
SHORT COMMUNICATION

Padres Trabajando por la Paz: a randomized trial of a parent education intervention to prevent violence among middle school children

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Abstract

This paper reports the results of a randomized trial to test the effectiveness of a theoretically derived intervention designed to increase parental monitoring among Hispanic parents of middle school students. Role model story newsletters developed through the process of Intervention Mapping were mailed to half of a subsample of parents whose children participated in *Students for Peace*, a comprehensive violence prevention program. The results indicated that parents in the experimental condition ($N = 38$) who had lower social norms for monitoring at baseline reported higher norms after the intervention than the parents in the control condition ($N = 39$) ($P = 0.009$). Children of parents in the experimental group reported slightly higher levels of monitoring at follow-up across baseline values, whereas control children who reported moderate to high levels of monitoring at pre-test reported lower levels at follow-up ($P = 0.04$). These newsletters are a population-based strategy for intervention with parents that show some promise for comprehensive school-based interventions for youth.

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Introduction

Our society faces the dilemma of raising independent adolescents with sufficient parental control to safeguard their health. Parental monitoring, parents' knowledge of their child's whereabouts, activities and companions, has been associated with lower levels of antisocial behavior, drug use, tobacco use and sexual activity (Patterson *et al.*, 1989; Metzler *et al.*, 1994; Steinberg *et al.*, 1994; Biglan *et al.*, 1995). These studies suggest that parental monitoring suppresses these health risk behaviors directly and indirectly through discouraging involvement with deviant peers (Larzelere and Patterson, 1990).

Because of the urgent need to protect youth from violence and other health risk behaviors, and the evidence for parental monitoring as a deterrent, interventions to increase parental monitoring could be part of comprehensive prevention interventions. However, interventions with families are problematic as classes for parents have been limited by non-attendance and selective attendance (Perry *et al.*, 1987; Klitzner *et al.*, 1990). While parent management training has been successful in reducing antisocial behavior, such training is demanding, costly and attrition is high (Kazdin *et al.*, 1992), suggesting a non-traditional, non-class, at-home format for a parent intervention (Perry *et al.*, 1990).

Students for Peace (SFP) was a 3-year project designed to evaluate a comprehensive, school-based intervention to reduce and prevent violence of middle school students (Kelder *et al.*, 1996). This paper reports the evaluation of the parent education component, *Padres Trabajando por la*

Paz (PTP; *Parents Work for Peace*), that employed role model story newsletters as a strategy to increase parental monitoring among middle school students. We hypothesized that parents randomized to the newsletter experimental condition would have significantly improved scores on monitoring and determinants of monitoring (self-efficacy, norms, outcome expectancies, knowledge and beliefs) at the post-test than parents in the control condition.

Method

Intervention

PTP consisted of bilingual newsletters incorporating role model stories theoretically derived to increase parental monitoring in Hispanic parents. The newsletter intervention was developed using the process of Intervention Mapping (Bartholomew *et al.*, 1998; Murray *et al.*, 1998). Parental monitoring was operationalized as talking to their children about their plans, knowing their child's friend's telephone numbers, calling the parents of their children's friends and visiting their child at school. Theory and pilot work suggested self-efficacy, outcome expectancies, knowledge, beliefs and norms as psychosocial determinants of the parental monitoring behaviors (Fishbein and Ajzen, 1975; Bandura, 1986). Role model stories about parental monitoring behaviors were collected from interviews with the population and adapted for the newsletter format (McAlister, 1995; McReynolds *et al.*, 1996). For example, a role model story targeted to increase norms for the parental monitoring behavior of maintaining a phone list quotes a mother:

I always ask who she is talking to. She has three friends who she talks to and she has these numbers written down where we can see them.

Four newsletters were mailed to parents in the intervention group over 2 week intervals during the third and fourth months of the school year. Intervention costs included interview tapes and time, photography, newsletter layout with inex-

pensive publishing software, photocopying, and mailing (McReynolds *et al.*, 1996).

Participants

Parents of Grade 8 students from one of the SFP intervention schools were included in the sample. To maximize participation and intervention impact, parents were eligible if their child reported moderate aggression (eight to 50 acts in the last week) the previous spring. Bilingual interviewers telephoned 142 eligible parents, enrolled 94 and conducted pre-test interviews. Non-enrollment resulted from incorrect phone numbers (30), refusals (6) and unavailability (12). Mean aggression score for the students of non-participating parents did not differ significantly from those agreeing to participate. Parents were randomized to the treatment condition at the conclusion of the pre-test interviews and 10–12 weeks later 82% completed the post-test telephone interviews (1 week after receipt of final newsletter). Children of these parents completed paper-and-pencil surveys at school at the conclusion of the parent baseline interviews and again during the post-test interviews. Parental consent for the child survey was obtained during the baseline telephone interview. The pre-test survey was completed by 92 of the 94 eligible students (97.9%) and 89 completed the post-test (97%).

Measures

Parental monitoring behaviors (PMB-parent) specifically targeted by the intervention were measured with four items assessing: (1) the amount of time parents ask children about their plans, (2) the number of child's friends' telephone numbers the parent has, (3) the number of times parents have called child's friends' parents and (4) the number of times the parent has visited the school. Item responses were coded (1) none or a few, (2) some and (3) most or many, and were summed to form the index. The PMB-student measure consisted of four similar items assessing the students' reports of their parent's monitoring behaviors. Student scores on the PMB-student index agreed with parent's reports of their own behavior at baseline ($r = 0.47$, $P = 0.001$).

Measures of the psychosocial determinants of parental monitoring were developed from focus group and telephone interviews as part of a pilot for this study, and included self-efficacy, outcome expectancies, knowledge, beliefs and norms. For self-efficacy, parents were asked to report on a 10-point scale how confident they were that they could: (1) ask child their plans when child was rude or (2) parent was rushed, (3) keep a list of friend's telephone numbers, (4) call parents of child's friends and (5) visit the school. Norms items assessed: (1) whether parents think most of their friends know where their children are most of the time and (2) know their children's friends. Outcome expectancy items assessed: (1) whether parents think their child is safer if they know the child's whereabouts, companions and activities, (2) whether parents think they can do a better job if they have telephone numbers, (3) call other parents, and (4) visit school. Beliefs items assessed: (1) how important it is to know where their children are, who they are with and what they are doing all the time, and (2) whether asking their child their plans is a way to show their child they care. Knowledge items assessed: (1) whether parents recognize child's friends, (2) know where their child spends time and (3) whether their child likes for them to ask about activities. These items employed a Likert-style response format and were coded such that higher scores indicated higher levels of the construct.

Analysis strategy

Analysis was conducted using least-squares analysis of covariance models (Fleiss, 1986) which included the follow-up scores on parental monitoring behaviors (PMB-parent and PMB-child), self-efficacy, norms, outcome expectancies, knowledge and beliefs as dependent variables, and intervention group as independent variable with child gender, pre-test scores and a pre-test score by condition interaction term. Significant interactions between baseline and condition were analyzed to predict the baseline level at which significant differences due to condition was attained (Fleiss, 1986).

Table I. *Sample characteristics*

Demographic characteristics	Intervention (%) (n = 38)	Control (%) (n = 39)
<i>Parent characteristics</i>		
Relationship of primary caretaker		
mother	86.8	87.2
grandmother	5.3	5.1
father	7.9	5.1
other		2.6
Country of origin		
Mexico	73.7	82.1
US	23.7	17.9
Central America	2.6	
Language of interview		
Spanish	84.2	84.6
English	13.2	12.8
both	2.6	2.6
Work at home ^a	63.2	51.3
Spouse lives in home	78.9	71.1
<i>Student characteristics</i>		
Gender		
boy	63.2	56.4
Grade		
8	97.4	89.7
7	2.6	10.3
Age		
mean	13.79	13.51
SD	0.732	0.731

^aParents were asked whether they worked outside of the home or at home.

Results

Process evaluation results suggest that 84% of experimental condition parents received PTP newsletters and 68% talked with their children about PTP. None of control condition parents reported receipt of PTP newsletters from any source. Attrition analysis suggests that there were no differences between experimental and control groups between parents maintained in the sample and those lost to follow-up. However, children of parents in the control condition who were lost to follow-up did score significantly higher (9.3 more aggressive acts per week, $P = 0.043$) on aggression at pre-test, reflecting a differential bias toward reducing the intervention impact.

Table II. ANCOVA and baseline results for main outcome variables

Measure	Range	Cronbach's α	Group ^a	N	Post-test		Adjusted post-test		Change	P
					Mean	SE	Mean	SE		
PMB-parent	4–12		C	39	7.949	0.328	7.877	0.330	0.415	0.37
			I	38	8.000	0.411	8.081	0.334	0.923	
PMB-student	2–8		C	30	4.433	0.294	4.369	0.270	0.102	0.096 ^b
			I	29	4.517	0.363	4.672	0.275	0.741	
Self-efficacy	5–50	0.82	C	38	46.564	0.483	46.616	0.624	1.537	0.31
			I	36	46.756	0.726	46.688	0.640	2.958	
Norms	2–10	0.83	C	37	6.553	0.301	6.488	0.273	0.172	0.003 ^c
			I	37	7.162	0.273	7.182	0.273	0.708	
Outcome expectancies	4–20	0.88	C	38	16.842	0.343	16.860	0.305	0.142	0.50
			I	37	17.162	0.278	17.150	0.309	0.071	
Beliefs	2–10	0.51	C	39	8.712	0.137	8.760	0.147	-0.214	0.16
			I	37	8.838	0.162	8.836	0.151	-0.322	
Knowledge	3–15	0.55	C	39	11.974	0.253	11.930	0.245	-0.019	0.35
			I	36	11.778	0.296	11.810	0.255	0.152	

C = Control group, I = Intervention group.

^aAdjusted post-test means are adjusted for baseline.

^bCondition by baseline interaction ($P = 0.04$) necessitates additional analysis.

^cCondition by baseline interaction ($P = 0.009$) necessitates additional analysis.

Demographic characteristics are presented in Table I. There were no significant ($P < 0.05$) differences in demographic characteristics or outcome measures at pre-test. Outcome results are presented in Table II. Child gender was dropped from all models for non-significant contribution. There were no significant ($P < 0.05$) differences between the experimental and control groups on follow-up measures, adjusting for baseline measures, for parent reports of parental monitoring behaviors, self-efficacy, outcome expectancies, beliefs or knowledge.

Condition by baseline interactions for student report of parental monitoring behaviors ($P = 0.04$) were significant along with parent report of norms for monitoring ($P = 0.009$). Among parents who reported low levels of norms at pre-test, there was a larger increase at post-test for the experimental than the control condition. Further analysis of the interaction between baseline and condition indicates that the difference between experimental conditions becomes signi-

ficant at the baseline level of 6. This finding indicates that parents in the experimental condition who express uncertainty or disagreement with the statement that their friends know their children's friends and whereabouts were more likely to express agreement at follow-up than parents in the control condition.

The significant interaction ($P = 0.04$) between condition and baseline scores for student reports of parental monitoring behaviors indicated that students in the experimental condition report increased scores for parental monitoring behaviors across the level of pre-test scores. However, students in the control condition who reported higher levels of parental monitoring behaviors at pre-test were more likely to report decreases in monitoring at post-test, suggesting regression toward the mean. Further analysis of the interaction suggests that the baseline level at which the difference between experimental conditions becomes significant is outside the range of our data.

Discussion

A pilot for the parent education component of a comprehensive violence prevention program for middle school students was evaluated by means of a randomized trial. Parents in the experimental group received four newsletters containing role model stories designed to increase parental monitoring. In this Hispanic population, the low-cost, minimal intervention strategy showed promise for changing social norms for child monitoring among parents who reported low levels at baseline. Child reports of parent's monitoring behaviors suggest that, across levels of baseline scores, the experimental group demonstrated a modest increase in monitoring.

Limitations to this study include statistical power, measurement and intervention strength. The small sample size reduces power, the ability to detect differences due to treatment, to values ranging from 0.18 (β) for the condition by baseline interaction for PMB-parent, 0.54 for PMB-student and 0.73 for norms. Given the measures used in this study, a sample size of 300 per group would be more adequate. Parental evaluation apprehension was a threat due to the sensitive questions, though child reports were less affected by this threat and did indicate an effect of the treatment, underlining the importance of multiple sources of measurement.

For both groups, the pre-test telephone interview may have served as an intervention in the style of Motivational Interviewing (DiClemente, 1991), affording parents the opportunity to reflect upon their parental monitoring strategies. The pre-test telephone interview may also have been an opportunity for parents in both conditions to experience anticipated regret, how they would feel if something happened to their children and they had not monitored them adequately (van der Pligt and Richard, 1994). In contrast to an expected decrease in monitoring by parents of eighth-graders, the control group increased their parental monitoring behaviors by 6% from pre-test to post-test while the experimental group increased by 11%.

The intervention was also limited in its impact

on the determinants of parental monitoring. The newsletter strategy is an excellent vehicle for increasing awareness of a problem and norms for behavior but does not provide the guided practice or reinforcement necessary to increase self-efficacy for a particular behavior (Parcel *et al.*, 1989). We recommend that an interpersonal component be added to the newsletter strategy by training parents as peer leaders to contact other parents, discuss the newsletter content and provide reinforcement (Ramirez *et al.*, 1995). Children could also involve their parents in newsletter homework assignments providing guided practice and reinforcement for monitoring.

Offering parents education to assist them in reducing their children's level of harmful risk is important yet difficult to achieve at a population level. This study tested a low-cost mass parent education strategy and allows for cautious optimism about the efficacy of the intervention. We also learned that newsletters are easily tailored to a specific target population, feasible to deliver and low in cost compared to other parent education strategies currently available.

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