

THREE-YEAR LONGITUDINAL STUDY ON REDUCTION OF BULLYING IN A RURAL, MULTICULTURAL ELEMENTARY SCHOOL USING THE CONFLICT RESOLUTION TRAINING PROGRAM

Diana A. Foster
Vickie Krenz
California State University, Fresno

Donald D. Pogoloff
Kingston, Washington

Donna Marie Callahan
Fresno Pacific University

Eric Krenz
California State University, Fresno

Violence on School campuses is a multifaceted phenomenon impacting the daily activities of students, parents, family members, teachers, school staff and members of the community. The Conflict Resolution Training Program © (CRTP) is a problem-solving violence prevention curriculum based on increasing communicative skills to reduce violence. The purpose of this research study was to investigate the effectiveness of the CRTP using Bandura's Social Learning Theory (self-efficacy construct) and Bloom's Taxonomy among rural, multicultural elementary school students with a third year follow-up in reducing aggressive behaviors. Students were administered pre, post and follow-up assessments to measure initial perceptions, program understanding, and program retention. The initial subjects consisted of one-hundred fourth and fifth grade students, with 24.5 percent Native American, 1 percent Asian, 4.1 percent Hispanic and 68.4 percent White. A quasi-experimental patch-up design, which integrates curriculum training continually to new groups the first year and nonequivalent control group quasi-experimental design for the third year, and PRECEDE/PROCEED determined the effectiveness of the program. Pearson chi-square with Yates Correction Factor was applied to determine statistically significant differences between the measurement intervals at level of significance $p < 0.05$. The study in 2001 showed a positive trend in reduction of asocial behaviors, which further validated the results and findings in the literature relating to asocial behaviors risk factors indicators (e.g., safety of the students, teachers, fighting, name-calling, rumors, and exclusions). Given developmental stages in childhood, earlier introduction of CRTP would appear efficacious.

The research was funded in part by a California State University, Fresno, College of Health and Human Services Research Award.

Introduction

Presented in a school environment free from violence and bullying, education gives students an opportunity to develop into physically and emotionally healthy individuals (Palfrey, 1997). In this setting, students should be encouraged to realistically address their actual and perceived weaknesses, unhindered by barriers of race, ethnicity, socioeconomic limitations, or other detrimental elements of communities in America's pluralistic society (Benson, 1996; Cortes, 1997). School occupies at least one third of a child's waking hours (Green and Kreuter, 1991). Should such a dominant force provide children with a program of problem resolution techniques to reduce violence and bullying and help articulate likely unarticulated needs in order to achieve goals, free from stressors, through socially acceptable mechanisms (Reid, 1997; Ross and Van Willigen, 1997)?

The present study investigated the effectiveness of violence reduction and conflict resolution-training program in a traditional school curriculum, as school violence has been a public health issue regarding today's youth. The Conflict Resolution Training Program (CRTP) is an inner-city approach to a fairly homogeneous demographic population (Community Board Program, Inc., 1990). This study reviewed its applicability to fourth- and fifth-grade students in a rural area, as adapted to a multicultural elementary school.

This research study reaffirmed violence as an unacceptable social behavior possibly leading to aggression, terror, or injury to students, school staff, and the community at large. Such violent behaviors may also result in damage or destruction of property. Further, aside from any propensity or toward precipitating stressors for asocial behaviors, violence is learned from peers and other figures dominant in a child's development (Bandura, 1973, 1977b; Price and Everett, 1997b; U.S. Department of Health and Human Services [HHS], 1993). The present study is using the American Psychiatric Association definition for Antisocial Personality Disorder that states violence is a subset of asocial behaviors (e.g., failure to conform to social norms, deceitfulness, impulsivity, irritability and aggressiveness, reckless disregard for safety of self or others, and lack of remorse in hurting or mistreating or taking a stolen object from another person (American Psychiatric Association [APA-DSM-IV-TR 301.7(a)(4)], 1994). Bullying is defined elsewhere in the literature as a specific type of aggression in which (1) the behavior is intended to harm or disturb; (2) the behavior occurs repeatedly over time; and (3) there is asymmetry of power (Nansel et al., 2001).

Background

Violence and bullying on a school campus are multifaceted phenomena that include influences and stressors of home, school, and community, compounded by developmental stages of students. It acts as a microcosm of activities of daily life of students, peers, teachers, parents, family members, and the community-at-large (Walker, 1995). According to the Centers for Disease Control and Prevention, aggression in early childhood is likely to lead to violence, social and cognitive deficits in later life (HHS, 1998). Students who engage in or associate with peers in high-risk, asocial behaviors are at increased risk for unexcused absences, tardiness, truancy, low self-esteem, poor hygiene, lessened commitment to academic attainment, and acting out in the classroom or on the playground (Cohen, Davis, and Aboelata, 1998; Kann et al., 1998; HHS, 1998).

There are many suppositions as to why one student will develop asocial behaviors, while others in similar situations are seemingly able to cope with adversity and employ appropriate, nonviolent, conflict resolution-learned behaviors (Corcoran, 1991; Elkind, 1998; Erikson, 1963, 1987; Seligman et al., 1995; Zimmerman, 1994). The literature reports behavior as a continuous learning process of observing and experiencing life, thus generating an individual's character as influenced by personal and environmental factors (Bandura, 1977a, 1977b; Eron, 1997; Price and Everett, 1997a, 1997b; Zigler et al., 1992).

Social Learning Theory (SLT) for behavioral modification explains human behavior as a continuous interaction between cognitive, behavioral, and environmental determinants (Bandura, 1977b). Individual responses to such reinforcements or specific stimuli produce behavioral changes and are internalized to form the personality and actions of the student (Bandura, 1977b, 1986, 1997). The reinforcements used in the CRTP are meant to supplant asocial behaviors with appropriate behaviors through students' participation in role-playing skits and students' observation of actions in stories and pictures. Students are rewarded by learning to take responsibility for their own actions and ceasing to make unproductive choices in problem resolution (Community Board Program, Inc., 1990)

Self-efficacy, a construct of SLT, assumes that an individual is capable of performing a specific behavior and achieving an expected outcome (Bandura, 1977a). The addition of Bandura's self-efficacy construct to behavior modification through observational learning by students relates to how a student feels about his or her capability to handle life experiences through applying prior appropriate behaviors to future challenges

(Bandura, 1977a). This construct also indicates that the verbal persuasion of peers, teachers, and parents may alter a student's capacity to learn. Specifically, noted child psychologist Erik Erikson (1963) identified the developmental stage of childhood manifested in the fourth and fifth grades as the Industry versus Inferiority phase. During this phase, positive influences by teachers, parents, and peer associations are likely to produce constructive learning behaviors. Rejection on the other hand, is likely to lead to failure in school and initiate increasingly more asocial behaviors (Elkind, 1988; Erikson, 1963; Seligman, Reivich, Jaycox, and Gillham, 1995). Through the CRTP process infused with self-efficacy construct, students' emotional capabilities, self-esteem, and resiliency in facing conflict risk factors may be revived if once present but now lost, or enhanced if currently diminished (Zimmerman, 1994). Finally, students may realize that socially correct choices result in rewards, with asocial behaviors inevitably resulting in punishment (Corcoran, 1991).

Social Cognitive Theory (SCT) explains the interactions between life expectations and reinforcements that contribute to learning (Bandura, 1986, 1989). Students learning to resolve daily conflict in a socially acceptable manner reflect the same physiological drive that previously led to violence (Bandura, 1973, 1997; Dreikurs, Cassel, and Kehoe, 1974; Elkind, 1988). The study assumed that violence was associated with asocial behavior and could be prevented or reduced by the CRTP (Community Board Program, Inc., 1995; Price and Everett, 1997a; HHS, 1993).

Many violence prevention and conflict resolution/peer mediation curricula exist in schools. A limited number of these have been evaluated because of the extensive costs and the evaluative skills necessary to determine directly related outcomes (Hausman, Spivak, and Prothrow-Stith, 1994; Price and Everett, 1997a; HHS, 2001).

Purpose and Scope

The purpose of this study was to investigate the effectiveness of the CRTP among rural, multicultural elementary school students with third year follow-up by application of tests to show the curriculum's effectiveness in reducing violence and aggressive behaviors. The objectives of this study (1) addressed the appropriate time to introduce students to the CRTP program as a non-violent alternative for asocial and violent behaviors; (2) designed evaluative instruments to determine the program effectiveness in changing behaviors; and (3) replicated the potential use of CRTP beyond its original inner-city, demographically homogeneous target.

Research Design, Theoretical Framework, and Methodology

Procedure for Sample Selection and Setting

The Committee on the Protection of Human Subjects at California State University, Fresno, Health Science Department determined that the study presented minimal risk for the participants. An overview of the Conflict Resolution Training Program was submitted and reviewed by the Chawanakee Joint School District Board in Madera County, California, in December 1997. The Board gave its permission for implementation of the program in the fourth and fifth grades to begin in January of the 1998 spring term in a rural, multicultural elementary school. The district limited the research study to one elementary school that included 100 fourth- and fifth-grade students. To address and circumvent a nonrandom sample selection of fourth- and fifth-grade students, an institutional cycle integration in a staggered training protocol was used to measure the effectiveness of the CRTP Program via the Campbell and Stanley quasi-experimental "patch-up" research design (Campbell and Stanley, 1966). The principal sent letters to all parents for the fourth- and fifth-grade students that CRTP's training involved conflict resolution research and would begin in January 1998.

Data for this research study were obtained from a nonrandom sample of 100 fourth- and fifth-grade students from a rural, multicultural elementary school. The statistical analysis of the ethnicity of the fourth- and fifth-

grade students was compiled by student responses: 24.5 percent Native American, 1 percent Asian-Pacific Islander, 4.1 percent Hispanic, and 68.4 percent White, not of Hispanic origin. The research study included a cluster sample of 24.5 percent Native Americans, where the California Public School Summary for elementary schools in the year 1997-98 reported 0.9 percent Native Americans (California State Board of Education [Public School Summary Statistics] [CSSA], 1999). This research study thus allowed access to an ethnic minority community for evaluation of health risks and asocial behaviors.

Research Design

Six research (null) hypotheses were used to determine the effectiveness of the CRTP program. The six null hypotheses included the following: (1) perceptions and knowledge of conflict risks; (2) comprehension of the curriculum; (3) asocial behavior risk factor indicators; (4) differences in asocial behaviors; (5) differences in positive behaviors; and (6) program effectiveness. The outcomes were evaluated as the cause and effect of the CRTP program in an educational setting for the first year of the research study. A nonequivalent control group quasi-experimental design was used at the third year interval (Campbell and Stanley, 1966). Four student groups received these staggered training sessions, depending upon the learning comprehension of the fourth- and fifth-grade students. Changes identified by the application of the null hypotheses for statistically significant differences between the fourth- and fifth-grade students and seventh- and eighth-grade students in the third year were evaluated. As studied, the CRTP interactive nonviolent resolution training program sought to increase communicative skills and reduce violence among the 100 fourth- and fifth-grade students. In the third year of the longitudinal study, the N population changed the original fourth-grade students by 18 (seven moved out of the area, 10 to continuation school and one repeated the sixth grade) and the fifth-grade by 18 (18 moved out of the area). The participants were in a rural, multicultural elementary school setting, not CRTP's intended original inner-city, demographically homogeneous target group.

The PRECEDE/PROCEED is a framework for the process of systematic development and evaluation of health education programs that begins with defining outcomes to be achieved (Green and Kreuter, 1991). The outcomes identified are the initial causation of the positive or negative behavior of the participating fourth- and fifth-grade student groups. The PRECEDE portion of the model emphasizes the diagnostic function causing a change in behavior to effect benefits or consequences. The PROCEED portion of the model operationalizes PRECEDE by assessing the funding, staff requirements, barriers, and policies to support the health education program for healthy lifestyles and planning the program (Green and Keuter, 1991)

The PRECEDE/PROCEED evaluation model was used to longitudinally measure the reduction in violent and other asocial behaviors (Foster, (2000). The PRECEDE model addressed risk factor indicators in social, epidemiological, behavioral, and educational diagnosis phases, as well as approval, resources, and staff allocations in the administrative and policy diagnoses phases (Green and Kreuter, 1991). PROCEED, with its corollaries, enabled the study to evaluate the effectiveness of the CRTP program by evaluating implementation, process, impact, and outcomes. Data collected at the implementation of the CRTP provided the evaluation of the fourth- and fifth-grade students' baseline risk factor indicators for asocial behaviors prior to CRTP training. Process evaluation allowed the study to collect data at post-training and identify changes in asocial behaviors of the fourth- and fifth-grade students. Impact evaluation facilitates the behavioral modification in student, student and student, and teacher and student relationships. Reduction of health problems and the increase of preventive behaviors in a prospective, observational manner were identified. The outcome evaluation phase allowed for statistical analysis of the six original survey/questionnaire instruments and one evaluation instrument from Community Board Program, Inc. (1995). The survey/questionnaire instruments, results and findings which summarized the effectiveness of the CRTP training of the fourth- and fifth-grade students in the original study are published in the Masters of Public Health Thesis entitled, "The Conflict Resolution Training Program in a Rural, Multicultural Elementary School" (Foster, 2000).

Bloom's *Taxonomy of Educational Objectives: Handbook 1: Cognitive Domain* was also utilized to assess the program by measuring comprehension of the curriculum. The program identified the participants' initial status regarding violence at school, acquired knowledge about problem-solving techniques, consequent changes in behaviors and values, and provided a classification of objectives in the educational setting for evaluating the curriculum against topics to be addressed in the elementary school (Bloom, 1956). The framework measured the comprehension of students' reactions to attitudes, behaviors, and beliefs in the reduction of asocial behaviors. The research study used Bloom's Taxonomy to evaluate the integration of the learning comprehension of students and the effectiveness of the CRTP in behavioral changes in reducing asocial and violent behaviors in the classroom and on the playground.

Bandura's SLT (self-efficacy construct) was applied to measure retention of the curriculum. The CRTP program applied the SLT principles in the training sessions via modeling, symbolism, and self-regulation processes through learning by observation (Bandura, 1973, 1977a). The CRTP integrated observational learning in four processes: attention, retention, production and motivation (Bandura, 1977a). These processes allowed the evaluation of the degree of change in the participants' asocial behavior in the classroom and on the playground over the duration of the study. Bandura postulated that the child must apply the self-efficacy construct to explain the internalization of aggressive behaviors and the consequent reproduction of the behavior in order to receive the expected outcomes concurrently at that time and in the future (Bandura, 1977, Bandura, Barbaranelli, and Pastorelli, 1996). In the CRTP program, the self-efficacy construct was applied to students who were able to observe the success or failures of peers' asocial behaviors, and thus voluntarily apply the appropriate conflict-resolution behaviors.

Social Learning Theory with the self-efficacy construct for behavioral modification by observational learning was integrated with the CRTP nonviolent intervention program. The attention process measured the willingness of the students to observe by reviewing pictures, applying the behavior in role-playing skits, and understanding the feelings in reading stories for which they supply an ending. The retention process, related to how students encoded behavior into memory (i.e., cognitive for facts or emotive for feelings), and identified changes in perception students gained from acquired knowledge of conflict risk factors in the attitudes, behaviors, and beliefs of peers in the classroom and on the playground. The production process measured student selection, organization, response, and refining of feedback to his other problem-solving techniques in conflict situations. The motivation process reinforced student-related behavioral feelings by practicing positive behavior in role-playing skits and reinforcing such appropriate behavior in peers.

Instrumentation

Six survey/questionnaire instruments were developed for the study from literature review and adapted to rural multicultural elementary school students to compile qualitative and quantitative data using nominal and ordinal measurements (Fink, 1995a, 1995b; Kuzma, 1992). The evaluation instruments were tested on a focus group of 10 students for reading and ease of interpretation (Green and Kreuter, 1991; McKenzie and Smeltzer, 1997).

Training Sessions

The researcher and a counselor, as a team, presented the curriculum in six detailed training sessions on nonviolent conflict resolution. Starting in January and continuing through June of 1998, participating fourth- and fifth-grade students received a curriculum in nonviolent conflict resolution (CRTP) training sessions, which supplanted other topics in a regular classroom schedule. Students were administered seven survey evaluation instruments at pre-training, post, follow-up (at one- to six-month intervals), and there was a third year follow-up assessment. These evaluations measured initial perceptions, program understanding, and program retention.

Study Variables

The fourth- and fifth-grade students as individual groups were considered independent variables. Students' responses to the questions asked on multiple evaluation instruments were considered dependent variables. The instruments identified students' responses to attitudes, behaviors, and beliefs pertaining to perception of knowledge of conflict risk factors, asocial behaviors caused by peer pressures, frequency rates of violence, academic achievement, work completion, self-esteem, hygiene, and classroom and playground behavior (Abramson, 1990, 1994).

Students' maturation, including physiological and psychosocial development, tending to cause changes in attitudes, behaviors, beliefs, knowledge, and perceived conflict risk in the CRTP program were considered confounding variables (Abramson, 1990; Biehler and Snowman, 1997). Teachers of different ethnicity from the students were also considered confounding variables (Cartledge, 1996).

Analysis of Data Collected

Due to the population distribution of the sample, it could not be assumed that the underlying population from which this sample was drawn was normally distributed. The data obtained from the evaluation instruments were analyzed by applying the Pearson chi-square test with Yates Correction Factor. These evaluation instruments determined the impact of the independent, dependent, and confounding variables, statistically measured differences, between the fourth- and fifth-grade students the first year and seventh- and eighth-grade students the third year as independent samples (Fink, 1995a, 1995b; Fink, 1996).

The level of significance chosen to test the hypotheses was $p < 0.05$. This level was elected to avoid false results produced by chance. An alpha of $p < 0.05$ was selected to draw conclusions.

Variables due to maturation of socioemotional and psychosocial development, attitudes, behaviors, beliefs, knowledge, and perceived risks in the sample population (ages nine to 14) may have confounded the study. Teachers' ethnicity different from that of the students' may have been a confounding variable in the study. Materials were solely in English. External validity addressed the issue of a specific group of participating students in the rural multicultural elementary school. With institutional cycle integration where students move through the grades studied during the program time frame, the research precluded separate group control. Internal validity was reflected in maturation and psychosocial developments of participating fourth- and fifth- and seventh- and eighth-grade students. This may have limited the perceptions of the students from diverse cultural backgrounds that perceived the world differently, thus formulating the students' value belief systems based on their own life experiences.

The reader is cautioned against making generalizations based on this research study's findings related to the following factors. A participant's perception of risk is, by nature, subjective and may reflect a perceptual rather than empirical expectation of potential harm.

Findings and Discussion

The findings of this study reflected violence on a school campus as a multifaceted phenomenon, impacting the daily activities of students, peers, teachers, parents, and other members of the family and community. The CRTP, in turn, demonstrated the effectiveness of problem solving, based on Bandura's SLT (self-efficacy construct) and Bloom's Taxonomy in a rural, multicultural, elementary school. The PRECEDE/PROCEED model used as framework to evaluate the effectiveness of the program in measuring the reduction of asocial and violent behaviors among and between fourth- and fifth- and seventh- and eighth-grade students and determined that the appropriate time to introduce the curriculum is in the fourth grade. Results of the three

year follow-up suggested that the earlier the students receive the training the more resilient they become. Data also revealed that CRTP was capable of replication beyond its intended inner-city target population.

This study is consistent with the literature regarding the manner by which learning objectives for becoming responsible people, understanding verbal and nonverbal behaviors, recognizing conflicts naturally occurring, resolving conflict, and acquiring active listening techniques are inculcated. This was supported by the fourth- and fifth- and seventh- and eighth-grade students showing differences in the learning objectives of the CRTP curriculum and behavioral modification outcomes in year one and year three follow-up intervals. In addition, analysis of the year one and three year post-assessment on comprehension revealed that there was an increase in the students' understanding of conflict resolution concepts in the CRTP during the third-year time interval. As displayed in Figure 1 in the Appendix, there was an increase in perceptions that conflict can occur naturally, and, active listening in the year three for both grades. The seventh-grade students showed, also, an increase in understanding verbal and nonverbal, compared to the eighth-grade students who showed an increase in resolving conflicts. The CRTP program bridges across multicultural and economic status with hands-on training for students and teachers in problem-solving techniques to resolve daily conflicts. The present study supported the curriculum based upon the objectives of the CRTP program with the preexisting problems of the school environment.

Participant comprehension of the CRTP program was evaluated by its effectiveness in initially identifying and subsequently in reducing indicators for asocial behavior risk factors. These indicators included smoking cigarettes, drinking alcohol, and taking non-prescribed drugs or illicit substances (Figure 2 in the Appendix). In addition, the study measured the frequency rate of violence in the prior 30 days associated with asocial or violent behaviors in the classroom and on the playground from the students/perpetrators' and students/victims' perspectives.

As reported in the literature, asocial behaviors may adversely affect students' academic attainment as measured by a decrease in grade point average, lack of motivation, failure in complete school assignments, and decrease of self-esteem and self-worth (Aber et al., 1996; Bandura et al., 1996; Embry, 1996a, 1996b; Price and Everett, 1997a, 1997b). Evaluation of the CRTP Program in the current study reported a positive trend in the fourth- and fifth-grade students' behaviors as measured by academic attainment, being cooperative and paying attention in the classroom, avoiding usage of bad language or calling people names, staying out of fights, and being a good friend with peers in year one and decreased in year three in the seventh- and eighth-grade students' in all categories, except in the category, being a good friend, as displayed in Figure 3 in the Appendix. Additionally, the study reflected a change from asocial, nonproductive to positive, productive behavior in the classroom, from the student's perspective. This study of CRTP is consistent with literature in building students' self-esteem and self-worth and, in turn, increasing resilience and reinforcing positive behaviors, thus improving academic attainment, motivation, work completion in the classroom (Embry, 1996a, 1996b).

Prior research, in the literature, showed asocial behaviors affected the student academic attainment. A decrease in motivation, work completion, and low self-esteem was reflected in poor personal hygiene and increased acting out in the classroom and on the playground, absences, tardiness, and truancy (Aber et al., 1996; Embry, 1996a, 1996b; Farrell et al., 1996). Bandura et al. (1996) reported that students with decreased 'self-efficacy' tend to have lower academic attainment, motivation, work completion and hygiene, with increased demonstration of inappropriate behaviors in the classroom and on the playground.

Evaluation of CRTP effectiveness supported by the statistical analysis, its application in training the fourth and fifth grades for asocial behaviors to beneficially affect academic attainment, motivation, work completion, hygiene, and inappropriate behaviors in the classroom and on the playground as displayed in

Figure 4 (in the Appendix) in year one and abated at the end of year three. This further supports the notion that the appropriate time to introduce the CRTP Program is no later than the fourth grade.

To date, there is a limited data on the long-term outcomes of conflict resolution or violence prevention programs implemented in school-based settings. The findings of this study provided a three-year follow-up to a conflict resolution training program conducted in a multicultural elementary school setting. Bandura's Social Learning Theory (SLT) with 'self-efficacy' construct of behavioral modification by observational learning was applied. The CRTP program also applied Social Learning Theory principles in its training sessions in modeling, symbolism, and self-regulation processes through learning by observation in terms of environmental determinations.

Bloom's Taxonomy identified the participants' initial status regarding violence at school, acquired knowledge about problem-solving techniques and consequent changes in behavior and values, and provided a categorization of objectives for evaluating the curriculum in concert with other topics to be addressed in the elementary school setting (Bloom, 1956, 1978, 1981; Butler, 1997). There are six levels of cognition in relation to the learning process through the application of CRTP program: knowledge, comprehension, application, analysis, synthesis, and evaluation. Evaluation through testing at key intervals in the curriculum proved consistent with Bloom's six levels in the learning processes including the application of a CRTP program.

Conclusions

The PRECEDE/PROCEED model was utilized to evaluate the effectiveness of the program by longitudinally measuring the asocial behavior risk factors associated peer pressures and the impact of frequency rates of violence from the student's perspective. The study showed differences in seventh- and eighth-grade students in the third year in smoking cigarettes, drinking alcohol and taking non-prescribed drugs or illicit substances. The study supported the finding and results in the literature in relation to asocial behavior risk factors indicators (e.g., name calling, using bad language, and, staying out of fights). CRTP training appeared to initiate changes from nonproductive asocial behaviors to positive productive behaviors in year one and decrease in year three. The CRTP program was effective in resolving conflicts in a peaceful manner, which supported the 'self-efficacy' construct between fourth- and fifth-grade students in year one, and decrease in year three for the seventh- and eighth-grade students. The CRTP program was also shown to establish an optimal reduction in violence when introduced early in the elementary school curriculum

The CRTP program, designed for inner city youth, is adaptable to a rural, multicultural elementary school setting. While there may be a skewing of the results due to the developmental maturation between the fourth and fifth grade students, this study revealed that the outcomes of Conflict Resolution Training Program continues to provide positive results as students enter into adolescence. Comparisons between the one year and year three assessment of students' perceptions may be reflective of the social changes that have been demonstrated as occurring during adolescence. However, it appears that the magnitude of asocial behaviors could be decreased using the CRTP program.

Recommendations

The study recommends expanding the application of CRTP Program as a total school approach from K through 12th in both rural and urban communities.

- Evaluate Conflict Resolution Training Program in the educational setting with a systematic review of the causes, risk factors, specific behaviors, and environmental conditions via prevalence rates, morbidity, and mortality. An excellent model of systematic approach is in the *Youth Violence: A*

Report of the Surgeon General (HHS, 2001).

- In the planning stage, it would be beneficial to develop partnerships or collaborative projects community-wide for funding for the program.
- Train the teachers in CRTP program techniques through the ‘Train-the-Trainer’ model (Community Board Program, Inc., 1990, 1995). In addition, linking a high school with its feeder schools, training peers’ counselors at the high school level to present the program to junior high and elementary students in their feeder schools, with the affect would be effective in changing the culture of all the campuses and create an atmosphere where younger students sought to attain the status of older peer counselors. Furthermore, self-efficacy would be reinforce through the notion of going on to high school and beyond, with possible reduction in violence on the campuses.

Appendix

Figure 1. Participants’ comprehension of the CRTP curriculum between year one when they were in grades 4 and 5 and year three when they were in grades 7 and 8

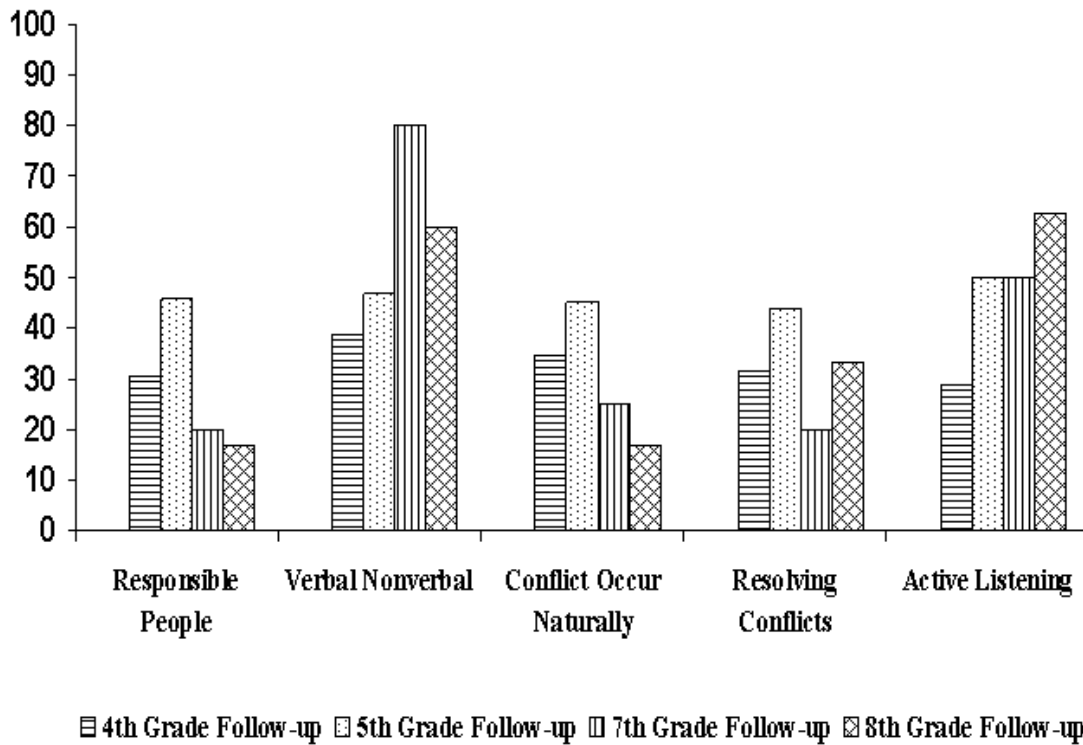


Figure 2. Participants' changes in asocial behavior risk indicators between year one when they were in grades 4 and 5 and year three when they were in grades 7 and 8

Changes in Asocial Behaviors
Finding and Results -- "Do you feel any pressures from students at your school to, . . ."

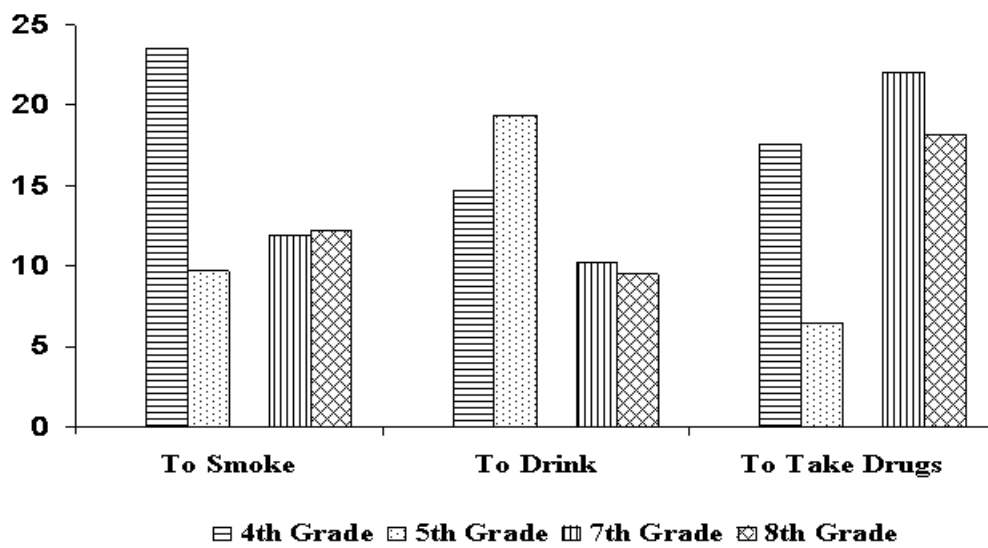


Figure 3. Participants' assessment of changes in asocial behavior indicators between year one when they were in grades 4 and 5 and year three when they were in grades 7 and 8

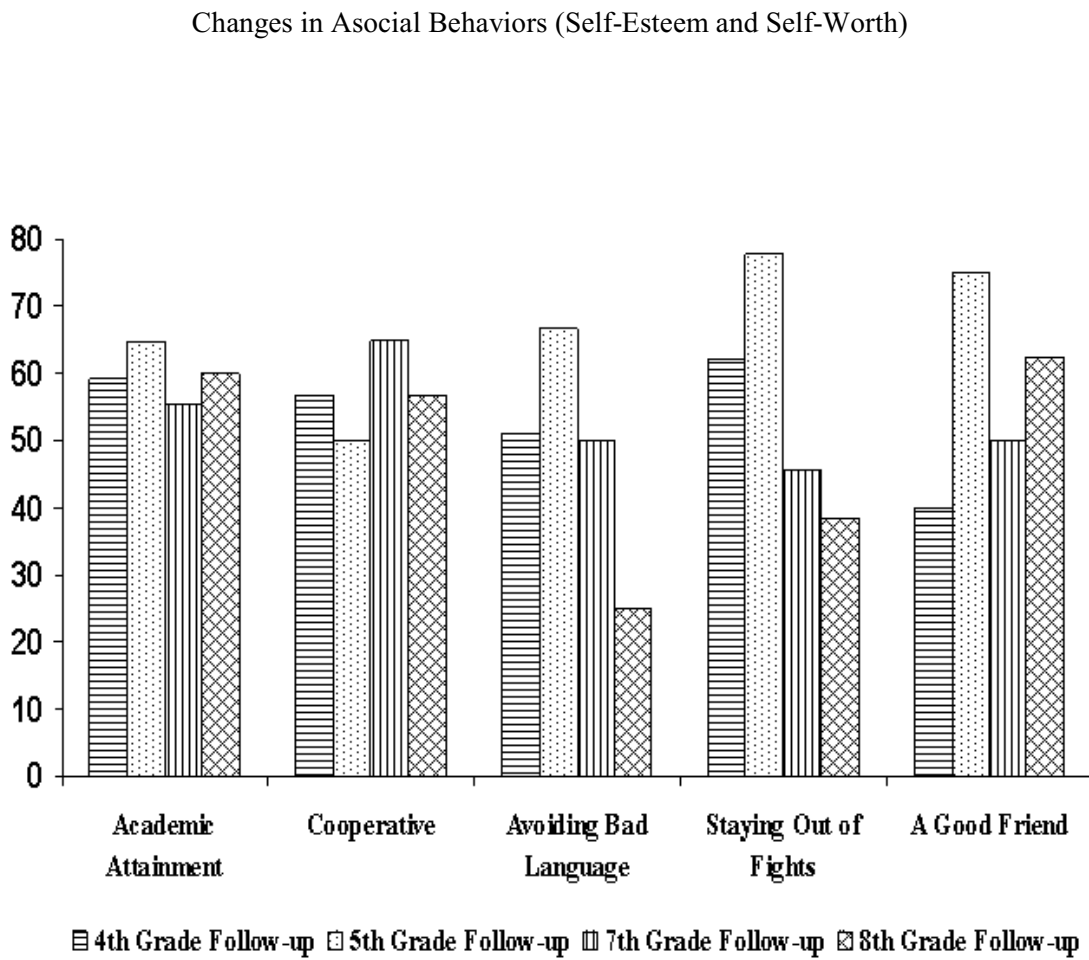
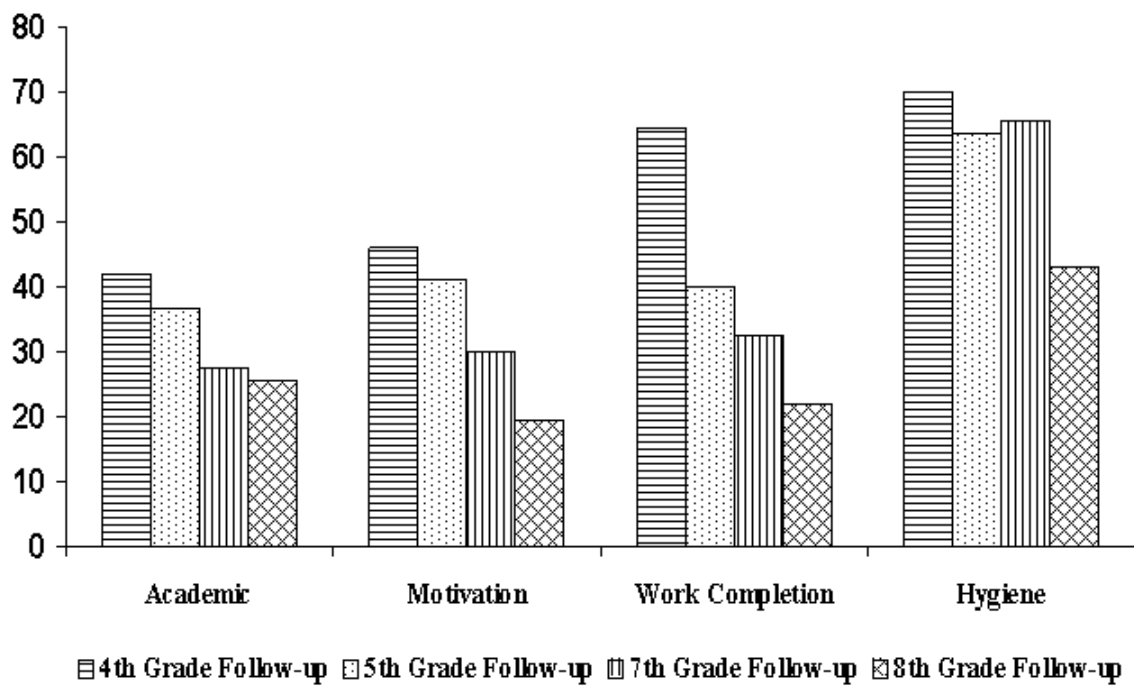


Figure 4. Teachers' assessment of changes in positive behavior indicators between year one when the participants were in grades 4 and 5 and year three when they were in grades 7 and 8



References

- Aber, J. L., Brown, J. L., Chaudy, N., Jones, S. M., and Samples, F. (1996). The evaluation of the resolving conflict creativity program: An overview. *American Journal of Prevention Medicine*, 12, 82-90.
- Abramson, J. H. (1990). *Survey methods in community medicine* (4th ed.). New York: Churchill Livingstone.
- Abramson, J. H. (1994). *Making sense of data* (2nd ed.). New York: Oxford University Press.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1977a). Self-efficacy toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bandura, A. (1977b). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44, 1175-1184.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bandura, A. (2001). Social cognitive theory in cultural context. *Applied Psychology: An international review*, 51, 269-271.
- Bandura, A., Barbaranelli, C., and Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Journal of Child Development*, 67, 1206-1222.
- Benson, P. L. (1996). *Developmental assets among Minneapolis youth: The urgency of promoting healthy community*. Minneapolis, MN: Search Institute.
- Biehler, R., and Snowman, J. (1997). *Psychology applied to teaching*. (8th ed.) New York: Houghton Mifflin.
- Bloom, B.S. (Ed.). (1956) *Taxonomy of educational objectives: Handbook 1—Cognitive domain*. New York: Longmans, Green.
- Bloom, B.S. (1981). *All our children learning: A primer for parents, teachers and other educators*. New York: McGraw-Hill.
- California State Board of Education. (1994). *Health framework for California public schools, kindergarten through grade twelve*. Sacramento : California Department of Education.
- Campbell, D.T. (1969). Reforms as experiments. *American Psychologist*, 24, 409-429.
- Campbell D.T. and Stanely, J.C. (1966). *Experimental and quasi-experimental design for research*. Boston: Houghton Mufflin.
- Cartledge, G. (1996). *Cultural diversity and social skills instruction*. Champaign, IL: Research Press.
- Cohen, L., Davis, R., and Aboelata, M. (1998). Conflict resolution and violence prevention: From misunderstanding to understanding. *The Fourth R*, 84, 1-18. August, September, October, 1998. Retrieved September 4, 1999 from <http://www.preventioninstute.org/conflict.html>.
- Cohen, L., and Swift, S., 1993. A public health approach to violence epidemic in the United States. *Environmental and Urbanization*, 5(2), 50-66. London, United Kindom, October 1993. Retrieved May 7, 1999. Available <http://www.preventioninstutue.org./violenc.html>.
- Community Board Program, Inc. (1990). *Conflict resolution resources for schools and youth: Conflict resolution: An elementary school curriculum*. San Francisco: Author.
- Community Board Program, Inc. (1995). *Classroom conflict resolution training for grades 3-6*. San Francisco: Author.
- Corcoran, K. (1991). Efficacy, "skills", reinforcement, and choice behavior. *American Psychologist*, 46, 155-157.
- Cortes, E. (1997, March/April). Reweaving the social fabric. *Families in Society: The Journal of Contemporary Human Services*, 78, 196-200.
- Elkind, D. (1988). *The hurried child* (rev. ed.). Reading, MA : Perseus Books.
- Embry, D. D. (1996a, March). Prevention of youth violence: Pathways to resiliency during elementary-school years with television and school-based interventions. Paper delivered at Society for Research on Adolescence in a Symposium, Prevention of adolescent violence through intervention in middle childhood. Boston, MA.

- Embry, D. D. (1996a, March). *Reasons of hope: Creating a climate for change and resiliency*. Tucson: Heatsprings.
- Erikson, E. (1993). *Childhood and society*. New York: Norton.
- Erikson, E. (1987). *A way of looking at things: Selected: Selected papers of Erik H. Erikson 1930-1980*. New York: Norton.
- Eron, L. D. (1997). The development of antisocial behavior from a learning perspective. In D.M.Stoff, J. Brieling, and J. D. Maser (Eds.), *Handbook of antisocial behaviors*, pp. 140-147. New York: Wiley.
- Farrell, A. D., Meyer, A. L., and Dahlberg, L. L. (1996). Richmond youth against violence: A school-based program for urban adolescents. *American Journal of Preventive Medicine*, 12(5), 13-21.
- Fink, A. (1995a). *How to analyze survey data*. Thousand Oaks, CA: Sage.
- Fink, A. (1995b). *How to sample in surveys*. Thousand Oaks, CA: Sage.
- Fink, A. (1996). *How to design surveys*. Thousand Oaks, CA: Sage.
- Foster, D. A., Krenz, V. D., Pogoloff, D. D., and Callanhan, D. M. (2001). Evaluation of the conflict resolution training program (CRTP) in a rural multicultural elementary school. The 6th Annual Rural Minority Health Conference 'Involving Youth in the Future of Rural Minority Health Conference Proceedings' 1, 60-61. Savannah, GA, December 7-9, 2000. National Rural Health Association: Kansas City, MO. Bureau of Primary Health Care, Health Resources and Services Administration (HRSA), Department of Health and Human Services (DHHS) and Office of Rural Health Policy, HRSA, DHHS.
- Foster, D. A. (2000, May). 'The conflict resolution training program in a rural, multicultural elementary school.' Master of Public Health Thesis, California State University, Fresno. Note: PRECEDE/PROCEED Model reprint from Green, L.W., and Kreuter, M. W. (1991). *Health promotion planning: An educational environmental approach* (2nd ed.) page 44, with permission from Mayfield Publishing Company, © 1991.
- Green, L.W., and Kreuter, M. W. (1991). *Health promotion planning: An educational environmental approach* (2nd ed.) Mountain View, CA: Mayfield.
- Hausman, A., Spivak, H., and Prothrow-Stith, D. (1994). Adolescents' knowledge and attitudes about and experience with violence. *Journal of Adolescent Health*, 15, 400-406.
- Kann, L., Kinchen, S.A., William, B. I., Ross, J. G., Lowry, R., Hill, C.V., Grunbaum, J., Blumsom, P.S., Collins, J.L., and Koble, L.J. (1998). Youth risk behavior surveillance, United States, 1997. Centers for Disease Control and Prevention. CDC Surveillance Summaries August 14, 1998. *Morbidity and Mortality Weekly Report*, 47 (SS-3), 1-98.
- Kuzma, J. W. (1992). *Basic statistics for health science*. Mountain View, CA: Mayfield.
- McKenzie, J. F., and Smelter, J. L. (1997). *Planning, implementing, and evaluating health promotion programs: Primer*. New York: Macmillian.
- Meeks, L., Heit, P., and Page, R. (1996). *Comprehensive school health education* (2nd ed.) Lacklick, OH: Meeks Heit.
- Nadel, H., Spellmann, M., Alvarez-Canino, T., Lausell-Bryant, L., and Landsburg, G. (1996). The cycle of violence and victimization: A study of the school-based intervention of a multi-disciplinary youth violence-prevention program. *American Journal of Preventive Medicine*, 12, 109-119.
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., and Scheidt, P. (2001). Bullying behaviors among US youth. *JAMA* 2001, 285(16) 2093-2132.
- Orpinas, P., Parcel, G., McAlister, A., and Frankowski, R. (1995). Violence prevention in middle school: A pilot evaluation. *Journal of Adolescent Health*, 17, 360-371.
- Palfrey, J. S. (1997). Keeping children and families in the center of our concerns. *Archives of Pediatric Adolescent Medicine*, 151, 337-348.
- Price, J.H., and Everett, S. A. (1997a, April). National assessment of secondary school principals perceptions of violence in schools. *Health Education and Behavior*, 24, 218-229.
- Price, J. H., and Everett, S. A. (1997b, May/June). Teachers' perceptions of violence in the public schools: The Metlife survey. *American Journal of Health Behavior*, 21, 178-186.
- Reid, W. (1997). Conceptions of curriculum and paradigms for research: The case of school effectiveness studies. *Journal of Curriculum and Superision*, 12, 212-227.
- Ross, C. E., and Van Willigen, M. (1997). Education and the subjective quality of life. *Journal of*

- Health and Social Behavior*, 48, 275-297.
- Seligman, M., Reivich, K., Jaycox, L., and Gillham, J. (1995). *The optimistic child: A proven program to safeguard children against depression and build lifelong resilience*. New York: Harper Perennial A Division of HarperCollins.
- Statistical Package for Social Sciences. (1997). *SPSS base 7.5 application guide*. Chicago: Author.
- Trembay, R. E., Japel, C., Perusse, D., McDuff, P., Boivin, M., Zoccolillo, M., and Montplaisir, J. (1999). The search for the age of 'onset' of physical aggression: Rousseau and Bandura revisited. *Criminal Behavior and Mental Health*, 9, 8-23.
- U.S. Department of Health and Human Services (DHHS). (1993). *The prevention of youth violence: A framework for community action*. Atlanta, GA: National Centers for Injury Prevention and Control, Office of Assistant Director for Minority Health, Centers for Disease Control and Prevention.
- U.S. Department of Health and Human Services (DHHS) (1997). *Youth risk behavior survey, 1997*. Atlanta, GA: Centers for Disease Control and Prevention [CD-ROM].
- U.S. Department of Health and Human Services (DHHS). (1998). *Facts about violence among youth and violence in schools*. Atlanta, GA : National Centers for Injury Prevention and Control, Centers for Disease Control and Prevention. Retrieved February 7, 1999. Available <http://www.cdc.gov/od/oc/media/fact/violenc.htm>.
- U.S. Department of Health and Human Services (DHHS). (2001). *Youth Violence: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Centers for Injury Prevention and Control: Abuse and Mental Health Services. Centers for Mental Health Services; and National Institute of Health, National Institute of Mental Health.
- Walker, D. (1995). Violence in schools: How to build a prevention program from the ground up. *Oregon Schools Study Council Bulletin*, 38 (5), 1-58.
- Weinstein, C. S., and Mignano, A. J. (1997). *Elementary classroom management* (2nd ed.) New York: McGraw-Hall.
- Yung, B. R. and Hammond, W. R. (1997). Antisocial behavior in minority groups: Epidemiological and cultural perspectives. In D. Stoff, J. Breiling, and J. Maser (Eds.) *Handbook of antisocial behaviors*, pp. 474-495. New York: Wiley.
- Zigler, E., Taussig, C., and Black, K. (1992). Early childhood intervention. *American Psychological Association*, 46, 997-1006.
- Zimmerman, J. (1994, May). Resiliency versus risk: Helping kids help themselves. *Far West Focus*, 1-4.

Biography

Diana A. Foster, M.P.H., RT, CHES, designed, implemented, evaluated and documented health education programs relating to wellness and prevention topics in bridging clients, students, families, schools and communities. Ms. Foster has presented at the American Public Health Association, and National Rural Health Association meetings, and Annual Central California Research Symposiums.

Vickie Krenz, Ph.D., is Professor of Health Science at California State University, Fresno. Her research focuses on public health program design and evaluation in rural settings. She has worked with diverse groups on public health issues including access to services, tobacco prevention, nutrition, teen pregnancy prevention, diabetes, HIV/AIDS, barriers to cervical cancer screening among Latinas, agricultural pesticides, and asthma. During the past 13 years, she has worked with numerous organizations to help improve the health and well being of people throughout Fresno County. Dr. Krenz's contributions have included serving on the Fresno Unified School District Health and Social Services Advisory Committee, HIV Community Planning Working Group, Fresno-Madera Chapter of the American Diabetes Association, and the American Red Cross. Dr. Krenz has contributed countless hours in assisting local and regional organizations in planning, implementing, and evaluating health promotion programs that address our underserved communities, families, and children.

Donald D. Pogoloff, J.D., M.P.H., represented institutional and individual healthcare providers in a private practice of law and was general counsel for Kings View, a not-for-profit corporation sponsored by the Mennonite church, the then largest private provider of mental health and substance abuse services in California. Before retiring in 2003 he was also a professor of public health, healthcare facilities' administration and health law at the California State University at Fresno. Mr. Pogoloff has also written extensively in the areas of medical record privacy, patient rights, not-for-profit corporate governance and state and local responsibilities for healthcare delivery and has authored legislation in health services reimbursement.

Donna Marie Callahan, M.S.W., has taught and directed the social work program at Fresno Pacific University for five years. Prior to teaching at the university she held positions as an elementary school counselor, private consultant, agency director and social worker with Big Brothers/Big Sisters of Fresno. In addition to collaborating in research with rural elementary school children, she has developed a manual to be used to assist volunteers and clergy to minister to separating and divorced persons. She serves on the Board of Directors of OASIS (Older Adult Social Services) and facilitates a grief support group for Hinds Hospice in Fresno.

Eric Krenz, Ph.D., is a Lecturer in the Health Science Department at California State University, Fresno. Over the past 14 years, he has been actively involved in numerous public health areas, including violence prevention, cancer prevention, and pregnancy prevention. In particular, he has been involved with Geographical Information Systems (GIS) with application to public health. Dr. Krenz has been a contributor on four refereed presentations using GIS mapping to identify barriers to pap smear screening among rural Latinas. Most notably, one oral paper was presented at the 23rd ESRI International Conference held in San Diego, CA on July 17, 2003.