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Positive Peer Group Interventions: An Alternative to Individualized Interventions for Promoting Prosocial Behavior in Potentially Disaffected Youth

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Abstract

Introduction. Most approaches to reducing the socially inappropriate behavior of adolescents target the individual rather than a group. Evidence suggests greater efficiency and longlasting effects may be achieved when groups of peers work together to make meaningful contributions to their communities through service learning projects. In the systems-intervention program presented here, titled *Positive Peer Group*, interventions are implemented with the goal of developing enhanced skills, increasing personal responsibility, increasing students' bonding to their school community, developing an ability to manage conflict responsibly, identifying with positive peers, and increasing social skill repertoires.

Method. The subjects were 198 students attending 17 schools with matched controls in Ohio, USA. Prior to entry into the program students exhibited characteristics signaling a capacity for leadership whether as positive role models or as potential leaders of a disaffected group likely to engage in negative behavior patterns. Students experiencing the experimental condition were offered opportunities to work together in small, heterogeneous groups on projects that contributed to improving their school or solving a problem that they themselves recognized within their school or community.

Results. Self-report measures taken pre- and post-intervention confirm statistically significant improvements in behavioral accountability, bonding to school, anger management, and the establishment of a psychological sense of school membership—all primary goals for this intervention.

Discussion and Conclusion. These data strongly support the contention that increased affiliation with the life of the school established through service-learning enhances social skill development and may inoculate children from becoming further disaffected.

Keywords: prevention, intervention, peer-group; anti-social behavior

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Intervenciones Positivas de los Grupos de Pares: una alternativa a la intervención individualizada para promover el comportamiento prosocial de jóvenes en situación de riesgo

Resumen

Introducción. Para reducir comportamientos antisociales, la mayoría de métodos se centran en el individuo problemático más que en el grupo. La evidencia sugiere que se puede lograr mejor eficiencia y efectos más duraderos cuando grupos de pares trabajan juntos en proyectos de aprendizaje para hacer contribuciones significativas a sus compañeros.

Objetivos. El programa de intervención del presente estudio, llamado *Grupo de Pares Positivos*, tiene por objetivo de desarrollar habilidades personales, aumentar la responsabilidad personal, aumentar la relación entre estudiantes y su comunidad, desarrollar la aptitud de manejar responsablemente los conflictos, identificarse con pares positivos, y aumentar los repertorios de habilidades sociales.

Método. Los participantes fueron 198 estudiantes de 17 escuelas con sujetos control en Ohio, USA. Antes de participar en el programa, los estudiantes mostraron capacidades de liderazgo como modelos positivos a seguir o como líderes potenciales de un grupo que exhibe un patrón de comportamientos negativos. Los estudiantes que participaron en la condición experimental tuvieron oportunidades de trabajar juntos como un pequeño grupo heterogéneo en proyectos que contribuyeron a la mejora de su escuela o a la solución de un problema que descubrieron en su escuela o comunidad.

Resultados. Los estudiantes tomaron medidas de autoinforme antes y después de la intervención y estas medidas confirman mejoras estadísticamente significativas en la responsabilidad de comportamiento, la relación con la escuela, el manejo de la ira, y la creación de un sentido psicológico de afiliación a la escuela—todos objetivos fundamentales de la intervención.

Discusión y conclusión. Estos datos respaldan con fuerza la opinión de que una afiliación mejorada con la vida de la escuela, establecida por aprendizaje hacia los demás, realza el desarrollo de habilidades sociales y puede inocular a estudiantes con comportamientos inadecuados.

Palabras claves: prevención, intervención, grupo de pares positivos, comportamiento antisocial

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Introduction

Schools have as a first priority the delivery of instructional content so as to enhance the scholastic ability of each of its students. However, the congregate setting of schools also acts as a training-ground for life, for citizenship and for mutual coexistence (Justicia, Benitez, Pichardo, Fernandez, & Fernandez, 2006). Schooling develops childrens' knowledge, skills, and abilities and enables each learner to make informed and responsible choices. At school, children learn the life-skills of responsibility, trustworthiness, self-respect, fairness, and caring. The teaching of these social skills, and the responsibility for developing young people balanced in their socio-emotional status, has developed as a goal for public education secondary to scholastics, yet still vitally important within the educational realm.

Schools traditionally have addressed each child's learning, one student at a time. Yet, as the power of systems-theory (Bánáthy, 1992) has become established in the minds of school leaders the opportunity to spread the positive effects of public education across more children has meant a paradigm shift away from *individual* interventions towards *group* interventions (Fagan & Wise, 2007). Contemporary educators accept and incorporate the power of interrelated forces in the educational ecosystems. In turn, this has led to an acceptance of the power of *peers as co-instructors* as well as the creation of a goal of *improving the learning community*.

Coincidental with schools' growing interest in providing group-learning opportunities for social skills' development has been an increase in service-learning. Service learning integrates meaningful service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities (http://www.servicelearning.org/what-service-learning).

When young people have a voice in decisions that affect their own lives and those of their peers they form stronger commitments to school and community and choose to act positively as agents of social change (Coalition of Community Foundations for Youth, 2002; Zeldin, Camino & Calvert, 2003). Service-learning emphasizes the power of including "young people as a mean-

ing part of the creation and implementation of service opportunities" (Fredericks, Kaplan, & Zeisler, 2001, p. 1).

Such opportunities are becoming relatively commonplace in the USA. In a recent governmental survey of a national sample of more than 2,000 Kindergarten through High School principals across the USA one-in-four schools were identified as providing 'academic-credit' for school-based community-service (Spring, Grimm & Dietz, 2008). A national study of USA-based service learning programs demonstrated that effective service-learning programs improve academic grades, increase attendance in school, and develop personal and social responsibility (Melchior & Bailis, 2002). Similar findings have been established for achievement gains on measures of cognitive complexity and problem-solving (e.g., Billig & Klute, 2003; Billig & Meyer, 2002; Meyer & Billig, 2003), overall academic functioning (Kirkham, 2001), attitude towards school (Furco, 2002; Kraft & Wheeler, 2003), and motivation to learn (Ritchie & Walters, 2003). The increased level of civic engagement in today's North American youth has been attributed to their opportunities and experience in making contributions at the school and community levels (Melchior & Bailis, 2002).

Models incorporating peers as helpers to their age-mates are not new. Peer groups have been shown to be positive social influences on potentially disaffected youth (e.g., Benítez-Muñoz, Almeida & Justicia, 2007; Cowie & Fernandez, 2006). Benefits have been established both for the student helped by interventions as well as those acting as helpers (Andrés, Barrios & Fernández, 2006). Changing instructors' *understanding* of antisocial behavior can be accomplished in schools (e.g., Benitez, Garcia-Beben & Fernandez-Cabeza, 2009) and instructors can teach children the *skills* for managing their antisocial behavior (Benitez-Muñoz & Justicia, 2006).

Thus, we may confidently conclude that schools serve their communities best when students are engaged in tasks that improve their learning communities; that schools' contribution to developing students' prosocial repertoires can be accomplished in group-settings by knowledgeable instructors; that students can be efficient and effective guides to one another; and that pro-

viding service learning opportunities is a means leading children to closer affiliation with their school and subsequently to improved educational performance at the individual level.

Positive Peer Groups: The Theoretical Base for the Positive Peer Group Program

The Positive Peer Groups (PPG) program is based on Donald Wonderly's (1991) conceptual research which posits that: (1) Children want to contribute meaningfully to others. (2) Children need to make contributions but do not necessarily have the skills or opportunity to do so. (3) Meaningful contributions to their school will increase children's positive attitude toward their school. (4) A program that enhances the students' positive attitude toward work will, in turn, increase school performance, attendance and classroom participation, and related positive behaviors.

The central focus of the theory is that WORK plus DISCIPLINE plus RESPONSIBILITY brings SUCCESS. The major focus of the PPG program is to develop leadership qualities by capitalizing on certain assumptions about children: (1) Children's need for group membership can be a powerful force for change; (2) Contributions to the school should involve *service* as motivation; and (3) A positive atmosphere of service can influence other positive social characteristics.

The PPG program was designed to have an impact on a variety of psychological, social, and educational areas. These include, among others: Peer relations; psychosocial development; school experiences; initiative; social competency; socialization within the school environment; bonding to school; attitude toward work, and issues associated with discipline and drug-free behavior.

The focus of the PPG program is on effecting system-wide improvement; the goal is not on 'saving' or changing the behavioral repertoire of any single child. Thus, the target is the *group* or the *school-system* and not any individual child. As a result, this intervention approach emphasizes *group work*, *group planning*, and *group implementation* of all elements of the selected activity program. Consensus building is a necessary by-product of the program's

implementation. Problem solving skills are taught for implementation within the school *society*—and not by individuals or dyads. The program has an entirely different focus from most 'special education' approaches that target disaffected youth who exhibit behavioral excess. In traditional interventions it is typical for the emphasis to be on *individualized* programming. In the PPG approach the individual is never directly served as an individual, but rather as a *group member* who needs to function successfully within an educational *system*.

Program Objectives:

The five objectives of the program were codified from the research documentation as follows:

1. Psychosocial Development: To build and develop prosocial skills.
2. Responsibility: To build personal responsibility.
3. School Experience: To bond with the school community.
4. Social Competence: To manage conflict responsibly.
5. Socialization: To foster identification with a positive peer group.

As an outgrowth of such social enculturation, it is anticipated that the children will also experience what communication specialists call 'inoculation'—the build-up of a reasoned resiliency against the contrary ideas and actions of others. This inoculation against peer pressure should help to protect children against such behaviors as drug use and violence—much as inoculations help fight communicable disease. These objectives were then extended to a 25-week curriculum designed for seventh grade students (12-yrs. old).

Method

Participants

This report summarizes the outcome effects of Positive Peer Groups (PPG) program initiatives developed and implemented by Prevention Systems Intervention, Inc. (PSI) of Twinsburg, Ohio USA, in 17 schools with 198 students.

Participants in Positive Peer Groups

Children were selected to participate in the program by their teachers because they matched one of four leadership patterns defined by success, by failure, or by disengagement within their peer group. The leadership categories were:

1. Positive or 'well-rounded'/prosocial Leaders (i.e., students viewed by adults as strong prosocial role-models and exemplars of high-social-standards, with developed skills in finding resolutions to problems);
2. Controversial Leaders (i.e., students who are socially liked but predominantly for rebellious behavior);
3. Rejected Isolates (i.e., students who are actively disliked by other students); and
4. Neglected Isolates (i.e., students who are neither actively liked nor disliked by the other students).

Students in the same clases as those selected as 'leaders' but who were not selected for the intervention became the 'control' or comparison group. Thus, the two groups, the one receiving training and intervention and the other receiving no extraordinary training, were possibly different from the outset. In order to make our comparisons legitimate, we investigated the groups' demographic characteristics before the program started and did not find any statistically significant or practical differences. Our study, then, is psychometrically solid enough to warrant legitimate conclusions

Instrumentation

The PPG program was designed to have an impact on a variety of psychological, social, and educational areas. These include, among others: Peer relations; psychosocial development; school experiences; initiative; social competency; socialization within the school environment; bonding to school; attitude toward work; and issues associated with discipline and drug-free behavior. Instruments were selected from among those published by reputable test developers using content validity (i.e., subject matter relevance) as the principal criterion and reliability as a secondary criterion. In addition, custom-designed instruments were developed to effect program evaluation.

The *Teacher Global Rating Scale* is a measure created by PSI staff to reflect teachers' perceptions of selected outcomes of the Positive Peer Group service learning program. Teachers are asked to describe each child on six scales using a 7-point Likert scale, from: 1—*Exceptionally Negative*, 3—*Somewhat Negative*; 5—*Somewhat Positive*; to 7—*Exceptionally Positive*. Test-retest reliabilities were calculated between the pretest and the posttest scores for 429 control subjects who had not received any intervention. The scores would be expected to remain sTable 5xcept for any maturation of the students or any differential impact among students of the standard school experience. In theory, then, the correlations should have been 1.0 over the twenty week span of the intervention program. The reliability coefficients were all in the range of .60 to .69, indicating moderately high reliabilities for a 20 week period.

The test-retest reliabilities for each of the scales, along with the descriptive phrases which accompany them to aid in interpretation were:

1. *Classroom Behavior* (.66): Participating in class discussions and activities.
2. *Responsibility* (.63): Completing and submitting assignments; bringing materials to class.
3. *Following Directions* (.62): In class work; for assignments; for non-academic tasks.
4. *Punctuality* (.60): Attending class regularly; being on time.
5. *Social Behavior* (.69): Being accepted by peers; getting along with others; being a friend; being cooperative; showing appropriate leadership.
6. *Problem Solving* (.67): Handling problems appropriately; showing initiative; not easily discouraged.

Implemented as a data-gathering tool for this group was the final version of the *PSI Student Survey* (PSISS). The development of the PSISS followed the standards set by the National Council on Measurement in Education (http://www.ncme.org/index.ace) and the American Psychological Association Joint Committee on Testing Practices 2001 draft policy (http://www.apa.org/science/ jctpweb.html). The PSISS is a five scale, paper-and-pencil survey instrument designed to measure students' self-perceptions of behaviors related to the goals of the interventions. This protocol was selected to reflect content validity (i.e., subject matter relevance) as the principal criterion and established reliability as a secondary criterion.

Items of the *PSI Student Survey* include:

Self Discipline (Alpha Coefficient, .75)

1. I finish my work on time.
2. I keep doing things even when they are boring.
3. I work hard to get what I want.
4. I work hard in school.
5. I try to be on time.

Work Ethic (Alpha Coefficient, .83)

1. I do well in school.
2. I do my homework.
3. I plan to work hard when I go to work so I can get ahead.
4. I am working to do my best in school.
5. I want to go as far in school as I can, maybe to college.

Behavioral Accountability (Alpha Coefficient, .80)

1. I take the blame when I make a mistake.
2. I return things I borrow on time.
3. I admit it when my parents blame me for something I really did.
4. I try to follow the school rules.
5. I try to work hard to improve myself.

Bonding to School (Alpha Coefficient, .80)

1. I like being in school.
2. I like the teachers and other adults in my school. I like the things taught in school.
3. I act the way I should in school.
4. I work on assignments to get the best grade I can.

Anger Management (Alpha Coefficient, .34)

1. I think, if I had to, I could talk my way out of a fight.
2. I use different ways to calm down when I get mad at people.
3. I can calm down if I get mad at somebody.
4. I walk away from fights.
5. My friends and I can settle our problems by talking it out.

Additional instruments selected to assess the effectiveness of the intervention, and the reliability coefficients for each of the scales, are:

1. The *Teacher Global Rating Scale,* test retest reliabilities range from .60 to .69 (Kazdin, 1980).
2. The *Piers-Harris Children's Self-Concept Scale*, internal consistency of .90 (Piers, 1986).
3. The *Behavior and Academic Self-Esteem Scale,* with scale reliabilities ranging from .60 to .69

4. The *PSI Student Survey,* behavior scale internal consistency reliabilities range from .48 to .70, and test-retest reliabilities range from .61 to .75; the attitude scale internal consistency reliabilities range from .54 to .74, and test-retest reliabilities range from .70 to .80.

All tests were administered in a paper-and-pencil format by PSI psychologists, educators or social workers. Students were given as much time as needed, within reason, as judged by the staff proctoring the sessions. Due to the usual problems with student attention, incomplete responses, and missing posttest data, the number of cases for each analysis differs across subscales.

Procedure

Treatment

The experimental service learning intervention was the Positive Peer Group (PPG) initiative developed by PSI Affiliates, Inc. The core program was carefully constructed and planned to last 20 weeks. Five additional weeks are allocated for selecting the child-participants, discussions with the teachers, other managerial activities, and organizing and conducting research.

The intervention program provides students with an opportunity to work together in small, heterogeneous groups on projects that contribute to improving their school or solving a problem that they themselves recognize within their school. The curriculum uses the influence of positive peers as a motivator. The program intervention incorporates a 25-consecutive-week project during which students complete a school needs-analysis, plan a project, and evaluate the impact of their project. The program implementers have experience with parallel projects involving similar activities in other local school settings; thus, some comparisons with other settings are possible, and are presented within this report where relevant.

Prior Implementations of the PPG Program.

The interventions described here were designed and implemented by the Prevention Initiatives Division of PSI Affiliates, Inc. (www.psi-solutions.org), Twinsburg, Ohio, a human services consortium of psychologists, educators, and prevention specialists who work in partnership with over 250 schools in Ohio, USA. The organization's title PSI reflects the founding philoso-

phy that drives all its program implementation — *Prevention through Systems Intervention*. The program implementation and evaluations were planned and executed by PSI staff in the schools being served.

Positive Peer Groups (PPG) was a well established intervention program prior to the current investigation; one that has been successfully incorporated into public and religious-foundation regular and special education settings with positive evidence and results (see for example Rosenberg, McKeon & Dinero, 1999; http://www.pdkintl.org/kappan/kros9910.htm). By 1996-7 the program had been implemented in 24 schools as an intervention for 480 students; in 1997-98 the program was implemented in 40 schools with 414 students; and in the following academic year, 1998-9, the program was implemented in seven schools as an intervention for 76 students. Consequently, these earlier implementations for almost 1,000 students across 70+ schools may be viewed as substantial pilot implementations to refine the intervention's administration and the skills of the facilitators.

Implementation of the Current Research

Students worked with facilitators to implement school-based projects that supported the functioning of their school (e.g., selling healthy-snacks to their fellow students; painting the school's stairwell; designing, crafting and installing a logo and signage for their school, etc.). In each case students themselves completed a needs-analysis, planned the service-learning activity, worked out the financial details and sought funding, and then implemented whatever was needed to complete the required task. Using the influence of the peer group as a motivational force, the Positive Peer Group Program created a context within which students contributed to their schools while interacting with peers selected for their leadership qualities and with adults in an adult-context.

The PPG program has as its target the creation of change in groups of disaffected youth in their attitude toward self, school, and society. The program solicits from children suggestions of 'worthy' school-based enterprises, and then assists the children in implementing these suggestions into the fabric of the school's life. The entire implementation of the selected goal-activity is the responsibility of the students—the facilitator assists them only by 'running interference' to ensure that children's plans can be fulfilled. The only limitation on the activities

selected by the children for implementation in their school is that the proposed activity enhances the school's functioning, as a system, or the functioning of groups of its members. So long as the proposed program is safe, and that there is consensus among a group of children committed to implementing the change, then the children's own plan is unequivocally supported.

Analysis and Results

Experimental Design and Statistical Treatment

As in prior implementations of this research-based intervention, an interpretive statistic was included to facilitate explanation of the data and to aid in curriculum diagnostics. This statistic is the Effect Size (Cohen, 1977), a measure of the impact of the program as indicated by the group differences. It is essentially the proportion of the total variance accounted for by the test in question and calculated by the ratio of the between-sum of squares to the total-sum of squares. Cohen has established arbitrary, but reasoned and now widely-accepted suggested interpretations of the index, as determined by results found in the social science literature. Values are standardized and can be interpreted as follows: Zero to .35 is a *low* amount of impact; 35 to .65 is a *medium* impact; and any value over .65 is a *strong* impact. The Cohen (1977) interpretations were established for social scientific research covering a wide variety of treatments. It is cautioned that, since the PPG Program is an innovative and multi-faceted endeavor, these interpretations may be far too conservative to discern the true impact of the program. Rather, they are guidelines for interpreting scientific research and should be adjusted for systems in development.

Data collection was conducted during the academic year 2000-2001, before the beginning of the PPG sessions and in the year immediately following; therefore the design had a pretest-posttest experimental-control structure. Two-way repeated measures analyses of variance were run with a critical value set at $\alpha = .05$. The two factors were "Time", reflecting the before-and-after the program differences and "Group", reflecting the program-control group differences. This is a conservative statistical test which presents an objective indicator of differential changes between the initial testing and the one following: *Values larger than a critical point, selected before the fact, are used to indicate that the results could not have occurred by chance and therefore that the program had a non-chance impact in that area*. Only one statistical test, that

for the interaction between the two factors, was run in order to minimize alpha or Type I (False Positive) errors.

Results

The results of this investigation are summarized in Tables 1 through 5 and in the text below (see *Author Note*). In Figures 1-4 the general demographic data describing the groups are illustrated (e.g., Figure 1—School Locations; Figure 2—Ethnic Mix of Program Participants; Figure 3—Gender Pattern of Experimental Group Participants; and Figure 4—Socio-Economic Status of Students).

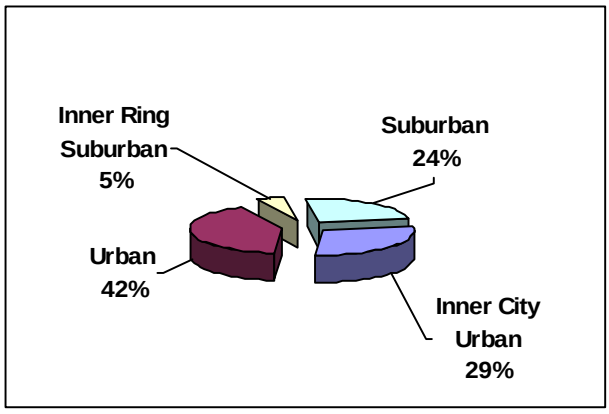

***Figure 1*. School Locations, PPG Program**

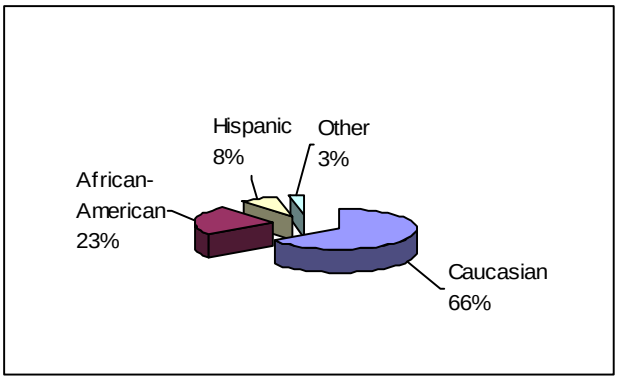

***Figure 2*. Ethnic Mix of Program Participants**

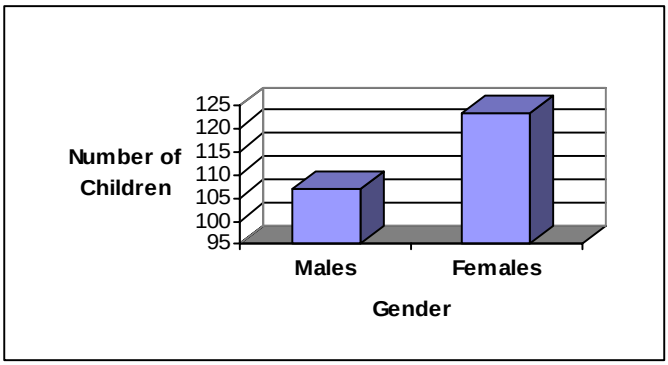

Figure 3. **Gender Pattern of PPG Participants**

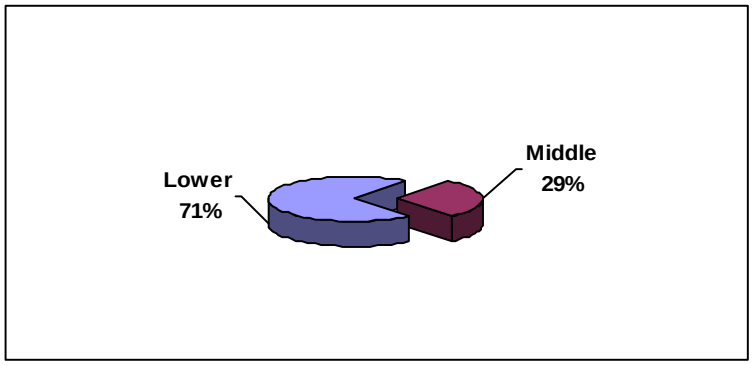

Figure 4. **Socio-Economic Status of Students**

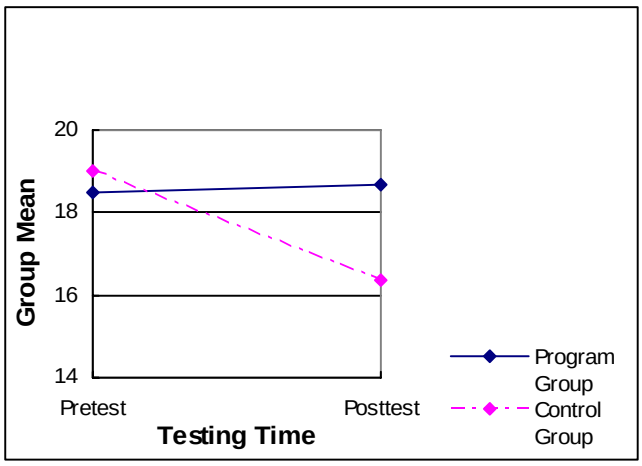

Figure 5. **Disordinal Interaction Pattern for Self Discipline**

Tables 1-5 summarize the data and indicate that the experimental program had a statistically significant impact in *all* of the stated program goals. The four instruments have a total of 27 scales among them, and of the 27 scales analyzed, 21 were found to be statistically significant. That is, the trend line for the program students was demonstrably different from that of the controls in a positive direction. This is a strong convergent indication that the program had an impact on these students.

Table 1. Summary of tests for the PSISS, PPG Program

Subscale	Significance	Effect Size
Attitude		
Self Discipline	No	-
Work Ethic	Yes	.048
Behavior Accountability	No	-
Bonding to School	Yes	.023
Anger Management	Yes	.036
Behavior		
Self Discipline	Yes	.046
Work Ethic	Yes	.053
Behavior Accountability	Yes	.033
Bonding to School	No	-
Anger Management	No	-

Table 2. ***Summary of tests for the BASE, PPG Program***

Subscale	Significance	Effect Size
Student Initiative	Yes	.030
Social Attention	Yes	.058
Success / Failure	Yes	.030
Social Attraction	Yes	.036
Self Confidence	Yes	.024

Table 3. Summary of tests for the TGRS, PPG Program

Subscale	Significance	Effect Size
Classroom Behavior	Yes	.063
Responsibility	Yes	.035
Following Directions	Yes	.038
Punctuality	Yes	.079
Social Behavior	Yes	.039
Problem Solving	Yes	.046

Table 4. ***Summary of tests for the Piers-Harris, PPG Program***

Subscale	Significance	Effect Size
Behavior	Yes	.121
Intellectual and School Status	Yes	.129
Physical Appearance and Attributes	Yes	.197
Anxiety	No	-
Popularity	Yes	.130
Happiness and Satisfaction	Yes	.094

Table 5. Points of Impact of the PPG Program

PROGRAM GOAL	VARIABLE	TEST
Psychosocial Development	Self-confidence	BASE (Table 2)
	Happiness and Satisfaction	P-H (Table 3)
Responsibility	Self-Discipline *(Behavior)*	PSISS (Table 1)
	Behavior Accountability *(Behavior)*	
	Work Ethic *(Behavior)* + *(Attitude)*	
	Responsibility	TGRS (Table 3)
	Punctuality	
	Behavior	P-H (Table 3)
School Experience	Problem Solving	TGRS (Table 3)
	Following Directions	BASE (Table 2)
	Student Initiative	
	Success / Failure	
	Intellectual and School Status	P-H (Table 3)
Social Competency	Anger Management *(Attitude)*	PSISS (Table 1)
	Social Attention	BASE (Table 2)
	Physical Appearance and Attributes	P-H (Table 3)
Socialization	Social Attraction	BASE (Table 2)
	Social Behavior	TGRS (Table 3)
	Popularity	P-H (Table 3)

Note: PSISS = *PSI Student Survey*; BASE = *Behavior Academic Self-Esteem*; P-H = *Piers-Harris*; TGRS = *Teacher Global Rating Scale 2*. The effect size is a statistic used to interpret the research hypotheses. All values presented here reflect those results that were greater than chance and are indications of the impact the program had on the area in question.

In order to describe the nature of this impact, the patterns of the means on the 21 scales for the two groups were studied. All the means showed the same pattern, which is illustrated in Figure 5. The pattern indicates that the control groups decreased in the attributes being measured while the program groups remained at their initial levels. Both groups started at about the same level on all the scales. First, it should be noted that the program means staying the same indicates a degree of stability in the scores and an implied consistency in the students' responses and hence the attributes themselves. This corroborates the reliability data reported in the instruments' test manuals which were initially used to select the scales. Second, the decline in the means of the control groups supports the rationale for implementing the program and corroborates the need for such intervention. *In summary, the PPG service learning program appears to have strong evidence that it reinforces and helps to maintain the participants' positive behaviors and values.*

There was some embedded redundancy in the testing program; with some goals covered by more than one instrument or scale. This provides a validity check independent of the measurement process (and, in terms of program refinement, allows for the investigation of modifications to the intervention curriculum). The results found for each goal are summarized in Table 5 and discussed individually below.

The *PSI Student Survey* contains two parallel sets of items, the first measuring the students' feelings or attitudes toward the various aspects of the program goals and the second measuring their reported behaviors. On the *Attitude* section, the program group showed a differential growth on three of the five scales: *Work Ethic*, *Bonding to School* and *Anger Management*. Program students maintained their initial feelings about the value of work and the need for it (19 points from a maximum of 25); their feelings of belonging in the school and the relationships to the people there (16 of 25); and their attitude toward the need for managing one's anger and reducing the amount of low-to-moderate level violence in the schools (18 of 25). There was no differential change on the other two attitude scales, *Self-Discipline* and *Behavior Accountability*. These are both indicators of personal responsibility and internalized ethics and are not strong indicators of a relationship of the respondents to an external status quo. This is a significant and positive finding in the evaluation of the PPG program: *The program intentionally targets the individual's relationship and attitude towards group-norms; it does not target the*

'internalized' characteristics of self-esteem, self-worth, or self-valuation. Thus, it was appropriate and relevant that no change was identified in the two 'self-related' variables on the PSISS survey instrument.

On the *Behavior and Academic Self-Esteem* scales, a series of 16 Likert items published by Consulting Psychologists Press, Inc. for use by teachers, the program showed an impact on all five scales (See Table 2). The control group decreased three points (out of 21) on *Student Initiative* while the program group essentially remained the same (see *Author Note*). Again, the pattern was one of helping the program students to maintain their initial ratings. The greatest impact, as indicated by the effect size, was on *Social Attention*. This scale reflects the child's general behavior, while *Student Initiative* indicates self-direction and independence in school contexts and a willingness to undertake new tasks. *Success-Failure* reflects his/her dealing with failure, and *Social Attraction* relates to the degree the child appears to get along with his/her peers and show leadership.

The program also had an impact on all the scales of the *Teacher Global Rating Scale* (TGRS; see Table 3). The TGRS measures a mixture of behaviors fundamental to successful participation in school academic and social activities (such as responsibility, following directions, and punctuality) and intellectual activities (such as participating in class discussions and problem solving). It would appear that the organizational and social skills necessary for participation in program activities help sustain the initial levels without the slippage seen in the control children. This effect was seen especially on *Classroom Behavior*, *Punctuality* and *Problem Solving*.

The program also had an impact on 5 of 6 indicators for different aspects of the participants' self-concept (*Anxiety* was unchanged). The affected characteristics were: (1) Admitting or denying problematic behaviors; (2) Assessment of his/her ability to handle academic tasks; (3) Leadership and the ability to express ideas; (4) Popularity; and (5) A general sense of well-being. As in all prior evaluations of this program, the activities and interaction with peers and adults which form a large part of the program interventions appears to have a positively inclined impact on participants' specific and general self-concepts.

The impact of the Positive Peer Group Program may further be understood and clarified by seeing how it relates to each of the program goals; such information is presented in aggregated, summary form in the Table 5. The data on the five program goals are next summarized.

Goal 1: Psychosocial Development—This program goal relates to the child's well-being, self-confidence and general satisfaction with his or her life. Teachers observed that the program students held their own in the ability to express ideas and in their appreciation of their work and work products. Since *work* is a fundamental idea in Wonderly's conceptual system (1991), meeting this goal was important. Participants also remained stable in their perceptions of themselves as happy, lucky, and "a good person." They like being the way they are and would not want to change. In summary, the program appears to have had a moderate effect on the degree to which the children feel positive about their lives, general self-concept, and dispositions. It also appears to have had an effect on the degree to which the children express their opinions and appreciate their work, work products, and activities. In terms of peer-relations, the results here support the program's effect on positive behavior in class (quiet in class and speaking in turn) and cooperation with others. It also indicates that participating children had a greater degree of appropriate talk about school accomplishments (See Table 2).

Goal 2: Responsibility—As a program goal, responsibility is perhaps the most important of the PPG's targeted outcome sets. It is measured by seven scales, six of which showed the common pattern that distinguished the program group; that is, stability for the experimental group compared to the control group's decline. Participants reported that they finish their work on time and work hard (Table 1). They also report being able to take blame and to have a sense of responsibility and to recognize the tie-in between hard work and success (Table 1). This was further corroborated by the *Behavior* scale of the Piers-Harris (Table 4). Their teachers also noted the stability of the students' responsibility and punctuality (Table 3). Specific to the arena of *responsibility*, the program appears to have had an effect of reducing the number of instances in which participants reported having been punished for school infractions, including being removed from of class for behavioral infranctions, required to staying after school as a punishment, or being assigned an extra assignment. The xperimental group children showed a

slight, non-significant shift toward more punishment occurrences while the control children demonstrated a much larger increase in the number of punished infractions.

Goal 3: School Experience—School experience is the student's socially positive and healthy adaptation to the school environment and his/her success in understanding and using its assets. The participating program students showed a strongly improved perception of their intellectual and school status. Program participants were helped to remain stable in this area as reflected in seven of the eight scales meant to measure it (*Bonding* on the PSISS Behavior Scale being the single exception). Participants reported a sTable 1ttitude toward their intellectual self-concepts (Table 4) and their feelings of belonging in the school (Table 1). Teachers reported that participants held constant in their school's academic behaviors: *Problem solving; following directions;* and *academic initiative* (Table 3). In addition, teachers reported that the participants' *Initiative* held steady (this includes willingness to undertake new tasks, make decisions, show self-direction, and bring up new ideas in classroom activities; Table 2). The intervention program also had a moderate-to-strong effect on the children's self-assessment of their ability to deal with academic and intellectual tasks and their general satisfaction with school. This variable is a part of the general self-concept; tying into this increase might therefore be two other improvements: (1) Attachment to school; and (2) The psychological rewards the students receive from school experiences. These are two major foci of the PPG program since they are a part of the process of bonding to school; thus, these data appear to signal that participants are on their way to becoming citizens well integrated into society.

Goal 4: Social Competency—This goal reflects the program's focus on constructive and mutually-supportive social interaction with one's peers. Social competency involves a complex of social behaviors, with several of them influenced by the PPG program. *Positive Peer Associations* is an attempt to measure positive and negative peer influence. *Interpersonal Competency* is having a clear picture of who one is and how to talk to and get along with a variety of people (including teachers). These are the areas on which the program had a positive influence. Participants reported a steady attitude toward social stability and non-violence in the school setting (Table 1) and an increase in theire perception that peers will accept their ideas (Table 4), while teachers reported that the students remained stable in their politeness in class and cooperation with other children (Table 2).

Goal 5: Socialization—This goal reflects maturity in social situations. It includes showing appropriate leadership (Table 2), social behavior (Table 3), which includes being friends and being cooperative and general popularity (Table 4). The program had a positive impact on all these indicators. While the program had a modest effect on the children's social behavior as perceived by their teachers, it had a very large impact on the children's perceptions of their physical selves, their leadership skills, and their ability to express ideas. The program also helps the children to become more punctual. The program appears to have had an impact on two other areas of socialization: (1) The degree to which the children are integrated (or not alienated from) the school environment and how comfortable they feel within the environment; and (2) Children's belief in conventional rules (i.e., the extent to which they see rules as part of the conventions of society and appreciate the moral validity of society's rules). Psychologists believe that such appreciation is a potent restraint against engaging in future misconduct. This includes within-school conduct as well as adherence to societal or moral laws (e.g., prohibitions on stealing and taking advantage of people, respectively).

Discussion

One of the characteristics that make this intervention effort and analysis unusual is the use of statistical data as the primary source, with complementary qualitative data from a variety of affected stakeholders. The sources of the data are the program participants, their parents, and school administrators. Such data sets allow us to study program effectiveness and elicit implications for planning further improvement.

The Positive Peer Group Program had a broad and discernible impact on participants when compared to control conditions. Except for a relatively few scales, all indicators showed a statistically significant difference between the trend line of the program and control groups. Additionally, the differences all showed the same pattern: *A level and steady pattern in the experimental group and a decline in social awareness and behavior in the control group*. Because the experimental design of this evaluation is a *true experimental format*, including a matched control group, there is strong causal evidence that the program positively influenced children’s behaviors and attitudes toward a wide variety of important school and cultural issues.

Moreover, the pattern over the 20-weeks of actual implementation indicates that a group-focused intervention program can help students maintain through time their initial behaviors and attitudes. Meanwhile, it also appears that there are societal forces that influence students who do not have outside supports to experience a gradual but discernible reduction in their positive social attributes through time. School-based experiences such as the PPG program appear to support the maintenance of positive social improvement, while absent such support the 'natural experience' (i.e., without school-based supports) children experience a decline in their willingness to adhere to social and moral rules. This developmental/maturational feature has long been recognized by teachers in secondary education who note that earlier the same children seemed to have greater willingness to act socially responsible than they do once they reach adolescence. The existence of a naturally-occurring decline in the mean scores of the control group across virtually all scales investigated supports a rationale for implementing school-based support programs and corroborates the need for such intervention. The program appears to reinforce and help maintain participants' behaviors and values.

Evaluation results, seen both in changes in test scores and anecdotal evidence reported by educators, indicate support for all of the program's goals. Children who experienced the group-based *service-learning* intervention showed an improved attitude toward their teachers and school administrators. In addition, participants showed an increased willingness to undertake new tasks, to initiate new ideas, to cooperate with others, and to cope with failure—that is, students become more willing to undertake new tasks and initiate new ideas. More importantly, they seem to benefit from the group experience, cooperating more with each other and learning to tolerate individual differences. They show a greater awareness of the school dynamics and the roles that people play in a societal microcosm. There also appears to be a positive effect on some aspects of self confidence (although that was not a declared program goal).

Conclusions

There is strong confidence that the PPG program creates a positive effect on a range of behaviors and attitudes, with implications for a wider outreach of the program's principles to

teachers and parents. Having empirical evidence to support a contention of *effectiveness* provides credibility and specific direction for future implementation.

Optimally, there should be a triangle-of-support for children's growth: With the child and his/her peers forming one point of the triangle; the school is a second point; and the parents as the third. Assuming that the points of this model triangle are *lines of communication*, it becomes natural to propose a role for program facilitators as communication-supporters for this triangular pattern. The triad of child/teacher/parent is the strongest support model yet envisaged for children. The PPG program encourages interaction and communication between the child and his/her peers, and between and among the child and school personnel.

The potential effect of a system-based program like the PPG would probably be enhanced if teachers had an immediate understanding of the ways that the program goals might be integrated into instructional strategies. Further, with increased parental involvement students would see the program goals within all three of their socialization forces: *Peer, teacher, and parent.* In this way, the triangle-of-support for children's growth can further be strengthened and stabilized.

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