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Relation of Domain Specificity Between Peer Support and Self-Concept: Validation By The Effects of Peer Support Program in Educational Settings

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Peer support programs in educational settings are growing in popularity, but few studies have applied a construct validity approach to test the relation of domain specificity between peer support and self-concept. In the present investigation, participation in different types of peer support program displayed differential impact on self-concept. In one study, participants who had received an academically-orientated peer tutoring program on verbal subject matter displayed significantly higher Verbal self-concept as measured by the Self Description Questionnaire II (SDQII) than those who had not participated in the program. In another study, participants who had received socially-orientated peer support program on improving interpersonal skills and communication displayed significantly higher Same-sex Relations self-concept as measured by Self Description Questionnaire II (SDQII) than those who had not participated in the program. In both studies, there were no significant effects on other facets of self-concept. The findings were consistent over gender. This provided strong evidence of the relation of domain specificity between peer support and self-concept in that specific peer support shares a positive relation with specific domains of self-concept.

Peer relationships play important roles in the well-being of individuals. For example, interactions with peers promote more mature moral reasoning (Piaget, 1965), facilitate learning by scaffolding (Vygotsky, 1986); facilitate school adjustment and achievement (Diehl, Lemerise, Caverly, Ramsay & Roberts, 1998), affect academic motivation (Berndt, Laychak & Park, 1990) and influence the internalization of socially valued goals, pursuit of prosocial goals and school-related interests (Wentzel, 1998; 1999). Hence it is not surprising to find that peer support programs in educational settings are growing in popularity.

Sullivan (1953) proposed that intimate friendship enhances adolescents' self-concept. As predicted by Sullivan's hypothesis, positive features of friendships are related with higher self-concept in several correlational studies (Coates, 1985; Demaray & Malecki, 2002; Dubow & Ullman, 1989; Townsend, McCracken, & Wilton, 1988; Way & Chen, 2000). In addition, Hirsch and Rapkin (1987) conducted a longitudinal study to assess students on social support and self-concept at the end of Grade 6 and at the middle and end of Grade 7. They found that perceived peer support was associated with high self-concept.

However, Shavelson, Hubner and Stanton (1976) posited that self-concept is multifaceted instead of unidimensional in nature. Described in the Shavelson model is a general self-concept defined by academic and non-academic self-concepts. Academic self-concept is further divided into self-concepts in particular content areas whereas non-academic self-concept is divided into social, physical, and emotional self-concepts. The multidimensionality of self-concept has been supported by numerous factor analytic studies (e.g., Harter, 1982; Marsh, Barnes, & Hocevar, 1985; Marsh, Parker, & Barnes, 1985) and construct validity reviews (e.g., Byrne, 1984; Marsh & Shavelson, 1985). Hence, recent self-concept research has emphasised the multidimensionality and domain-specificity of self-concept. Therefore, it has been argued that adolescents can distinguish their

self-concept into different facets (Harter, 1982; Marsh & Holmes, 1990; Marsh & Shavelson, 1985).

Studies also show that positive features of friendships are strongly associated with various domains of self-concept. Cauce, Felner and Primavera (1982) found that friend support was positively related to peer self-concept of a sample of ninth- and eleventh-grade students. Keefe and Berndt (1996) found that positive features of friendships were strongly related with various domains of self-concept including the global self-worth, social acceptance, behavioral conduct and scholastic competence in a study based upon 297 seventh and eighth graders. Rhee (1993) found that peer support is important for children's perceived social acceptance and behavioral conduct in a sample of Korean elementary school children. Marsh, Parada, Craven and Finger (in press) revealed that being victims of bullying was negatively associated with all eleven facets of self-concept as measured by Self-Description Questionnaire II (SDQII) and showed that positive features of friendships were strongly associated with various domains of self-concept. Longitudinal studies also have demonstrated the positive relation between peer support and different facets of self-concept. For example, Berndt, Hawkins and Jiao (1999) conducted a longitudinal study with 101 students. Participants completed a questionnaire measuring friendship quality and self-concept in the spring of sixth grade and again in the fall and spring of seventh grade. It was found that one of the subscales of self-concept (social competence) increased during the seventh-grade year when friends in the fall had higher social competence. In other words, one's social competence was high when friends were more confident in their social skills.

Nevertheless, these studies did not examine the relation between certain types of peer support and particular domains of self-concept. The study conducted by Wenz-Gross, Siperstein, Untch and Widaman (1997) revealed that less companionship and more problem-solving support from peers was associated with lower social acceptance self-concept in a sample of 482 sixth-, seventh-, and eighth-grade adolescents. This study seems to provide evidence that different types of peer support are associated with different facets of self-concept. Meta-analyses of academically-orientated peer tutoring programmes, have demonstrated that this type of programme has impacted positively on academic domains (see Cohen, Kulik & Kulik,1982; Rohrbeck, Ginsburg-Block, Fantuzzo & Miller, 2003). In contrast, non-academically orientated peer tutoring programmes have demonstrated that this type of programme has impacted positively on non-academic domains. For example, Blake, Wang, Cartledge and Gardner (2000) conducted a study in which students with serious emotional disturbances served as tutors to teach social interaction skills to peers also with serious emotional disturbances. Both tutors and tutees showed increase in socially appropriate behavior and decrease in abusive behavior. It is thus postulated that particular types of peer support programmes will impact on specific outcome domains that are most relevant to the goals of the intervention. That is, academically-orientated peer support programmes are hypothesized to have a positive influence mainly on academic-related outcomes and socially-orientated peer support programmes are hypothesized to have positive impact on non-academic outcomes most relevant to the goals of the intervention.

Recent self-concept enhancement research has demonstrated that specific facets of self-concept relevant to the goals of the intervention can be enhanced (see Craven, Marsh & Burnett, 2003). For instance, research has found a positive relation between academic self-concept, academic achievement and academic locus of control and little relation of these constructs to non-academic domains (Marsh, 1984). Hence

academic self-concept has a strong association with specific academic-related outcomes. It is thus posited that an academically-orientated peer support programme will have a positive impact on academic facets of self-concept and have little or no impact on non-academic facets of self-concept unrelated to the goals of the intervention. Since peer support has been shown to impact upon both academic and non-academic domains, it follows that a socially-orientated peer support programme is predicted to impact on non-academic facets of self-concept and have little or no impact on academic facets of self-concept unrelated to the goals of the intervention. Hence, it is anticipated that there exists a specificity of relation between the type of peer support programme and its impact upon specific facets of self-concept most relevant to the goals of the intervention.

To address these issues, the effects upon multiple facets of self-concept of two types of peer support programmes - academically-orientated peer support and socially- orientated peer support programmes - were examined to ascertain whether differential effects could be identified. Study 1 consisted of an evaluation of the impact upon multiple dimensions of self-concept of an academically-orientated peer support programme solely on verbal subject matter whereas Study 2 involved an evaluation of the impact upon multiple dimensions of self-concept of a socially-orientated intervention on improving interpersonal skills and communication. SDQII was used to measure the multiple dimensions of self-concept. It measures 11 areas of self-concept of adolescents: seven non-academic self-concept scales (opposite-sex relation, same-sex relation, parent relation, honesty-trustworthiness, emotional-stability, physical appearance, physical ability), three academic self-concept scales (verbal, mathematics, general-school self-concept) and general self-concept (Marsh et al., 1985; Marsh, Smith, Owens, & Marsh, 1988, Marsh, 1990).

 In addition, the construct validity approach adopted by Marsh, Richards and Barnes (1986a, 1986b) to study intervention effects provides promising direction. This approach has demonstrated that the facets of self-concept most relevant to the intervention's goals are most affected and less relevant domains are least affected (Craven, 1989; Craven, Marsh, & Debus, 1991; Marsh & Richards, 1988; Marsh et al., 1986a, 1986b; Craven et al., 2003). Hence, for Study 1 of the present investigation, it is hypothesized that academically-orientated peer tutoring will have a positive effect mainly for the academic domains of self-concept most logically related to the intervention's goals whereas non-academic domains of self-concept will be less affected. Conversely, it is hypothesized that a socially-orientated peer support programme (Study 2) will have positive effects upon the non-academic domains of self-concept most logically related to the intervention's goals whereas academic domains of self-concept will be less affected.

Since Study 1 focuses on an academically-orientated peer support programme designed to enhance participants' verbal skill and not other aspects of academic skill, it is postulated that participants who have experienced an academically-orientated peer tutoring programme compared to participants who have not experienced this programme will display statistically significant higher Verbal self-concepts as measured by the SDQII. Participants who have experienced an academically-orientated peer tutoring programme compared to participants who have not experienced this programme will display no significant effects for facets of self-concept not targeted by the intervention (Physical Ability, Physical Appearance, Opposite-sex relations, Same-sex relations, Honesty-Trustworthiness, Parent relations, Emotional-Stability, General self-concept, Mathematics and General-School). For Study 2, since it focuses on a socially-orientated peer support

programme designed to enhance social and communication skills, it is anticipated that this programme will have a positive impact mainly on peer relation self-concept as measured by the SDQII.

Previous research has found that same-sex peers are a greater source of companionship for adolescents (Buhrmester & Furman, 1987) and adolescents report more companionship with their same-sex peers than opposite-sex peers (Kuttler, La Greca, & Prinstein, 1999). Same-sex peers may be more effective in meeting children's social needs (Dusek, 1991). Therefore, same-sex relation is the primary source of peer relation for early adolescents. It is thus anticipated that particularly the Same-sex relations self-concept as measured by the SDQII will be enhanced instead of Opposite-sex relations self-concept in Study 2. Hence, it is expected that participants who have experienced a socially-oriented programme will display statistically significant higher Same-sex relations self-concepts as measured by the SDQII. Participants who have experienced this programme compared to participants who have not experienced this programme will display no significant effects for facets of self-concept not targeted by the intervention (Physical Ability, Physical Appearance, Opposite-sex relations, Honesty-Trustworthiness, Parent relations, Emotional-Stability, General self-concept, Mathematics, Verbal and General-School).

It was also interested to examine the generalisability of the intervention effect of these programmes over gender. For Study 1, it would examine whether the impact of the intervention on Verbal self-concept for the experimental group was generalized to both males and females. Similarly, for Study 2, it would examine whether the impact of the intervention on Same-sex self-concept for the experimental group was generalized to both males and females.

Study 1

Methodology

Participants

The participants were 35 Year 7 students from two high schools in metropolitan Sydney, New South Wales, Australia. The age of Year 7 students ranged from 11 to 14 (m=12.06, SD=.84). The sample comprised a total of 19 males (54.3%) and 16 females (45.7%). In addition, there were 16 Year 11 participants whose age ranged from 15 to 16 (m=15.31, SD=.48). The Year 11 sample comprised a total of 8 males (50.0%) and 8 females (50.0%). The participants came primarily from working class to middle class families.

Research Design

This study applied an experimental design to study the effect of an academically-orientated peer tutoring intervention on the self-concept of Year 7 tutees. This type of programme is called cross-age peer tutoring since it involved the experimental group of Year 7 tutees receiving tutoring on a one-to-one basis administered by Year 11 tutors. Since the Year 7 tutees were assessed by the school English teacher as in need of remedial work in English lessons, the key tasks for the tutors was to provide academic assistance to tutees with learning materials, assignments and clarification of content covered in English lessons. It also allowed the

tutees to raise any questions that had arisen from their regular school English lessons.

Procedures

A sample of 16, Year 11 students who volunteered to serve as peer tutors was recruited in the programme by the teacher-in-charge of student welfare. And a sample of Year 7 students (*n*=35) were randomly assigned to either an experimental group (*n*=16) or control group (*n*=19).

Prior to implementing the programme, the tutors were required to attend one training session for a period of 80 minutes. The training session was conducted by the teacher-in-charge of student welfare. The teacher-in-charge explained the nature of the tutoring, rationale behind the tutoring, role of tutor, and the importance of the establishment of rules. The teacher-in-charge also taught the tutors some tutoring techniques including: Teaching tutors how to pause to give tutees opportunity to self-correct their answers, how to prompt with clues when tutees made errors, and how to praise tutees' correct responses and avoid criticism. Besides the training session, there were regular weekly meetings on a group basis between the teacher-in-charge and the tutors to discuss issues that arose in the tutoring sessions.

The first author discussed with the teacher-in-charge the content of training prior to the training session and the intervention. In addition, the first author talked with both Year 7 tutees and Year 11 tutors after the conclusion of the intervention to elucidate their perceptions of the strengths and limitations of the programme. The first author also engaged in three observations of all tutoring sessions to check whether the tutors applied the tutoring techniques properly and provided appropriate assistance to the tutees. The first author also liaised with the teacher-in-charge biweekly to check the progress (such as interactions between tutors and tutees, dedication of tutors/tutees) and to see whether there were any problems and difficulties (such as frequent absenteeism and dropout) encountered during the intervention. As mentioned previously, the progress of the intervention was monitored by the teacher-in-charge in weekly meetings with the tutors whereby tutor's questions were answered and corrective feedback on tutoring procedures was provided.

The SDQII measure was administered one week prior to implementation of the intervention during term 1 of the school year. This served as the pretest measure (Time 1).The tutoring programme was administered over a period of one school term (10 weeks). Peer tutoring took place in the library during the lunch break. Tutoring sessions comprised 20 minutes per day, 4 days per week for 10 weeks.

At the end of term 1 (Time 2), the posttest measure of the SDQII was administered to participants in the school hall. Again, the teacher-in-charge read aloud the instruction and questions to the participants and participants completed the questionnaire silently in their seats. Other teachers also assisted by circulating to answer any questions raised by the participants and collected the completed questionnaires.

SDQII Measures

As mentioned previously, the SDQII was designed to measure 11 areas of self-concept of adolescents (Marsh et al., 1985; Marsh et al., 1988; Marsh, 1990). The SDQII measures seven non-academic self-concept scales (opposite-sex relation, same-sex relation, parent relation, honesty-trustworthiness, emotional-stability, physical appearance, physical ability) and three academic self-concept scales (verbal, mathematics, general-school self-concept) and general self-concept. The measure consists of 102 declarative sentence items and approximately half of the items are negatively worded. Responses to declarative statements are rated on a response scale that ranges from 1 "false" to 6 "true". Extensive research findings have shown that the reliability, factor structure, construct validity are established in the SDQII test manual (Marsh, 1990).

Independent and Dependent Variables

The independent variables were the peer tutoring intervention and gender of Year 7 participants. Dependent variables were multiple self-concept facets (including Opposite-sex relation, Same-sex relation, Parent relation, Honesty-Trustworthiness, Emotional-Stability, Physical Appearance, Physical Ability, Verbal, Mathematics, General-School self-concept and General self-concept) measured by the SDQ II.

Statistical Analyses

Initial analyses comprised a series of t-tests to test for pre-test differences between the experimental and control groups in order to examine whether the random assignment was successful. A series of repeated measures Multivariate Analysis of Variance (MANOVA) were conducted to examine the effect of peer support intervention on the different facets of self-concept. The independent variables include between-subject variables and within-subject variables. Time (Time 1 and Time 2) was the within-subject factor whilst peer tutoring intervention group (experimental group or control group) and gender (male and female) were the between-subject factors whereas different facets of self-concept were the dependent variables.

Results

Preliminary Analysis

A series of t-tests shown in Table 1 reveals that there were no significant pre-test differences between the experimental and control group in any domains of self-concepts and peer support. This indicates that the random assignment was generally successful in matching the two groups in terms of self-concepts.

As mentioned before, a series of repeated measures MANOVAs was used to evaluate the changes in different facets of self-concept scores. The most crucial test was the group x time interaction. For Verbal self-concept, there was significant group x time interaction ($F_{(1, 31)}=5.31$, $p<.05$). Further analysis of simple main effect of time for the Verbal self-concept indicated that the experimental group showed a significant increase in Verbal self-concept ($F_{(1, 33)}=8.60$, $p<.01$) whereas the control group showed a slight, non-significant decrease in Verbal self-concept (see Table 2). Hence, participants who have experienced the academically-oriented peer support intervention compared to participants who had not experienced this intervention displayed statistically significant higher Verbal self-concepts.

Table 1. *Study 1 (academically-orientated Australian intervention): Means and Standard Deviations of Self-concept Subscales for Experimental and Control Groups*

SDQ II Scale	Time	Experimental Group (N=16)		Control Group (N=19)		Pretest Comparison
		Mean	SD	Mean	SD	t-value
Math	T1	3.12	.97	3.86	1.46	-1.74
	T2	3.45	.88	3.82	1.49	
Verb	T1	3.24	.82	3.93	1.41	-1.82
	T2	3.86	.84	3.88	1.25	
Schl	T1	3.85	.91	4.42	1.08	-1.68
	T2	4.07	.58	4.48	1.21	
Osex	T1	3.84	1.68	3.61	1.63	.40
	T2	3.99	1.44	3.85	1.52	
Ssex	T1	4.81	1.01	4.82	.80	-.03
	T2	4.67	.67	4.91	.80	
Prnt	T1	5.19	.96	5.32	1.00	-.39
	T2	4.75	1.03	5.11	1.31	
Hons	T1	4.69	.83	4.80	.84	-.40
	T2	4.46	.91	4.70	1.04	
Emot	T1	3.95	1.13	3.81	1.14	.37
	T2	3.98	.95	3.83	1.11	
Phy	T1	4.97	.47	4.45	1.33	1.58
	T2	4.77	.61	4.48	1.43	
Appr	T1	3.50	1.59	4.12	1.14	-1.33
	T2	3.88	1.45	4.20	1.11	
Genl	T1	4.46	1.09	4.98	.73	-1.68
	T2	4.35	.99	4.85	1.10	

Note: Math= Mathematics Verb= Verbal Schl= General-School self-concept Osex= Opposite-sex relation Ssex=Same-sex relation Prnt= Parent relation   Hons= Honesty-Trustworthiness Emot= Emotional-Stability Phy = Physical Ability Appr= Physical Appearance Genl= General self-concept

*p<.05

For the other facets of self-concept (Physical Ability, Physical Appearance, Opposite-sex relations, Same-sex relations, Honesty-Trustworthiness, Parent relations, Emotional-Stability, General self-concept, Mathematics and General-School), there was no significant group x time interaction. Participants who had experienced the intervention compared to participants who had not experienced the intervention did not display significantly greater effects for these facets of self-concept not targeted by the intervention.

Table 2. *Study 1 (academically-orientated Australian intervention): MANOVAs Showing Simple Main Effect of Time on Verbal Self-concept for Experimental and Control Groups*

		Verb	
Source of variation	**Df**	Ms	F
Within-subject test			
Error	33	.36	
Group (1) x Time	1	3.09	8.60**
Group (2) x Time	1	.02	.06

Note: Verb= Verbal   Group (1)=experimental group   Group (2)=control group
*p<.05 **p<.01 ***p<.001

For the other facets of self-concept, there was also no significant group x time x gender interaction. This indicated that those who had experienced the intervention compared to participants who had not displayed no significant effects for these facets of self-concept not targeted by the intervention regardless of the gender of participants.

In sum, the results of the findings provide support for the a-priori prediction that academically-orientated peer tutoring would have a significant impact on Verb self-concept. For the other facets of self-concept, there were no significant changes. Thus these results are consistent with the prediction that the domain of self-concept most logically relevant to the intervention's goal shows positive significant gain whereas those less relevant to the intervention's goal were affected less. Moreover, the impact of the intervention on Verbal self-concept was generalized to both males and females.

Study 2

Methodology

Participants

The participants were 40 Year 7 students from a Hong Kong school. Their age ranged from 12 to 15 (*m*=13.10, *SD*=.81). The sample comprised a total of 22 males (55.0%) and 18 females (45.0%). In addition, there were 3, Year 11 participants whose age ranged from 16 to 17 (*m*=16.67, *SD*=.58). The sample comprised a total of 1 male (33.3%) and 2 females (66.7%).

Research Design

This study applied an experimental design to study the effect of a socially-orientated peer support programme on the self-concept of Year 7 students. The experimental group of Year 7 students received the socially-orientated peer support intervention administered by Year 11 students. Each session was structured to cover a specific theme designed to promote social and interpersonal relationship skills (see Appendix).

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Procedures

Year 7 students (*n*=40) were selected and randomly assigned to either an experimental group (*n*=21) or control group (*n*=19). These students came from the same class and were recommended to participate in the programme by the class teacher on the basis that they needed to improve social and interpersonal relationship skills. A sample of 3, Year 11 students who volunteered to participate in the study served as the group leaders and they were recruited in the programme by the teacher of guidance.

Prior to implementing the programme, the Year 11 group leaders were required to attend two training sessions each for a period of 80 minutes. The training sessions were conducted by the teacher-in-charge. The teacher-in-charge explained the nature and rationale behind of the peer support programme, the role of group leader and the importance of establishing group rules and norms. The teacher-in-charge also provided an overview of the content of the peer support programme. Group leaders were also taught some group leading techniques including: How to establish rapport at the beginning of the programme, how to promote group cohesion by building up trust, cooperation and communication among group members, how to lead the programme activity, and how to encourage group members to share their opinions and feelings. Lastly, the group leaders role-played some of the programme activities and discussed how to implement the activities effectively. In addition to the training sessions, there were regular weekly meetings on a group basis between the teacher-in-charge and the group leaders to discuss any issues that arose in each session.

The first author discussed with the teacher-in-charge the content of training prior to the training session and the content of the whole course of peer support programme. In addition, the first author talked with both the Year 7 group members and Year 11 group leaders after the conclusion of the intervention to elucidate their perceptions of the strengths and weaknesses of the programme. Three observations were also made by the first author during the programme to check if the group leaders followed the procedures and covered the content when conducting the programme activities. The first author also discussed progress biweekly with the teacher (e.g. topic covered, interactions between leader and group members and group cohesion) and to see whether there were any problems and difficulties (such as discipline and dropout) encountered during the intervention. The progress of the programme was monitored by the teacher-in-charge and she was available for answering leader's questions and giving corrective feedback to tutors.

The Chinese version of the SDQII was administered one week prior to implementation of the interventions during term 1 of the school year. This served as the pretest measure (Time 1). The peer support programme was administered over a period of 9 weeks. The peer support programme took place in the classroom or activity hall during the first and second lessons. Each session comprised a period of 35 to 40 minutes per week for a period of 9 weeks.

At the end of term 1 (Time 2), the posttest measure of the Chinese version of the SDQII was administered to participants. The teacher-in-charge read aloud the instructions and questions to the participants and participants completed the questionnaire silently in their seats in the activity hall. The author assisted by circulating and collecting the questionnaires, and answered questions raised by the participants.

SDQII Measures

Given this study was conducted with Chinese participants, the Chinese version of the 11 SDQII subscales (Kong, 2000) were utilized in the context of the present investigation. The Chinese version of the SDQII is a translation of the original 11 SDQII subscales into Chinese. The reliability and construct validity has been reasonably established (Kong, 2000).

Independent and Dependent Variables

Similar to Study 1, the independent variables were the peer support group intervention and gender of the Year 7 participants. Dependent variables were multiple self-concept facets (including Opposite-sex relation, Same-sex relation, Parent relation, Honesty-Trustworthiness, Emotional-Stability, Physical Appearance, Physical Ability, Verbal, Mathematics, General-School self-concept and General self-concept) measured by the Chinese version of the SDQII.

Statistical Analyses

Statistical analyses in Study 2 were similar to those in Study 1. Initial analyses involved a series of t-tests test for pre-test differences between the experimental and control groups in order to examine whether the random assignment was successful. A series of MANOVA were conducted to examine the effect of the peer support intervention on the different facets of self-concept measured by the Chinese version of the SDQII. The independent variables include between-subject variables and within-subject variables. Peer support intervention group (experimental group and control group) and gender (male and female) were between-subject factors, and time (Time 1 and Time 2) was within-subject factors whereas different facets of self-concept were the dependent variables.

Results

Preliminary Analysis

A series of t-tests shown in Table 3 reveals that there was no significant pre-test differences between the experimental and control group in all the domains of self-concepts. This indicates that the random assignment was generally successful in matching the two groups in terms of self-concepts.

As done in previous study, a series of repeated measures MANOVAs was used to evaluate the changes in different facets of self-concept scores. The first analysis was the group x time interaction. Inspection of the group x time interaction shows that there was significant main effect for group x time interaction effect ($F_{(1, 36)}=7.64$, $p<.01$) of peer support intervention for the Same-sex relation self-concept from time 1 to time 2 whereas there was no significant main effect for other facets of self-concept. Further analysis of simple main effect of time for the Same-sex relation self-concept indicated that the experimental group showed a significant increase in Same-sex relation self-concept ($F_{(1, 38)}=4.84$, $p<.05$) whereas the control group did not (see Table 4). These results indicate that the intervention had positive effect on Same-sex relation self-concept targeted by the intervention.

Table 3. *Study 2 (socially-orientated Chinese intervention): Means and Standard Deviations of Self-concept Subscales for Experimental and Control Groups*

SDQ II Scale	Experimental Group (N=21)			Control Group (N=19)		Pretest Comparison
	Time	Mean	SD	Mean	SD	t-value
Math	T1	3.39	1.34	4.10	1.28	-1.72
	T2	3.26	1.51	3.92	1.41	
Verb	T1	3.50	1.26	3.62	1.16	-.30
	T2	3.41	1.08	3.82	1.23	
Schl	T1	3.70	1.04	4.00	.84	-.99
	T2	3.69	.92	3.85	.90	
Osex	T1	3.61	.98	3.55	1.12	.18
	T2	3.80	.92	3.63	1.07	
Ssex	T1	4.53	.93	4.92	.93	-1.33
	T2	4.93	1.01	4.61	1.02	
Prnt	T1	4.13	1.16	4.40	1.17	-.73
	T2	4.13	1.26	4.11	1.28	
Hons	T1	4.36	.88	4.78	.72	-1.64
	T2	4.34	.88	4.70	.61	
Emot	T1	3.94	1.01	4.41	1.06	-1.44
	T2	4.08	1.02	4.20	.89	
Phy	T1	3.99	1.23	3.82	1.52	.39
	T2	4.08	1.17	3.76	1.56	
Appr	T1	3.42	.93	3.31	1.24	.33
	T2	3.48	.95	3.25	1.37	
Genl	T1	4.02	.99	4.11	1.01	-.27
	T2	4.10	.96	4.07	1.09	

Note: Phy = Physical Ability Appr= Physical Appearance Osex= Opposite-sex relation Ssex=Same-sex relation Hons= Honesty-Trustworthiness Prnt= Parent relation Emot= Emotional-Stability Genl= General self-concept Math= Mathematics Verb= Verbal Schl= General-School self-concept

*p<.05

For the other facets of self-concept (Physical Ability, Physical Appearance, Opposite-sex relation, Honesty-Trustworthiness, Parent relation, Emotional-Stability, General self-concept, Verbal, Mathematics and General-School), the results showed that there were no statistically significant group x time interaction effects. Participants who had experienced the intervention compared to those who had not received intervention displayed no significant greater effects for these facets of self-concept that were not targeted by the intervention.

Table 4. *Study 2 (socially-orientated Chinese intervention): MANOVAs Showing Simple Main Effect of Time on Ssex Self-Concept for Experimental and Control Groups*

		Ssex	
Source of variation	**Df**	Ms	F
Within-subject test			
Error	38	.35	
Group (1) x Time	1	1.68	4.84*
Group (2) x Time	1	.93	2.69

Note: Ssex=Same-sex relation   Group(1)=experimental group Group(2)=control group
*p<.05   **p<.01   ***p<.001

Regarding the generalizability of the intervention effect over gender, inspection of the group x time x gender interaction indicates that there was no significant interaction for the Same-sex relation self-concept. Hence, the intervention effect on Same-sex relation self-concept was generalized to both males and females.

For the other facets of self-concept, similar to Study 1, there was also no significant group x time x gender interaction. This indicated that those who had experienced the intervention compared to participants who had not experienced this programme displayed no significant effects for these facets of self-concept not targeted by the intervention regardless of the gender of participants.

In sum, the results of the findings provide support for the a-priori prediction that the impact of the socially-orientated peer support programme had a significant impact on Same-sex relation self-concept. For the other facets of self-concept, there were no significant changes. Therefore these findings are consistent with the prediction that the domain of self-concept most logically relevant to the intervention's goal shows positive significant gain whereas those less relevant to the intervention's goal were affected less. Moreover, the intervention's impact on Same-sex relation self-concept was generalized to both males and females.

Discussion

This study provides clear support for the relation of domain specificity between peer support and self-concept by showing that particular type of peer support programme had impact on specific facets of self-concept that are most relevant to the goals of the intervention. Academically-orientated peer support intervention had positive impact mainly for the academic domains of self-concept most logically related to the intervention's goals whereas socially-orientated peer support programme had positive effect mainly upon the non-academic domains of self-concept most logically related to the intervention's goals. The results have implications that researchers need to take the relation of domain specificity between peer support and self-concept into consideration when trying to improve the effectiveness of peer support programme on self-concept enhancement. Moreover, it indicates that construct of peer support can be distinguished into academic and non-academic domains that has not been postulated in peer support research. Hence, new peer support construct will be explored in the future.

While the findings of this study provide preliminary evidence to support the relation of domain specificity between peer support and self-concept in that specific peer support shares a positive relation with specific domains of self-concept, a major limitation of the present study is that it was confined to two types of peer support programmes. Hence, future research may consider testing the generalisability of the findings to different types of peer support that will match with different facets of self-concept such as physical peer support and emotional peer support. Nevertheless, the present investigation has provided preliminary evidence for the relation of domain specificity between peer support and self-concept that has not been examined in both peer support and self-concept research.

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Appendix

Outline of Each Peer Support Programme Session

Programme Session	Name of Activity	Activity Theme
1	Getting to know you	To help participants learn about each other, begin new friendships and establish group rules
2	Listening and communication	To improve listening and communication skills
3	Working together	To promote co-operation among members
4	Assertiveness	To stand up for one's rights without being aggressive and deal with pressure in a positive way
5	Peer pressure	To deal with negative peer pressure
6	Self-awareness	To improve one's self-worth
7	What is a friend	To discover the qualities of friendship
8	Group decision making	To learn how to work as a group in making a decision
9	Winding up	To consolidate the sessions