



SOCORRO SEAT BELT PROGRAM
PROMOTING A SAFE COMMUNITY

A Program to Increase Seat Belt Use Along the Texas–Mexico Border

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A school-based, bilingual intervention was developed to increase seat belt use among families living along the Texas–Mexico border. The intervention sought to increase seat belt use by changing perceived norms within the community (i.e., making the nonuse of seat belts less socially acceptable). The intervention was implemented in more than 110 classrooms and involved more than 2100 children. Blind coding, validity checks, and reliability estimates contributed to a rigorous program evaluation. Seat belt use increased by 10% among children riding in the front seat of motor vehicles in the intervention community, as compared with a small but nonsignificant decline in use among control community children. Seat belt use among drivers did not increase.

MOTOR VEHICLE CRASHES

are the leading cause of death among children, adolescents, and young adults in the United States. Seat belts substantially reduce the risk of motor vehicle fatalities—by an estimated 38% to 46% among drivers (averaged across all levels of crash severity)¹ and by an estimated 45% among front seat passengers.²

Many motor vehicle occupants, however, do not consistently use seat belts. A review of seat belt interventions revealed substantial variability in the efficacy of different programs.^{3,4} Interventions designed to reach large segments of a community through the use of media and informational campaigns have often exhibited limited success.^{5,6} However, motor vehicle occupants who fail to use safety restraints are probably the most resistant to traditional seat belt interventions, suggesting a need for alternative programs.

The need for new interventions is especially acute along the Texas–Mexico border, where

rates of seat belt use are lower than in many other parts of the country and different cultural norms may require alternative interventions. A study of young children (less than 5 years) residing in 14 Texas cities, for example, revealed that only 51.5% of El Paso children were restrained.⁷ In the present investigation, we evaluated a school-based seat belt intervention—the Socorro Seatbelt Program—that targeted children and families living in a predominantly Mexican American community on the Texas–Mexico border. The program sought to increase seat belt use by changing perceived norms within the community, that is, by making the nonuse of seat belts less socially acceptable.

THE PROGRAM

The Socorro Seatbelt Program, implemented in 1999 in several elementary schools in the Texas–Mexico border area, consisted of 5 components: curriculum, role model stories, seat belt newsletters, a family slogan and poster contest, and church support. Initially, bilingual classroom-based assistants conducted a 3-session seat belt curriculum in English and Spanish. Each session began with 2 magic tricks, which served as an immediate and powerful rapport builder. The second session involved a discussion of “the magic of seat belts,” children offering reasons why family members should

wear seat belts as well as reasons why they might not wear seat belts.

In the final session, children developed seat belt slogans and drawings designed to convince family members to use seat belts (Figure 1). The posters and slogans produced were displayed as part of a school-wide contest in which each child viewed all of the other children’s posters or slogans; all children received prizes (e.g., calculators) for their creations. This component of the intervention sought to personalize children’s involvement in a set of seat belt activities; it also sought to change perceived seat belt use norms by creating the impression among children that all of their peers used seat belts and regarded them as important.

Next, role model stories obtained from community members (e.g., parents, principals, and pastors) were drafted into half-page vignettes and published in newsletters, along with each individual’s photograph. This component of the program sought to change perceived norms by having familiar and respected community members act as role models who endorsed seat belt use in a personal manner.

Seat belt newsletters were developed and distributed to families of all children. Newsletters were drafted in both Spanish and English and contained digitized presentations of many children’s drawings or slogans, seat belt stories, and 1 or 2 seat belt facts. In

addition to altering perceived norms, this component of the program sought to increase knowledge regarding proper use of seat belts.

Parents were invited to join their children in a second school-wide poster and slogan contest. The goal of this component of the program was to facilitate the emergence of seat belt use as an issue for family discussion.

Finally, pastors from 2 local churches provided personal seat belt stories for distribution at the schools involved in the study, arranged for the distribution of newsletters during weekend masses, and vocally encouraged parishioners to use seat belts. Again, this component of the program sought to change perceived norms by having a respected member of the community personalize and endorse seat belt use.

EVALUATION

Two adjacent communities served as the intervention and control sites. The intervention community was served by 5 elementary schools in Socorro, Tex;

the control community was served by 6 elementary schools in Ysleta, Tex. The 2 communities were similar in terms of key demographic characteristics. For example, Hispanics constituted 94.7% and 95.4% of the intervention and control communities, respectively. Percentages of high school graduates in the intervention and control communities were 34.9% and 42.8%, respectively, and corresponding median family incomes were \$16 177 and \$18 296. The population of each of the catchment areas was approximately 27 000.

Preintervention seat belt use was observed at each elementary school during a 13-day period. Observations were collected during 1-hour periods at the beginning of each school day. Approximately 10 trained observers coded seat belt use among drivers, front seat passengers, and back seat passengers. Two additional observers tallied the total number of vehicles driving past each school site. Coders were unaware of the purpose of the project.

Two types of coding strategies were used during each assessment period: *distance coding* and

contact coding. In the case of distance coding, 3 pairs of coders were positioned on sidewalks located within 15-mile-per-hour (24-km-per-hour) school zones. Each pair of observers evaluated seat belt use within the same vehicle, providing a rigorous assessment of interrater reliability. Coding at intervention and control sites was alternated daily. In the case of contact coding, 2-person teams stopped vehicles entering each school drop-off area under the pretext of distributing general motor vehicle safety information. One team member distributed safety pamphlets to drivers while the second unobtrusively coded seat belt use.

Postintervention assessments were conducted exactly 1 year after the preintervention assessments. Ten new coders were trained to ensure that observers remained unaware of the purpose of the project. The accuracy of coders' seat belt observations was assessed during a single mock coding session in which coders evaluated the seat belt use of 4 motor vehicle occupants (2 adults and 2 children) who drove by each coder 35 times. On each trial, vehicle occupants were instructed to use (or not use) their seat belt; the seat belt status of each occupant was generated via a random number table. An accuracy rate of 92% was obtained when observers coded mock drivers' seat belt

Key Findings

- In the intervention community, seat belt use among children riding in the front seats of vehicles increased from 47% to 57% ($z = 2.75, P < .01$).
- In the control community, seat belt use among children riding in front seats showed a non-significant decline from 50% to 47% ($z = 0.94, P > .10$).
- The seat belt use rate among the 2216 drivers observed arriving at the control schools declined significantly between the preintervention and postintervention assessments (from 90% to 83%; $z = 4.87, P < .01$). In contrast, the rate among the 2106 drivers arriving at the intervention schools showed a nonsignificant decline (from 92% to 90%).
- Seat belt use among the 954 children riding in the front seats of vehicles arriving at the intervention schools increased from 46% to 55% ($z = 2.73, P < .01$). Seat belt use among the 412 children arriving at control schools increased from 45% to 54% ($z = 1.83, P < .07$).

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**PROGRAMA DE CINTURONES
DE SEGURIDAD EN SOCORRO**
PROMOVIENDO UNA COMUNIDAD SEGURA

Spanish

No necesitas ser flaco para que suene "clack"

El "click" salva vidas

Abuelito, abrochate el cinturón por mi

Los gatos tienen nueve vidas, tú tienes una así es que abróchate

Te puedes ver muy bien con el cinturón puesto

El usar mi cinturón mantiene mi vida a todo dar

Los cinturones de seguridad mantienen vivos los sueños

English

You don't have to be thin to click it in

The click saves lives

Grandpa, buckle up for me

Cats have nine lives, you have one, so buckle up—

You can look good wearing a seat belt

Wearing my seat belt keeps my life a blast

Seat belts keep dreams alive

FIGURE 1—Seat belt slogans developed by Socorro children: Examples in Spanish and English.

use; the rate was 98% when seat belt use by front seat passengers was coded. Only 52% of the evaluations were accurate when observers coded the seat belt use of back seat passengers.

DISCUSSION

The intervention described here represents a promising strategy for increasing seat belt use among children. It is important to note that the intervention was not designed as an educational program, although children and families were indeed provided with information regarding the importance and appropriate use of seat belts. Such information, however, was incorporated into a much larger program that sought to increase seat belt use by changing perceived community norms; that is, the program sought to alter perceptions of acceptable "seat belt" behavior. Future research will need to assess whether this type of intervention changes the perceived norm regarding a targeted health behavior or simply alters its perceived importance.

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Contributors

L. D. Cohn directed the program and was responsible for drafting the report. D. Hernandez contributed to the implementation and evaluation of the program, and M. Cortes contributed to the development of program materials. T. Byrd contributed to the development of the program and to revisions of the report.

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