

## PREVENTION DIMENSIONS EVALUATION DATA SUMMARY

### **Effectiveness in the Early Years – 1982-92**

During these years, PD had three formal evaluations. Two were focused on content objectives<sup>1</sup>, the third<sup>2</sup> was directed at implementation of the resource lessons. The resource lessons continue to be evaluated on effectiveness based on the previous evaluation results and the assessment of the yearly survey findings.

In 1989 Leonard J. Haas Ph.D. was contracted to evaluate the program. The sample was 4,554 tenth grade students in six representative school districts across the state of Utah. Of this group, 2,863 yielded questionnaires that were both valid and matchable with questionnaires obtained one year earlier. Encouraging trends with regard to decreased amount of alcohol, tobacco, marijuana, and cocaine used in the past month were shown, however, the cumulative effect on tobacco did not show a statistically significant impact on use, and thus the need for more tobacco prevention was added. This evaluation further demonstrated that PD delays the onset of substance use for a substantial percentage of high school students. Overall, earlier exposure to the resource lessons appears to make the greatest impact on “psycho-social” variables such as self-esteem and resistance to peer pressure. It was also found that the decline in resource lesson effectiveness is almost directly paralleled by a *decline in the amount of resource lessons being delivered*. This finding led to the evaluation on resource lessons implementation in 1992. This evaluation (1989) also produced information on the positive changes in several of the attitudes, values, and social skills which tend to protect a young person from the risk of substance abuse. The findings validated that the underlying model (Haas and Gottsegen, 1986) under which the resource lessons are based appears to be valid.

The evaluation conducted in 1990 suggested that the cumulative impact of the PD resource lessons upon drug use is significant. This is especially evident in regard to alcohol use. The results indicate that alcohol use among 6<sup>th</sup> grade students in Utah decreased during the four years following the statewide implementation of PD. This result was found despite a trend of increasing alcohol use among 18 to 25 year old Utahans during this same period (Bahr, 1989). Thus it may be that PD countered a trend that may have been present among younger Utahans

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<sup>1</sup>Evaluation of K-12 Prevention Curriculum, (UPSTARRT), 1988-89 results, Leonard J Haas Ph.D. The Impact of Four Years of Elementary Level Intervention, Evaluation of the K-12 Curriculum, 1990, Leonard J. Haas Ph.D. & Steven C. Luke

<sup>2</sup>Evaluation of the K-12 Prevention Curriculum, Special Report: The Effect Of High Exposure to K-12 Lessons, 1992, Prevention Evaluation & Research Center (PERC)

during this period. The fact that the impact of the program on substance use was uniformly positive, while self-esteem and locus of control scores were not affected by the resource lessons as expected, suggested that the success of PD may not depend upon immediate changes in student self-esteem or responsible decision making as the program goals suggested. It may have been due to the earlier results of changes in self-esteem and/or responsible decision making at younger ages. The final recommendations pointed to the fact that prevention programs exist in a complex environment. For example, changes in social environment, such as decreases in public tolerance of substance use, combined with the development of specific attitudes and skills among students, may have the greatest impact on substance use behavior. The evaluation pointed out that only by attending to this complexity can we better understand the success of existing programs and refine them so that they are even more effective in the future. This recommendation led to the creation of and the on-going work of the Prevention Dimensions Steering Committee.

In 1992 the study of the impact of dosage of the resource lessons was released. This information has led to how the training and the implementation is carried out. The literature had suggested that the implementation of drug and alcohol prevention programs is quite variable, and that program effects are stronger among students who receive a more complete implementation of a prevention program (Botvin, Baker, Dusenbury, Tortu, & Botvin, 1990a; Botvin, Baker, Filazzola & Botvin, 1990b, Botvin, Dusenbury, James-Ortiz & Kerner, 1989). Since previous evaluations of PD noted that there is great deal of variability in what actually constitutes the program as delivered to a particular group of students (PERC, 1992), these studies prompted the re-analysis of some of the previous data to determine if the PD program was stronger among students who received a “more complete implementation” of the program. An important conclusion was suggested by this study, that the effect of teaching a small amount of resource lessons is roughly the same as not teaching it at all. In other words, it appears that there is a “threshold” of PD exposure which must be attained before the resource lessons can have an impact. The results indicated that a dose of 40 hours or more is needed in order to impact the use of all the substances targeted by the program. The evaluation found that teachers who supplemented PD with another program demonstrated significantly poorer outcomes than students who received more than 40 hours of PD. The proportion of the sample receiving a dose at or above 40 was at the time relatively low.

Other studies by Leonard Haas have replicated some of the earlier results and have demonstrated the utility of the resource lessons. Specifically, PD has been shown over time to decrease the use of substances by Utah students and the increase of the skills needed to resist substance use. Student outcomes from his 6-year longitudinal evaluation demonstrated significant reductions in the rate of initiation of alcohol, tobacco, and marijuana use as well as a decrease in monthly alcohol use. The teacher training and resource lesson components of PD allow teachers to effectively deliver substance abuse prevention in the classroom resulting in

significant delays in the onset of substance use for junior high school students. The overall impact based on the cumulative effects of the resource lesson exposure is quite promising.

### **Additional Studies – 1989-2005**

The last of the studies conducted by Hass and associates support the effective nature of the teacher training processes. Teacher evaluations from those participating in PD teacher in service trainings continue to show significant increases in teacher knowledge of the effects of alcohol, tobacco, and marijuana. Additionally, teacher knowledge of effective prevention skills and teaching has also increased. Trained teachers maintained a willingness to use PD materials in their classrooms.

Other evaluations of PD have also shown the program when implemented with fidelity to be highly successful. Although Haas initial studies suggested a higher classroom instruction threshold may be needed to achieve expected outcomes a follow-up evaluation with 39 eighth grade and 57 ninth grade students in Brigham City, who received only 10 hours of the resource lessons in 1998, showed statistically significant improvements in knowledge about ATOD's and skills for resisting use of ATOD's as measured by pre and posttests ("Four State Consortium for Integrated Prevention Data Systems: Utah Final Report. By S.R. Harrison, R. Hopkins, S. Tonin, S. McPhee: 09-19-2000). These results suggest that a lower dosage of PD has an impact if the teacher implements the lessons with fidelity over a shorter period of time, thus increasing the intensity of the intervention.

Another evaluation of the PD resource lessons in sixth grade students in Salt Lake City found positive changes in students receiving the resource lessons compared to students in a control group who did not receive the program. Between November 1998 and May 1999, 86 sixth grade students received PD lessons and were compared to 64 sixth grade students not receiving the program. The students receiving the resource lessons had statistically higher risk factor protection scores on the posttest compared to the control group. Further analysis revealed that the areas that contributed to the total protection change were a significantly higher level of school protection and family protection for the experimental group. Further, the experimental group showed significantly lower individual risk factor scores than the control group on the post test. (Tatchell, Thomas W.; Waite, Phillip J.; Tatchell, Renny H.; Durrant, Lynne H.; Bond, Dale S. "Substance Abuse Prevention in Sixth Grade: the effect of a Prevention Program on Adolescents' Risk and Protective Factors", American Journal of Health Studies . Vol. 19 Issue 1, p54-61. 2004)

In summary, this series of PD evaluation findings with positive results was encouraging. In particular, students demonstrating higher scores on knowledge of resistance skills and other personal problem solving skills (life skills) compared to those who do not participate in PD was worth noting. Also, a published article demonstrating the differential effect PD had in

significantly reducing risk factors for substance abuse among high-risk students receiving instruction compared to high-risk students not receiving the materials was critical. As a result of its history of positive findings, PD received “promising program” status from the U.S. Department of Health & Human Services “National Registry for Effective Prevention Programs (NREPP)”. PD was renamed a “legacy” evidence-based prevention program.

In an effort to replicate these results, a study of 280 elementary school classrooms in Utah was conducted during the 2003-04 school year. This was a randomized control trial (RCT) study comparing implementing and non-implementing classrooms. Findings from this study demonstrated a number of statistically significant outcomes related to risk and protective factors for third and fourth grade classrooms, including: 1) students in PD trained classrooms scored significantly higher on knowledge of refusal skills than their peers in non-trained classrooms; 2) students receiving PD lessons also scored significantly higher on knowledge of problem solving skills than students who did not participate in PD resource lessons; 3) among third grade students receiving PD resource lessons, substance abuse protective factor scale scores for “school opportunities for prosocial involvement” and “school rewards for prosocial involvement” were significantly higher than third graders whose teachers had not been trained; 4) fourth grade students receiving PD resource lessons demonstrated reductions in the substance abuse risk factor “favorable attitudes towards drug use”; and 5) fourth grade students also demonstrated significantly higher substance abuse risk factor scale scores for “perceived risk of drug abuse” than their fourth grade peers who do not participate in the PD resource lessons.

Specific highlights from **the 2004-05** year include the following:

- Nearly 2,100 teachers participated in 62 PD teacher trainings held throughout the state in 32 school districts, making the total 6,398 who have been trained.
- Teachers participating in USOE sponsored trainings report significantly higher training outcome scores than teachers who are trained in local substance abuse authority or local school district trainings.
- Nearly 38,000 fourth grade students received a “Mind Over Matter” music CD’s and parent pamphlets with 9,300 student homework assignments that were returned.
- Ninety-seven percent of parents of fourth grade students discussed the songs and / or messages with their children.
- Data from teacher online surveys indicate that approximately 76% of teachers trained teach a PD lesson in a given month with the average teacher teaching 3.3 lessons per month for an average of 78.6 minutes instruction time.

## **Studies – 2006 - 2012**

PD program evaluation during these years emphasized implementation of the PD resource lessons resources. During this period the USOE staff was busy conducting teacher trainings and these years characterized a significant shift from locally conducted trainings whose content and length varied to a more standardized teacher training conducted locally by USOE staff and contracted employees. On average there were approximately 1,000 participants trained and 27 in service trainings held annually during these years, totaling more than 10,000 individuals trained and receiving the new PD materials. The 4<sup>th</sup> grade “Mind Over Matter” CD and parent pamphlet continued to be available and was distributed to more than 40,000 students on an annual basis. In 2009, a series of focus groups were held with PD trained teachers, two in St. George and 1 in Salt Lake City. Twenty-four teachers participated and offered feedback and recommendations about the program. These include: 1) teachers overwhelmingly love the PD training and resource lessons, 2) teachers and their students love singing the Steve James songs, 3) teachers believe school leadership is critical to supporting PD implementation, and 4) teachers feel strongly that it is a *choice* they make to use the resource materials.

In 2008-10, USOE staff was also busy revising resource lessons and with the help of a committee of master teachers and others with content expertise, developed 5-foundation lessons. The 5 core lessons were pilot tested and the concept of “whole school training” approach began. In this new training paradigm, the USOE trainers conduct the PD training on-site in a school and train half of the professional staff in the morning and train the other half of the staff in the afternoon. This approach then ensures that all faculty are receiving the same consistent prevention message and materials simultaneously, and with the support and encouragement of school administration then begin to figure out ways in which each grade level team can implement PD into their classrooms. This holistic approach also helps the school culture by ensuring a common prevention language and approach to prevention.

The pilot 5-core lesson evaluation indicated that the materials and training format appear to greatly strengthen and enhance the capacity of the PD resources to impact both teachers and their students.

## **Studies – 2013 - Present**

During the 2012-13 school years a quasi-experimental design with matched pairs of implementing and non-implementing classrooms was conducted. Schools and classrooms are paired based on common socio-demographic status with Title 1 school classrooms being compared to Title 1 school classrooms and vice versa for Non-Title 1 schools. The pre and posttest school survey was only administered in 4<sup>th</sup>-6<sup>th</sup> grade classrooms and all teachers K-6<sup>th</sup> grade were asked to complete a monthly online implementation survey. The data analysis plan

also included a comparison of 6<sup>th</sup> grade SHARP risk and protective factor scale scores to scale scores of those in 6<sup>th</sup> grade implementation classrooms. There were a total of 88 implementing 60 comparison classrooms and in Cache, Davis, Jordan and Logan school districts.

Specific scales included were: opportunities for prosocial involvement, school rewards for prosocial involvement, peer individual rewards for prosocial involvement, favorable attitudes toward drug use, and belief in a moral order. Knowledge-related content questions focused on: decision making, bullying, and assertive communication.

The results from this study were very encouraging with four of five scales demonstrating increased total scores from pre-test to posttest; however the increase was not statistically significant (ANOVA). Fidelity scale scores indicated there was a high degree of compliance among participants as teachers in grades four through six reported a) adherence to lesson content (86%), b) achieved lesson objectives (84%), and rated c) engagement level with students ( 86%).

Positive, but somewhat guarded findings were also observed in the smaller subsample of 6<sup>th</sup> grade students. A comparison of risk and protective factor scale scores of implementing classrooms were compared to the average district SHARP scale scores. The results indicated that the scale scores among students in implementing classrooms were higher than the district scale scores, the difference was not significant.

Other general findings related to PD implementation based on teacher follow-up surveys and from the annual Comprehensive Prevention Program (2015) survey that is completed by public and charter school district include the following highlights.

- Based on online reporting, it is estimated that approximately 72% of Utah students in K through 6<sup>th</sup> grades received PD instruction.
- 74% of public school districts report providing drug prevention instruction in all schools.
- 93% of public school districts report collaborating to improve or expand prevention programs with their local substance abuse authority and 86% indicate this relationship is “somewhat or very effective”.
- 63% of public school districts indicated they collaborated with a local or regional coalition to improve or expand prevention program services and 64% rated this collaboration as “somewhat or very effective”.
- 89% of public districts and 77% of charter schools held a parent seminar in response to HB 329. Public districts held 57 seminars with approximately 6,200 in attendance and charter schools held 61 seminars with 3,581 attending. The most frequently reported subjects covered in the parent seminars were bullying, internet safety, mental health, substance abuse prevention, and suicide awareness and prevention.