the subsequent extent of active engagement (also see Dumas et al. 2007).

Also, like Heinrichs et al. (2005) but unlike several U.S. studies, we found that being a single parent was

not associated with less parental engagement. This probably reflects differences in the social integration of single parents in Europe and the United States, where being a single parent is more associated with social disadvantage and multiple risks than is the case in Germany or Switzerland. For example, in the current sample, single mother status was not correlated with either low SES or poor neighborhood networks.

The recruitment efforts for targeted immigrant minorities had some success at the initial phase of the engagement process, as enrollment rates were as high as those of German-speaking parents. However, these parents were subsequently more likely not to attend the sessions and less likely to complete the program and to use the imparted techniques. Immigrant groups who were not offered the program in their native language were less likely to engage at each stage of the process. The strongest effects were observed during active participation, where language barriers are likely to have the greatest impact.

These results suggest that language barriers are a significant contributing factor to the low involvement of immigrants but that program translation alone is not sufficient to raise engagement across the whole engagement process. In this vein, Kumpfer et al. (2002) have argued that parent programs may need additional cultural adaptations, which should comprise modified recruitment strategies, delivery formats, and program contents.

Furthermore, parents with strong neighborhood ties were more likely to enroll, participate, and complete the program. This effect is possibly associated with the group delivery format, which may be particularly attractive for more sociable and well-connected parents. Thus, the opportunity to meet other parents has been found to be an important motive for participation in group-based programs (Gross et al. 2001; Harachi et al. 1997). Future research should examine whether other delivery formats (e.g., individual trainings, self-administered programs) are more easily accessed by poorly integrated parents. Also, this study has only examined the strength of neighborhood networks as an individual characteristic. Tests of neighborhood-level contextual effects would be desirable but require larger samples and bigger number of clusters.

Finally, parents who attended meetings with a supportive and positive course climate were more likely to complete the course and more likely to use the parenting techniques. Dumas et al. (2007) similarly found that active participation predicted the number of attended sessions. One should note that the course climate itself may be either an effect of variation in the number of motivated parents in the course or reflect the course provider's ability to maintain a supportive environment. Unfortunately, the current study did not allow us to disentangle provider effects from self-selection effects. Ideally, research on this issue would include the random allocation of providers to courses with a similar intake of participants.

This study has several limitations. First, though baseline data could be obtained for a larger proportion of the target population than in most studies, 31% of the target group participated neither in the study nor in the intervention. This group is likely to be less integrated, more disadvantaged, and less amenable to a variety of support services. Second, the instruments presented in this study are limited. For example, we do not have valid and reliable measures of the extent to which individuals actively participated in the sessions and whether they used the Triple P techniques with fidelity. Such measures would be important to better understand the extent to which the active ingredients of a parent training are transported into the daily interactions with the child. Third, the generalizability of the findings is limited. Some factors associated with parental engagement may be influenced by specifics of the recruitment process and the local social and cultural context. However, the body of research of parental enrollment into community-based parent trainings is still too small to draw conclusions on which processes can be generalized and which are specific to a given intervention.

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