Using Lay Home Educators to Provide Safety Message in Dallas, TX, USA

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PURPOSE

Previous studies have shown that home visits by health professionals can be effective at increasing injury prevention behaviors, but few if any studies have examined the use of lay home visitors. Such a program, if effective, may be considerably less expensive and could be offered to more people at risk.

BACKGROUND

There is a lack of research on the efficacy of home visitation programs conducted by lay educators. To examine if lay educators could provide education that impacts specific behavior changes, the Injury Prevention Center of Greater Dallas (IPC) partnered with the Texas Home Instruction for Parents of Preschool Youngsters (HIPPY) to implement a residential fire and scald burn prevention project. The HIPPY program was designed to provide parents with information and support to help them in preparing their pre-school age child for school.

METHODS

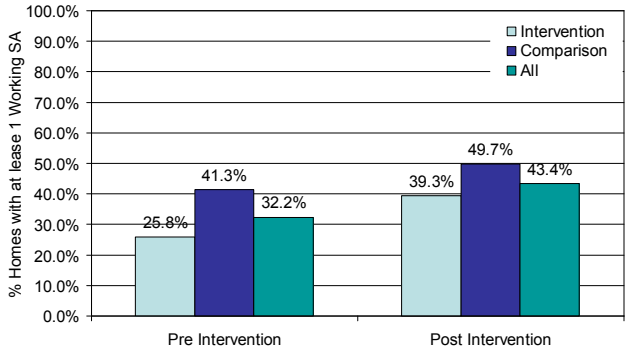
There were 9 lay home educators who performed weekly home visits to 161 families in the spring of 2009. The educators were randomly assigned into intervention (5 lay educators, 93 families) and comparison (4 lay educators, 68 families) groups. All were affiliated with one school district.

Educators in the intervention group provided literature/brochures and one-time verbal education to participants, that included information about the importance of smoke alarms and proper hot water temperature (<120 degrees). Educators in the comparison group provided written literature/brochures without verbal reinforcement.

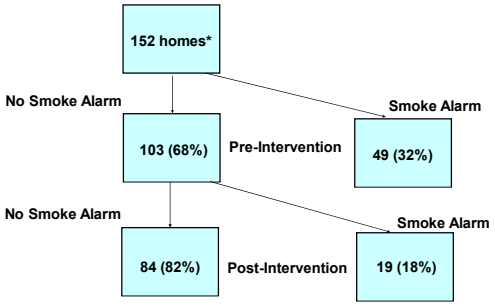
Pre-intervention assessments were conducted by the lay educators at the beginning of the process. Post-intervention assessments were conducted by the same lay educators approximately two months later. The home assessments collected information about the number, location, and status of smoke alarms, and the temperature of the hot water at a faucet.

RESULTS

Homes with ≥ 1 Working Smoke Alarm



Working Smoke Alarms



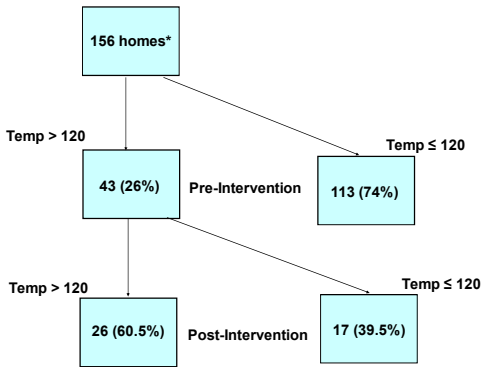
Eighteen percent (19/103) of the homes without a working smoke alarm had a new smoke alarm installed during the program

Intervention Group: 18.2% (12/66) had a new smoke alarm

Comparison Group: 18.9% (7/37) had a new smoke alarm (P = NS)

*9 had missing information about smoke alarms

Hot Water Faucet Temperature



Thirty-nine and one-half percent (39.5%) of homes with unsafe (>120 degrees) hot water temperature at the time of the initial assessment, had lowered the hot water temperature to a safe level (<= 120 degrees) by the time of the post-intervention assessment.

Effect on Intervention vs Control Groups (Among those who had initial unsafe hot water temperature):

Intervention Group: **68% (13/19) lowered hot water temp** from unsafe level (>120 degrees) to safe level (<=120 degrees)

Comparison Group: **17% (4/24) lowered hot water temp** from unsafe level (>120 degrees) to safe level (<=120 degrees)

[Odds Ratio = 10.8 (2.5-45.9), P < 0.01]

*5 had missing information about hot water temperature

LIMITATIONS

There was apparent "spill over" because the "comparison" group actually had an intervention: the home visitor/educators for the comparison group gave out brochures with information about safety practices such as smoke alarms and hot water temperature, and proper practices for injury prevention. The only additional activity in the intervention group was a one-time verbal reinforcement.

•Both the intervention and comparison groups were in the same geographic area.

•The data collected for the pre- and post-intervention home assessments were collected by the same home visitor/educators who were doing the intervention, with the possibility of unconscious bias; and in some cases the hot water temperatures may not have been accurately measured.

•To address these issues, during a next phase of the project which will be implemented in January 2011, a trained IPC staff member will conduct all pre- and post-intervention home assessments. Additionally, the intervention and comparison groups will be in two separate geographic regions with comparable populations.

CONCLUSIONS

•The collaborative program drew upon the strengths of each agency. By utilizing HIPPY home instructors, who conduct 30 visits with each participant and have an established relationship with participants, injury prevention messages were incorporated into their routine educational message.

•Despite the limitations mentioned above, the program appears to be a cost effective method to providing safety messages to families, and resulted in potentially beneficial behavior changes, especially regarding unsafe hot water temperatures.

NEXT STEPS

•IPC and HIPPY are undertaking a second phase of the intervention in January 2011. The intervention will be more active with increased dosage of the intervention, and the home assessments will be more rigorous and conducted by a trained IPC staff member, in order to avoid some of the pitfalls on this pilot program.

•If the results of the second phase of the intervention are positive, there is potential for wider dissemination of the program. The program is cost effective because it utilized lay educators. It did not require the distribution and installation of smoke detectors, but rather connects parents to resources through which they can obtain smoke detectors.