

Peers Helping Peers: The Effectiveness of a Peer Support Program in Enhancing Self-concept and Other Desirable Outcomes

Louise A. Ellis, Herbert W. Marsh, Rhonda G. Craven, and Garry E. Richards
Self-concept Enhancement and Learning Facilitation Research Centre
University of Western Sydney, Australia

Paper presented at NZARE AARE, Auckland, New Zealand, November 2003
ELL03779

Peers Helping Peers: The Effectiveness of a Peer Support Program in Enhancing Self-concept and Other Desirable Outcomes

Louise A. Ellis, Herbert W. Marsh, Rhonda G. Craven, and Garry E. Richards
Self-concept Enhancement and Learning Facilitation Research Centre
University of Western Sydney, Australia

This study examined the effects of participation in a peer support program designed to smooth the transition to adolescence and secondary school for seventh-graders by enhancing self-concept and other desirable outcomes. Participants in the study were students from a secondary school in Sydney, Australia. One hundred and thirty Grade 7 students participated in weekly groups facilitated by Year 10 students, and served as the experimental group. The program consisted of 12 fifty minute sessions. Study participants in the experimental and control groups completed an extensive self-report questionnaire on 3 occasions (near the beginning of the year, 12 weeks later, and towards the end of the year). The results suggested that, although the peer support program had no impact on self-concept, significant effects were found for participant's ability to adapt to change, coping strategies, and attitudes towards bullying. Moreover, these effects seemed to be retained over time.

Early adolescence has been described as a pivotal stage of development that is marked by a confluence of biological, behavioural, social and intellectual change. Around the same time that adolescents are undergoing these personal changes, they are also undergoing the transition from primary to secondary school. New secondary school students face a multitude of changes, such as differences in educational demands, teacher attitudes, grading systems, and a disruption of social networks. As adolescents are faced with such tremendous change, it is not surprising that for some, this period is fraught with difficulty and poor outcomes. For example, declines in self-esteem (Hirsch & DuBois, 1991), increased negative attitudes towards learning (Brush, 1980), lower levels of intrinsic motivation (Gottfried, 1981; Harter 1992), increased anxiety about school (Harter, Whitesell, & Kowalski, 1987), as well as a decline in grades (e.g., Alspaugh & Harting, 1995; Crockett, Petersen, Graber, Schulenberg, & Ebata, 1989; Reyes, Gillock, & Kobus, 1994; Simmons & Blyth, 1987) have been found among students entering secondary school. In addition to an increase in school-related problems, the early adolescent period has been associated with a sharp increase in rates of psychological symptoms and maladaptive behaviours, such as anxiety, depression, substance abuse, eating disorders, and anti-social conduct (e.g., Cohen et al., 1993; Kazdin, 1993; Petersen et al., 1993; Young et al., 2002). Perhaps most disturbing, is the dramatic increase of attempted and completed suicide with the onset of adolescence (e.g., Hawton, 1982; Kazdin, 1993).

Evidence suggests that, while many negotiate this period with few difficulties, adolescents today face even greater risks to their current and future well-being than any time previously documented (Barber & Crockett, 1993; Zaslow & Takanishi, 1993). A key question remains. Why it is that today's adolescents are facing an even greater risk for difficulty? Part of the answer, could be that the demands and expectations, as well as the risks and opportunities facing adolescents, are both more numerous and more complicated than they have ever been before. According to the Carnegie Council on Adolescent Development (1995) today's youth:

are dealing with social pressures to use drugs, including alcohol and cigarettes, and to engage in sex at distressingly early ages...Urban neighbourhoods once secure are unsafe: even classrooms and hallways can erupt into battlegrounds. With easier access to weapons and

drugs that endanger themselves and others, adolescents have increasing reason to fear each other. Many have not learned how to handle conflict without resorting to violence. (p.39)

During this critical time, when adolescents face unprecedented choices and pressures, adolescents may not be receiving sufficient adult guidance and support. The frenzied pace of contemporary life, coupled with the availability of a range of time-consuming commodities, such as television and computer games, have helped create barriers within families (Charlton, 1998). Nowadays, both parents often work full-time and are being required to work longer hours, which has meant that families have less time to spend with each other. Family structures have also changed dramatically, as both divorce and single-parent households are far more common than a decade ago. Many divorced parents become overloaded and socially isolated as they attempt to juggle household, childcare, and financial responsibilities that were previously dealt with by two parents (Hetherington and Stanley Hagan, 1997). As a result, it is not surprising that such parents can become uncommunicative and less supportive in dealing with their children (Hetherington, Cox, & Cox, 1982).

How Can Peer-Support Help?

Due to the enormity of problems faced by today's youngsters, researchers and practitioners have called for strategies to assist them to overcome adjustment difficulties. This is particularly important as early adolescence has been found to be a critical "turning point" for many youth, one of the "last real opportunities to affect their educational and personal trajectory" (Jackson & Hornbeck, 1989, p. 831). In light of this evidence, educators have intensified their efforts to create schools which are responsive to adolescent development and make students feel a part of a supportive and caring community (Clark & Clark, 1993; Mac Iver & Epstein, 1993). Over recent years, peer support programs have been proposed as part of the solution in addressing students' problems (Wassef et al., 1995). Given the erosion of traditional support structures, the notion of encouraging students to support one another appears to be worthwhile. The potential of peer programs is even more compelling in view of the preference for adolescents to turn to peers rather than parents for information, support in times of stress, and advice on personal problems (e.g., Fenzel & Blyth, 1986; Sebald, 1989; Vineland, Whittle, Garland, Hicks, & Schaffer, 1991).

Over the last decade, there has been a proliferation of programs incorporating peer-based strategies, such as peer tutoring, befriending, and peer counselling programs. Cowie and Wallace (2000) argues that peer support systems can enhance pro-social behaviour and can transform a school from one that is indifferent to one that is warm, friendly and emotionally open. However, while peer support is recognised as a useful approach, it is often restricted to pupils with learning difficulties and emotional and behavioural problems, and not applied to all students. This paper examines the effects of an Australian designed Peer Support Program, which is intended to be implemented to all new students in secondary school. The Program has become quite popular in Australia, and a similar model is being adopted by schools in New Zealand, Singapore and Scotland.

The Peer Support Program

The Australian Peer Support Program trains senior secondary school students to work regularly with small groups of seventh grade students. The seniors are responsible for leading a group of seventh graders through the program content and activities, covering areas such as assertiveness, goal setting, group decision making, friendships, etc. The program is designed to assist secondary students to develop crucial values, skills and attitudes that will not only assist students through the turbulence of adolescence and the transition to secondary school,

but will also accompany them through adulthood. More specifically, the program claims that the program assists students by:

- Creating a safe and caring school environment
- Developing an understanding of themselves
- Developing competencies which enhance the quality of their relationships with others
- Learning how to solve problems individually and in groups
- Developing skills for positive, socially responsible participation in the school community
- Learning how to resolve conflict in peaceful ways

(Peer Support Foundation Ltd, 2001)

How effective is the Peer Support Program?

Are students any different after participating in the program? Answers have generally come forth in the form of testimonial and anecdotal support. However, there is little empirical evidence for the effectiveness of the program. One study asked participants at the end of the program what they learnt (Kaye and Webb, 1996). Impressively, ninety-nine percent of students reported that they enjoyed the program and nine-six percent felt that it helped them settle into school.

The purpose of this study was to empirically examine the effectiveness of the Peer Support Program on seventh-graders self-concept, personal and social skills, coping ability and attitudes towards bullying. An experimental pre/post/follow-up design was used, as well as a control group. The results of this study serve to increase our understanding of the key strengths of peer support programs, as well as their benefits in easing the transition to adolescence and secondary school.

Method

Participants

Participants were 254 seventh-grade students, approximately half of whom comprised the experimental group (N = 124), and the other half, the control group (N = 130). All of the students were from a moderate sized boy's secondary school, which served a highly multicultural student body. A large portion of students described themselves as being Lebanese (30%), followed by Australian (19%), and Vietnamese (14%).

A pre-test, post-test, and follow-up design was utilised with experimental and control groups. All of the participants were new to the secondary school and in Grade 7. The duration of the study was approximately two school years. Baseline data was collected on in 2001 near the start of the school year, 12 weeks later, and towards the end of the school year. The experimental group data was collected in 2002, also near the start of the year (prior to the intervention), 12 weeks later (at the end of the intervention), and three months later (towards the end of the school year) to parallel data collection times for the control group. The same measures were completed on all three occasions by control and experimental group participants.

Program Description

The Australian Peer Support Program was founded in 1971 by Elizabeth Campbell, a drug and health education officer in New South Wales who began using cross-age peer groups to deliver anti-drug programs. She found that the best people to speak to young people were other young people. Following her success with these programs, in 1983 the Peer Support Foundation was set up. Although the initial impetus behind peer support was an anti-drug initiative, the Foundation realised that the same methods can be applied equally to all students in schools. In 1984, the Peer Support Foundation's first program for Secondary Schools was introduced. The Primary Schools' Program followed this in 1989. At the beginning of 1984, six secondary schools had adopted the program. By the end of the year, this had grown to sixty schools. In New South Wales today, there are more than 1,600 primary and secondary schools from the government and non-government sector adopting the Peer Support Foundation's programs. Once the programs were established in New South Wales, the Peer Support Foundation began to support the delivery of peer support programs in other states of Australia. The Foundation also provides information and support to schools who have adopted the model in New Zealand, Singapore and Scotland.

The Peer Support Foundation has recognised that in order to keep their programs interesting and relevant, their programs must continue to develop and improve. The focus of the present research study is on the secondary school Core Peer Support Program for seventh grade students, which was revised in 2001.

Basically, the program involves senior students being responsible for taking their small group of younger students through the program. The secondary school program consists of 12 sessions. Each of the sessions were designed to run for forty-five minutes and the Peer Support Foundation advocates that sessions should take place once per week. The Peer Leaders, with the support of a supervising teacher, facilitate each session. Each group consists of eight to ten Grade 7 students and two peer leaders. The Peer Support Foundation has compiled a manual for the secondary school Core Program, outlining in detail the session plans (Peer Support Foundation, 2001). The aims of each session are clearly defined, guidance is given as to what preparation and materials may be needed, and the format for the activities is thorough, with suggested timing.

Procedure

Consent to conduct the current study was obtained from the University of Western Sydney Ethics Review Committee (Human Subjects). Participants under the age of 16 years were required by the committee to have written parental/guardian permission to participate. This procedure was completed by all participants prior to the administration of the questionnaire.

Participating students were asked to complete a self-report questionnaire on three occasions during the school year. Questionnaires were administered in a large hall by the research group in a regularly scheduled class period. Anonymity was guaranteed and participants were assured that the data would be used for research purposes only and not by the school. On the first occasion that students completed the questionnaire, the first questions regarding background information were worked through by the researcher with the group. Following this, the rating scale was explained to students and the meanings of some of the more difficult items were described to the seventh graders. Students were then asked to work through the questionnaire on their own and submit the completed form to the researcher when they had finished.

Instrumentation

Self-Concept

Three factors of self-concept (Same-Sex Relations, General School, and General Self) were used from Marsh's (2000) SDQII-S. See Appendix 1A for a description of the 3 scales and example items. The 3 factors, together consisted of 15 items, which were all scored on a 6-point Likert response scale (1 = False; 6 = True). In this study, internal consistency estimates (Cronbach's alpha) were good, varying from .72 to .81.

Personal and Social Skills

The Review of Personal Effectiveness scale (ROPE; Richards & Neill, 2000) was used to measure personal and social skills. The ROPE is a revised version of the Life Effectiveness Questionnaire (LEQ; Neill, Marsh, & Richards, 1997). The ROPE and LEQ have been specifically designed to be sensitive to the types of effects often produced by experience-based intervention programs. Over recent years, the ROPE has been widely used to examine the effectiveness of outdoor education programs, proving that the instrument is a psychometrically sound and useful tool for evaluating program outcomes (e.g., Neill, Richards, & Badenoch, 1997). The ROPE contains 12 areas of personal effectiveness including personal abilities and beliefs (Self-Confidence, Self-Efficacy, Stress Management, Open Thinking), social skills (Social Effectiveness, Cooperative Teamwork, Leadership Ability), organisational skills (Time Management, Quality Seeking, Coping with Change), an 'energy' scale called Active Involvement, as well as a measure of overall effectiveness in all aspects of life (see Appendix 1B for a description of the scales, as well as example items). The instrument consists of 3 items per scale, all of which are rated of a scale of "1-False, Not like me" to "8-True, Like me". For this sample, internal consistency estimates (Cronbach's alpha) were acceptable, ranging from .66 to .91 (median = .76).

Coping Strategies

A modified version of the Coping Strategy Indicator (CSI; Amirkhan, 1990) was used in the present study. The CSI is a 33 item instrument which measures 3 fundamental strategies of coping used in response to stressful situations or problems (see Appendix 1C for scale description). These strategies include Problem Solving, Seeking Support, and Avoidance. Amirkhan (1990) found factor analytic support for the 3 strategies of coping, as well as adequate internal consistency, test-reliability, and construct validity. For the present study, the aim was to design a shortened version of the CSI without sacrificing its good psychometric properties. The instrument was pilot tested with a separate sample of secondary school students. On the basis of the pilot test results, 15 of the original 33 items were selected. The instructions requested participants to indicate the extent to which they used each strategy when they face difficulties or problems. The items were all rated on a scale of "1-Never" to "6-Always". In this study, Cronbach's alphas ranged from .76 to .83, indicating high internal consistency for the 15-item CSI.

Perceptions of Bullying

Students' attitudes towards bullying were assessed using the Bullying Attitude scale (APRI-A). The APRI-A measures 2 fundamental perceptions of bullying: Pro-Bully and Pro-Victim (see Appendix 1D for example items). The instrument consists of 12 items which are all scored on a "1-False" to "6-True" response scale. In this sample, the Pro-Bully and Pro-

Target scales had acceptable internal consistencies (Cronbach's alpha) of .66 and .60, respectively.

Results

Group means and standard deviations for the Experimental and Control Groups at the three data collection points are presented in Appendix 2. The Experimental and Control groups were initially examined for differences at the pre-test point. Only one significant difference was found, which was on the problem Avoidance scale, $F(1, 224) = 7.23, p = .008$.

Differences over Time 1 and 2 between the two groups were conducted using multivariate repeated measures analyses based on Wilks's Lambda criteria. In these analyses, time (1, 2 and 3) was the with-subjects factor and condition (experimental and control) served as the between subjects factor. T-tests were also performed to assess Time 1 to Time 2 and Time 2 to Time 3 differences between groups. As a result of incomplete data for some cases and the subsequent omission of these cases in analyses, sample sizes varied in the different analyses.

Self-Concept

No significant Group X Time interaction effects were found on the 3 self-concept factors. However, significant Time effects were observed for Same-Sex Relations [Wilks' $\Lambda = .78, F(2,186)=25.73, p = .000$] and General School self-concept [Wilks' $\Lambda = .93, F(2,186)=6.51, p = .002$]. Figures 1 and 2 illustrate the degree of change on these variables over time. T-tests revealed that between Time 1 and Time 2, students from both the experimental and control group evidenced significant improvements in Same-Sex Relations [$t(216) = 7.52, p < .01$] and General School self-concept [$t(216) = 3.73, p < .01$].

Between Time 2 and Time 3, the experimental group continued to report increases in Same-Sex Relation, while the control group reported deterioration in Same-Sex Relations. However, these differences were not significant. No Group effects were observed on any of the self-concept factors.

Figure 1: Means on Same-Sex Relations for the Experimental and Control Groups

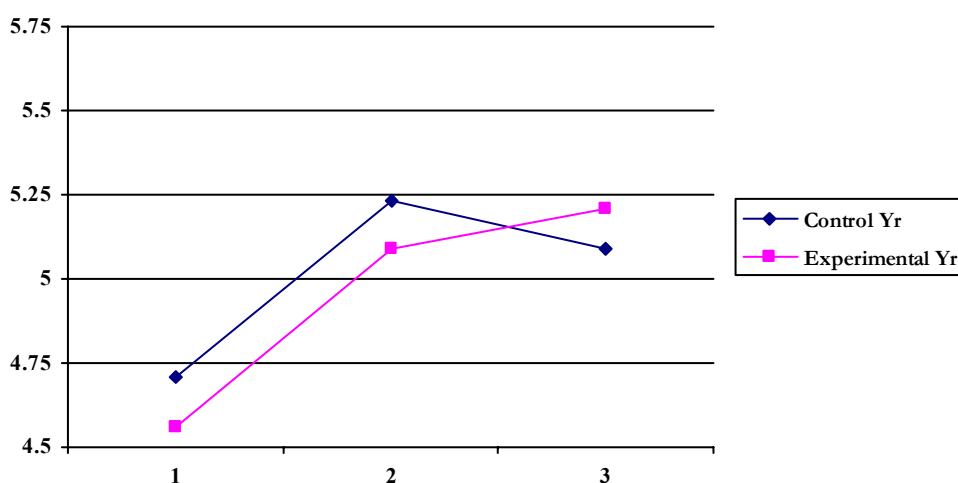
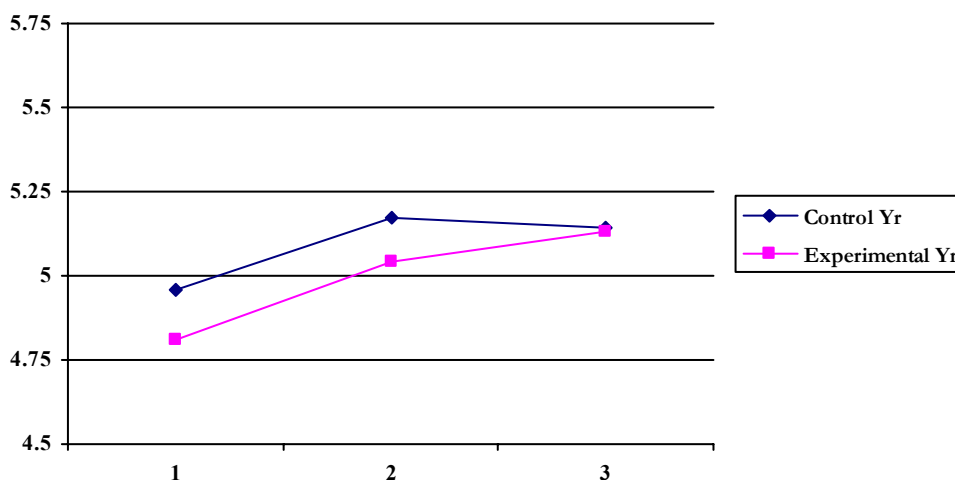


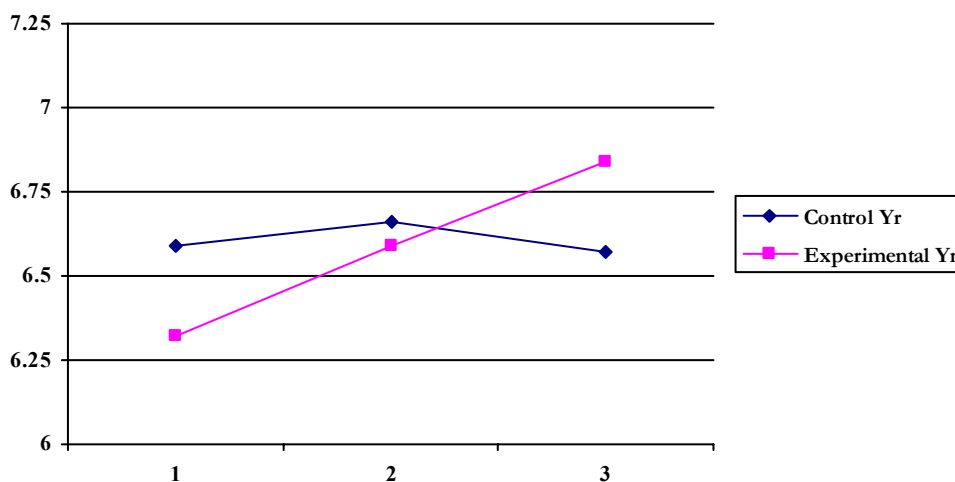
Figure 2: Means on General School Self-Concept for the Experimental and Control Groups



Personal and Social Skills

A significant Group X Time interaction effect was found on the Coping with Change scale, Wilks' $\Lambda = .96$, $F(2,186)=4.19$, $p = .017$. Figure 3 illustrates the change in reported ability to cope with change for the Experimental and Control groups over time. T-tests indicated that students who participated in the peer support program significantly increased their ability to cope with change from Time 1 (pre-test) to Time 2 (post-intervention), $t(108) = 2.47$, $p < .02$, while control group participants scores did not change on this scale from Time 1 to Time 2, $t(108) = .39$, $p > .10$. From Time 2 to Time 3, program participants continued to report improvements in their ability to cope with change, but this difference was not significant, $t(100) = 1.23$, $p > .10$. Differences between Time 2 and Time 3 for control participants were not significant, $t(103) = 1.09$, $p > .10$. No other Group X Time, Group or Time effects were found on the ROPE.

Figure 3: Means on Coping with Change for the Experimental and Control Groups



Coping Strategies

A significant Group X Time interaction effect was found on the Seeking Support scale, Wilks' $\Lambda = .93$, $F(2,159) = 4.19$, $p = .003$ (see Figure 4). T-tests indicated that there were no significant differences between Time 1 and Time 2 for either the experimental [$t(99) = .13$, $p > .10$] or control group [$t(97) = 1.5$, $p > .10$]. However, students who participated in the program reported significant increases in support seeking from Time 2 to Time 3, and control group participants reported significant declines between these times.

A significant Time difference was observed on the Problem Avoidance scale. Figure 5 illustrates the problem avoidance generally decreased over time. Significant changes were observed for the control group between Time 1 and Time 2, $t(97)=3.33$, $p < .01$. For the experimental group, the differences approached significance between Time 2 and Time 3, $t(78) = 1.96$, $p = .05$.

Figure 4. Means on Support Seeking for the Experimental and Control Groups

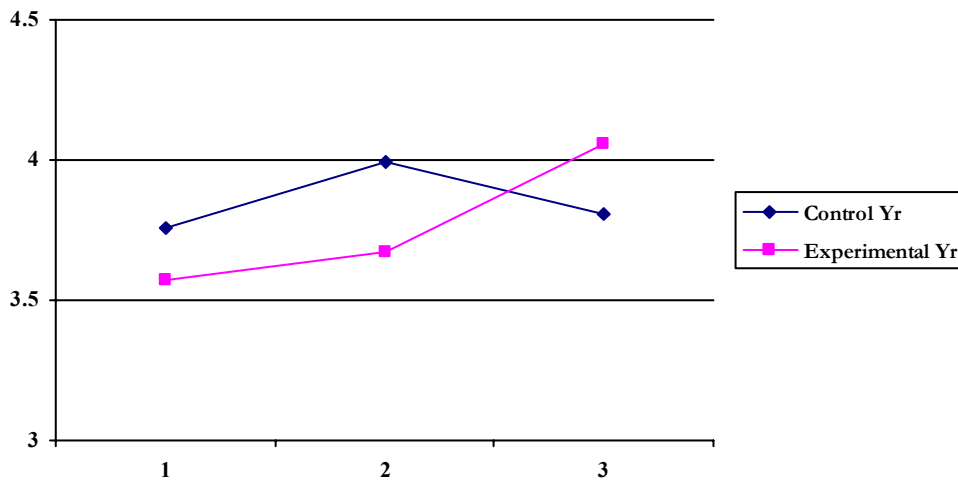
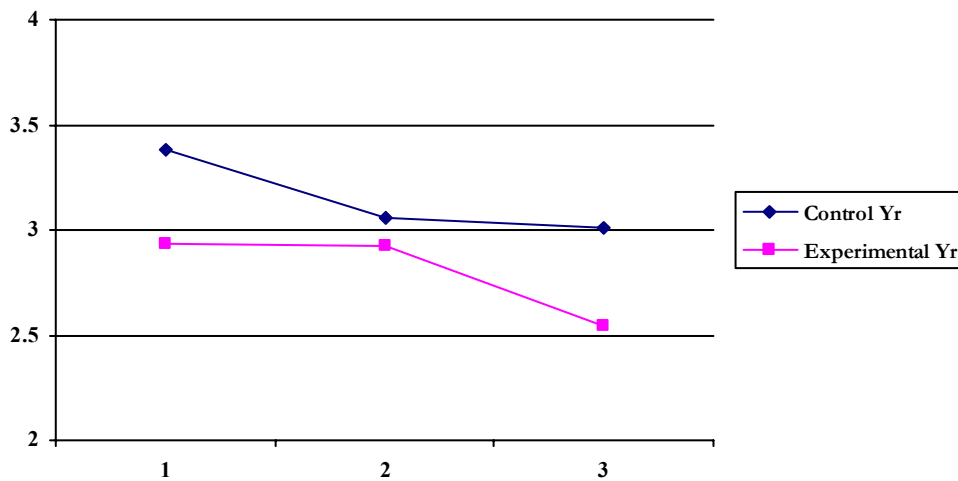


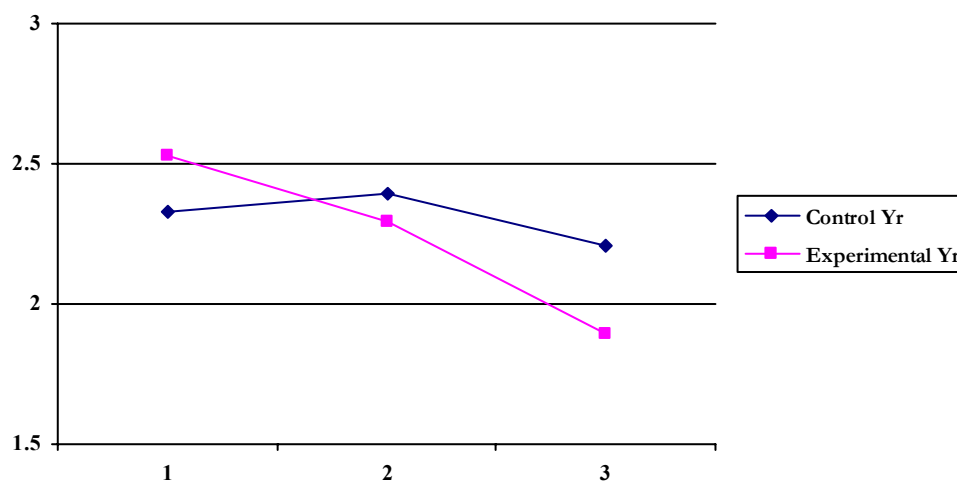
Figure 5: Means on Problem Avoidance for the Experimental and Control Groups



Perceptions of Bullying

A significant Group X Time interaction was observed for the Pro-Bully scale, Wilks' $\Lambda = .93$, $F(2,158) = 3.90$, $p = .003$. Students in the experimental group reported significant declines in their perceptions that bullying is acceptable between Time 1 (pre-test) and Time 2 (post-intervention), $t(101) = 2.23$, $p < .03$. Between Time 2 and Time 3, both experimental [$t(77) = 2.12$, $p < .04$] and control group [$t(100) = 2.12$, $p < .04$] participants reported significant decreases in pro-bullying attitudes. No significant Group X Time, Group or Time effects were found on the Pro-Target scale.

Figure 6: Means on the Pro-Bully scale for the Experimental and Control Groups



Discussion

The primary goal of this study was to evaluate the effectiveness of the Peer Support Program on seventh-graders self-concept, personal and social skills, coping ability and pro-social attitudes. Firstly, the results indicated that students who participated in the program reported an enhanced ability to cope with change, while the control group participants did not. This skill almost certainly helped students settle into their new school environment. The results between post-intervention (Time 2) and three months later at follow-up (Time 3) were stable, which demonstrated the endurance of the positive effects of the program on coping with change. Undoubtedly, the ability to adapt to change is very important in today's society. The possession of this skill will be of value during their adolescent years as they deal with biological changes and the beginning of dating, as well as for some, moving neighbourhoods and parental separation. This skill will also help them deal with the many and varied life changes they will undoubtedly encounter in their life's journey ahead. Most will undergo changes from school to university and work, the move from their parents' home to independent living, single life to marriage. Many will also change careers.

Secondly, program participants reported significant increases in seeking social support when they faced difficulties or problems between post-intervention and follow-up. The control group exhibited no significant differences in seeking social support over time. A number of the program sessions discussed strategies for dealing with problems and were specifically designed to encourage active coping strategies, such as obtaining advice and support from others. Although program participants did not report significant increases in seeking social

support immediately after the program, it is possible that students had not yet had the opportunity to use their newfound coping strategies or had not yet discovered someone that they could feel comfortable talking to and, as a result, it wasn't until the follow-up that the effects became apparent. These results are promising as there is evidence to suggest that active coping strategies, such as seeking social support, are a key influence to successful adjustment (e.g., Herman-Stahl et al., 1995; Printz, Shermis, & Webb, 1999).

Thirdly, students in the experimental group reported significant declines in their acceptability of bullying behaviour between pre-test (Time 1) and post intervention (Time 2), while the control group did not. In accordance with the view of Salmivalli (1999), it appears peer support program may have the power to restructure aggressive attitudes and so change the quality of interpersonal relationships for the better.

Intervention programs have frequently been criticised on the basis of showing positive outcomes as demonstration programs yet failing to maintain these results when disseminated more widely in the community (Elias, 1991). Indeed, highly significant results are rarely found in universal programs, since most participants are functioning in the normal range prior to the prevention program. Considering this, the results found in this study are encouraging. They are a positive endorsement of the Peer Support Program as an effective method of enhancing coping resources and promoting pro-social behaviour. However, despite the promising findings further research is necessary. To begin with, research needs to be conducted on more than one school. Future studies should also include both coeducational as well as single sex schools. In addition, this study relied exclusively on student's self-report measures. Future studies could obtain additional data from teachers and parents.

References

- Alspaugh, J. W. & Harting, R. D. (1995). Transition effects of school grade-level organization on students achievement. *Journal of Research and Development in Education*, 28(3), 145-149.
- Brush, L. (1980). *Encouraging girls in mathematics: The problem and the solution*. Cambridge, MA: Abt Books.
- Carnegie Council on Adolescent Development (1995). *Great transitions: Preparing adolescents for a new century*. Washington DC: Carnegie Council on Adolescent Development.
- Charlton, T. (1998). Enhancing school effectiveness through using peer support strategies with pupils and teachers. *Support for Learning*, 13(2), 50-53.
- Clark, S. N., & Clark, D. C. (1993). Middle level school reform: The rhetoric and the reality. *The Elementary School Journal*, 93(5), 447-459.
- Cohen, P., Cohen, J., Kasen, S., Velez, C. N., Hartmark, C., Johnson, J., Rojas, M., Brook, J., & Streuning, E. L. (1993). An epidemiological study of disorders in late childhood and adolescence. I. Age- and gender-specific prevalence. *Journal of Child Psychology and Psychiatry*, 34, 851-867.

Cowie, H. & Wallace, P. (2000). *Peer support in action: From bystanding to standing by*. London: Sage Publications.

Crockett, L. J., Petersen, A. C., Graber, J. A., Schulenberg, J. E., & Ebata, A. (1989). School transitions and adjustment during early adolescence. *Journal of Early Adolescence*, 9, 181-210.

Elias, M. J. (1991). A multilevel action-research perspective on stress-related intervention. In M. E. Colten & S. Gore (Ed.), *Adolescent stress: Causes and consequences* (pp.261-279). New York: Walter de Gruyter.

Fenzel, L. M., & Blyth, D. A. (1986). Individual adjustment to school transitions: An exploration of the role of supportive peer relations. *Journal of Early Adolescence*, 6, 315-329.

Gottfried, E. (1981). Grade, sex, and race differences in academic intrinsic motivation. Paper presented at the Annual Meeting of the American Educational Research Association, Los Angeles.

Hawton, K. (1982). Attempted suicide in children and adolescents. *Journal of Child Psychology and Psychiatry and Applied Disciplines*, 23, 497-503.

Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and information components. *Developmental Psychology*, 17, 300-312.

Harter, S., Whitesell, N., & Kowalski, P. (1992). Individual differences in the effects of educational transitions on young adolescents' perceptions of competence and motivational orientation. *American Educational Research Journal*, 29, 777-807.

Herman-Stahl, M. A., Stemmler, M., & Petersen, A. C. (1995). Approach and avoidant coping: Implications for adolescent mental health. *Journal of Youth and Adolescence*, 24(6), p.649-659.

Hetherington, E. M., & Stanley-Hagan, M. M. (1997). The effects of divorce on fathers and their children. In Lamb, M. (Ed.). *The role of the father in child development* (3rd Edition), pp.191-211.

Hirsch, B. J., & DuBois, D. L. (1991). Self-esteem in early adolescence: The identification and prediction of contrasting longitudinal trajectories. *Journal of Youth and Adolescence*, 20(1), 53-72.

Jackson, A. W., & Hornbeck, D. W. (1989). Educating young adolescents: Why must we restructure middle grade schools? *American Psychologist*, 44(5), pp.831-836.

Kazdin, A. E. Adolescent mental health: Prevention and treatment programs. *American Psychologist*, 48, 127-141.

Kaye, P. G., & Webb, A. (1996). 'A little help from my friends': A secondary school peer support programme. *Pastoral Care*, June, 21-25.

- Mac Iver, D. J., & Epstein, J. L. (1993). Middle grades research: Not yet mature, but no longer a child. *The Elementary School Journal*, 93(5), 519-533.
- Petersen, A. C., Compas, B. E., Brooks-Gunn, J., Stemmler, M., Ey., S., & Grant, K. E. (1993). Depression in Adolescence. *American Psychologist*, 48, 155-168.
- Printz, B. L., Shermis, M. D., & Webb, P. M. (1999). Stress-buffering factors related to adolescent coping: A path analysis. *Adolescence*, 34(136), 715-734.
- Reys, O., Gillock, K., & Kobus, K. (1994). A longitudinal study of school adjustment in urban, minority adolescents: Effects of a high school transition program. *American Journal of Community Psychology*, 22(3), 341-369.
- Salmivalli, C. (1999). Participant role approach to school bullying: Implications for interventions. *Journal of Adolescence*, 22(4), 453-459.
- Simmons, R. G., & Blyth, D. A. (1987). *Moving into adolescence: The impact of pubertal change and school context*. New York: Aldine de Gruyter.
- Wassef, A., Ingham, D., Lassiter-Collins, M., & Mason, G. (1995). In search of effective programs to address students' emotional distress and behavioral problems. *Adolescence*, 30, 523-538.
- Young, S. E., Corley, M. C., Rhee, S. H., Crowley, T. J., & Hewitt, J. K. (2002). Substance use, abuse and dependence in adolescence: Prevalence, symptom profiles and correlates. *Drug and alcohol dependence*, 68, 309-322.
- Zaslow, M. J., & Takanishi, R. (1993). Priorities for research on adolescent development. *American Psychologist*, 48(2), 185-192.

Appendix 1

A. Summary Description of the 3 SDQII-Scales

Scale	Description	Example Item
Same-Sex Relationships	Student ratings of their popularity with members of the same sex and how easily they make friends with members of the same sex	"I make friends easily with members of my own sex"
School	Student ratings of their skills and ability in school subjects in general	"I am good at most school subjects"
General	Student ratings of themselves as effective, capable individuals, who are proud and satisfied with the way they are	"Most things I do, I do well"

B. Summary Description of the 12 scales from the ROPE

Scale	Description	Example Item
Self-Confidence	Confidence and belief in personal ability to be successful	"I am confident in my ability to be successful"
Self-Efficacy	Ability to handle things and to find solutions in difficult situations	"I am calm when things go wrong"
Stress Management	Self-control and calmness in stressful situations	"I am open to new thoughts and ideas"
Open Thinking	Openness and adaptability in thinking and ideas	"I communicate effectively in social situations"
Social Effectiveness	Competence and effectiveness in communicating and operating in social situations	"I am good at cooperating with team members"
Cooperative Teamwork	Cooperating in team situations	"I am seen as a capable leader"
Leadership Ability	Leadership capability	"I am efficient and do not waste time"
Time Efficiency	Efficient planning and utilisation of time	"I try to get the best possible results when I do things"
Quality Seeking	Put effort into achieving the best possible results	"I cope well with changing situations"
Coping with Change	Ability to cope with change	"I like being active and energetic"
Active Involvement	Use action and energy to make things happen	"Overall, in my life I am an effective person"
Overall Effectiveness	The overall effectiveness of a person in all aspects of life	

C. Summary Description of the 3 scales from the CSI

Scale	Description	Example Item
Problem Solving	Attempts to work out the problem by carefully planning a course of action or trying different ways to solve the problem until one works	“I make a plan of action about what I will do”
Seeking Support	Turns to others for comfort or advice	“I tell my fears and worries to a friend”
Avoidance	Physically or psychologically (i.e., through fantasy or distraction) withdraws from the problem	“I avoid the problem by watching television more than usual”

D. Summary Description of the Bullying Attitude Scale

Scale	Description	Example Item
Pro-Bully	Students who believe that bullying is acceptable	“Bullying is OK if done in fun”
Pro-Victim	Students who believe that bullying is unacceptable and should be stopped	“People who are bullied deserve our help”

Appendix 2

Means and Standard Deviations on each of the scales for the experimental and control group

Scale	Group	Time 1		Time 2		Time 3	
SDQII-S		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Same-Sex	Control	4.71	1.03	5.23	0.79	5.09	0.88
	Experimental	4.56	1.28	5.09	1.06	5.21	0.84
General School	Control	5.18	0.90	5.31	0.81	5.29	0.88
	Experimental	5.17	1.04	5.26	0.88	5.31	0.88
General Self	Control	5.18	0.69	5.31	0.64	5.29	0.67
	Experimental	5.17	0.83	5.26	0.75	5.31	0.71
ROPE							
Stress Management	Control	6.06	1.45	5.96	1.47	6.09	1.49
	Experimental	5.91	1.63	6.05	1.64	6.29	1.44
Self-Efficacy	Control	6.20	1.48	6.28	1.35	6.18	1.49
	Experimental	6.17	1.55	6.22	1.67	6.30	1.36
Cooperative Team	Control	7.07	1.26	7.03	1.26	6.76	1.54
	Experimental	7.03	1.39	7.01	1.52	6.98	1.40
Leadership Ability	Control	6.54	1.41	6.60	1.56	6.39	1.66
	Experimental	6.33	1.92	6.68	1.64	6.65	1.48
Time Efficiency	Control	6.29	1.38	6.22	1.27	6.22	1.35
	Experimental	6.26	1.50	6.36	1.47	6.56	1.15
Social	Control	6.53	1.05	6.63	1.10	6.59	1.18
	Experimental	6.44	1.55	6.49	1.57	6.72	1.27
Open Thinking	Control	6.87	1.04	6.76	1.00	6.65	1.12
	Experimental	6.62	1.31	6.96	1.18	6.89	1.21
Quality Seeking	Control	7.22	0.89	7.23	0.84	7.11	0.91
	Experimental	7.18	1.06	7.23	0.98	7.17	1.04
Self-Confidence	Control	7.03	0.93	7.01	0.94	6.85	1.11
	Experimental	6.93	1.30	6.98	1.21	7.06	1.08
Active Involvement	Control	6.92	1.08	6.92	1.00	6.75	1.06
	Experimental	6.90	1.37	6.99	1.25	6.96	1.08
Coping with	Control	6.59	1.10	6.66	1.07	6.57	1.12
	Experimental	6.32	1.50	6.59	1.51	6.84	1.16
Overall	Control	6.50	1.19	6.53	1.21	6.46	1.22
	Experimental	6.40	1.30	6.41	1.60	6.62	1.32
CSI							
Problem Solve	Control	4.40	1.10	4.49	1.08	4.42	1.10
	Experimental	4.26	1.14	4.54	1.17	4.47	1.21
Support Solve	Control	3.76	1.35	3.99	1.41	3.81	1.34
	Experimental	3.57	1.56	3.67	1.53	4.06	1.36
Avoidance	Control	3.38	1.18	3.06	1.26	3.01	1.25
	Experimental	2.93	1.28	2.92	1.26	2.55	1.20
APRI-A							
Pro-Bully	Control	2.33	0.86	2.39	1.03	2.21	0.89
	Experimental	2.53	1.17	2.29	1.03	1.89	0.79
Pro-Target	Control	4.98	0.97	4.86	0.97	4.94	0.94
	Experimental	4.84	1.05	4.83	1.04	5.18	0.85