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The Impact of the Peer Support Programme on Interpersonal Relationship, Self-Esteem, General Health Questionnaire and Adaptation Scale for School Environments on Six Spheres among Japanese High School Pupils

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Abstract: This study aimed to explore how the peer support programme gave influences on technical high school pupils in Japan. The study invited a total 76 pupils (37 in an intervention group and 39 in a control group) to be involved into the peer support programme and assessments. The participants were annually assessed three times by adopting four scales, which examined their interpersonal relationship level, self-esteem, mental health, and school environmental adaptation states. The results showed that pupils in the intervention group (the peer supporters) tended to improve their own skills and abilities in terms of all the scales after joining the programme. Also, in terms of Adaptation Scale for School Environments on Six Spheres (ASSESS), which was a newly developed scale, there were no significant positive influences in both areas of "fulfillments in study" and "peer support activities against bullying". As a conclusion, even in the technical high school where the majority of pupils were male, the peer support programme gave positive influences on the intervention group (the peer supporters) in terms of interpersonal relationship level, self-esteem, mental health, and school environmental adaptation states.

Keywords: *ASSESS, interpersonal relationship, male pupils, mental health, peer support, self-esteem.*

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Introduction

Peer support approaches have continued to develop during the past 40 years in the Western nations. In Japan, the peer support approaches were introduced to school education in the early 1990's when several children's issues had been exacerbated such as bullying, youth suicide, class disruption, and school absenteeism. The peer support was applied as a part of preventive methods against these children's issues. Since the year 2000, researchers and schoolteachers have paid more attention to the peer support approach. Peer support is an approach that builds on the helpfulness and altruism characteristic of friendship by extending it beyond friendship to the wider peer group. Regarding peer support in school, Cowie and Wallace (2000) explained the details of its features, and it can be expressed briefly as follows: 'Youth undergo training to address conflicts and assist their peers in fostering more positive and nonviolent interactions with each other.' Also, some studies (e.g., Naylor & Cowie, 1999) mentioned that over 80% of students who had engaged in peer support reported that peer support had been of significant assistance in coping with bullying issues.

In Japan, adult coordinators of the peer support seemed to make much account of how children use their gained skills and knowledge in their own supporting activities in real life situations, rather than how children can gain/improve their skills through the training sessions. This implies that schoolteachers who took the lead in peer support activities, believed that children's experiences of supporting others in real situations, play a role to powerfully enhance/reinforce their altruistic attitudes. Generally, other educational skill training programmes, such as social skill training (SST), structured group encounter (SGE), T-life skill, T-adventures, etc, seems to be designed to help children to improve and/or gain their prosocial skills through its training sessions (of programmes). However, these educational skill trainings

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generally do not include the practices in real situations. In this vein, the views on the peer support seems to be different from those of other skill training programmes. In other words, the peer support programme seems to heavily focuses on the power of supporting experiences, which strongly nurture children's abilities in various ways.

The study of the peer support approach in educational settings, seemed to imply several issues and its research gaps. One of the issues was it is necessary to develop a new measurement method, which is able to evaluate the peer support activities from multiple perspectives. In the previous studies, many researchers adopted several scales together to assess children's personal abilities (aspects) such as communication skill. For instance, these previous studies included interpersonal relationship skills (Ellis et al., 2005; Kondo et al., 2016; Sasaki, 2005; Yamazaki & Inoue, 2012), self-esteem (Andres, 2007; Ellis et al., 2005; Houlston & Smith, 2009; Sasaki, 2005; Sasaki et al., 2007; Takahashi & Kurihara, 2006), social skills (Andres, 2007; Ellis et al., 2005; Fujikame, 2021; Houslston & Smith, 2009), self-efficacy (Mihara, 2006; Takahashi & Kurihara, 2006), leadership (Bandure et al., 2000; Ellis et al., 2005). However, these methods generally appeared to be insufficient to evaluate the peer support activities from the perspective of educational settings. For instance, there were some opinions, which mentioned that it is desirable to evaluate aspects of educational environments in school, such as relationships between teachers and pupils, aspects of learning, and satisfaction level in school life. In short, the research methods of most previous studies, were designed to mainly assess children's personal psychological developments, therefore, it is necessary to adopt the multiple evaluation method to assess the educational environments, which provide a foundation for children's peer support activities. Based on the above, this study adopted the new scale, Adaption Scale for School Environment on Six Spheres (ASSESS) (Ishii et al., 2010) and tried to use both ASSESS and conventional psychological scales to evaluate the peer support programme from various angles.

Another research issue was that there were few longitudinal studies of the peer support, which mainly focused on a male-dominated school. Generally, male pupils tend not to be involved in the peer support activities, because supporting activities, such as care for others, appear to be feminine traits and behaviours. Male pupils generally do not want to be considered as a "teacher's pet" from other male pupils. Also, male pupils tended to feel loss of masculinity by joining supporting activities, which appeared to be related to ladylike manners (Olweus & Endresen, 1998). In the perspective of providing not only peer support but also social support, females tend to achieve more favorable outcomes compared to males (e.g., Fredrick et al., 2018). From these reasons, in order to fill the research gaps, this study adopted the newly developed scale, ASSESS and tried to evaluate the peer support programme at the male-dominated school from various aspects. Incidentally, the contents of peer support training in this study were based on samples of its theory and practice of Japan Peer Support Association (JPSA), which was a largest organization, promoting peer support in Japan.

Methodology

Objectives

The research objectives were as follows;

1) To evaluate the peer support programme multilaterally by adopting both the new and conventional scales.

2) To examine the impact of the peer support programme on pupil's social behaviours and mental health in the male-dominated high school.

Participants and Data Collection

Participants were invited from the technical high school where was located in middle-sized city in Aichi prefecture, Japan. The school had generally 840 pupils across the 1st to the 3rd years (15-18 year olds), and the majority of them were male pupils (93%). The members of the school health committee were asked to join as the intervention group (the peer supporters), and annually about 20 pupils were given peer support trainings and joined its supporting activities. Basically, only the pupils who joined the school health committee for the first time (the first year), were regarded as a participant, because the study was designed to examine how peer support will influence the participants within one year of the programme. Also, the members of the clean-up committee were invited as the control group (see the table 1).

Table 1. Participants and Years

		2012	2013	Total
Intervention Group	Total	21	16	37
	Male/Female	18/3	16/0	34/3
Control Group	Total	21	18	39
	Male/Female	18/3	16/2	34/5

Measures

For the evaluation of the peer support programme, the following scales were adopted. Interpersonal Relationship Scale (IRS) is a 6-item scale for assessing self-assertion, self-understanding, open-mindedness, understanding of others, sensibility and reliability. The items are rated on a 5-points Likert scale and the larger numbers indicates more skillful.

The scale was originally developed for assessing impact of Structured Group Encounter. IRS yielded relatively high reliability for the samples (α=0.84). Rosenberg Self Esteem Scale (RSES10) is a 10-item scale for evaluating individual self-esteem. The items are rated on a 5-point Likert format, and the larger numbers indicates one's higher self-esteem. RSES10 yielded acceptable reliability for the samples (α=0.75). General Health Questionnaire (GHQ28) is a 28-item screening device for assessing somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. The items are rated on a 4-points Likert scale from 0 ("strongly disagree") to 4 ("strongly agree"), that the smaller number indicates healthier condition. GHQ28 yielded relatively high reliability for the samples (α=0.82). Adaptation Scale for School Environments on Six Spheres (ASSESS) (Ishii et al., 2009) is a scale designed to evaluate how much a child adapts himself to school environments from various angles. ASSESS is composed of six subordinate scales (categories), which are "Life satisfaction (5 items)", "Teacher's support (5 items)", "Friend's support (5 items)", "Prosocial skills (5 items)", "Non-infringing relationship (5 items)" and "Learning adaption (5 items)". Six subordinate scales have 5 items each and 4 items for checking consistency, were added, then in total, the scale has 34 items. Each subordinate scales indicates the following meanings.

1) "Life satisfaction (5 items)": To explain how much children are content with their school daily life, (overall satisfaction). "Life satisfaction" yielded relatively high reliability for the samples (α=0.81).

"Teacher's support (5 items)": To explain the level of support children receive from their teachers, (relationship with teachers). "Teacher's support" yielded relatively high reliability for the samples (α=0.81).

3) "Friend's support (5 items)": To explain the level of support children receive from their friends, (relationships with friends). "Friend's support" yielded acceptable reliability for the samples (α=0.77).

4) "Prosocial skills (5 items)": To explain how confident children are about their prosocial skills for communicating and supporting friends. "Prosocial skills" yielded acceptable reliability for the samples (α=0.79).

5) "Non-infringing relationship (5 items)": To explain how little children experience negative feelings of bullying, ignorance, and negative attitudes from friends. "Non-infringing relationship" yielded relatively high reliability for the samples (α=0.83).

6)"Learning adaption (5 items)": To explain how much children feel about their learning satisfaction and high motivation for learning. "Learning adaption" yielded acceptable reliability for the samples (α=0.70).

From the above, four subordinate scales, which are "Teacher's support", "Friend's support", "Prosocial skills', and "Non-infringing relationship", are regarded as factors for making positive interpersonal relationships. Basically, in all the six subordinate scales, the items are rated on a 5-point Likert format, and the larger numbers indicates one's higher adaption level. The ASSESS was designed to evaluate the peer support programme from new perspectives, and its assessments of reliability and validity were conducted by several studies (e.g., Yamada & Yonezawa, 2011).

Procedure

From April 2012 to February 2013 (for 2 academic years), the peer support programme was conducted as a part of the school health committee's activities. The members of the school health committee were selected from each class in school, and they were given peer support raining sessions (see the table 2) by a school nurse who was a qualified coordinator of Japan Peer Support Association (JPSA).

Table 2. Consents of Peer Support Training Sessions

Level	Session	Objectives	Month	Note
Basic course	1	Orientation meeting, Birthday chain (Cultivating companions) Egogram (Self-understanding)	Apr.	
	2	Breathing technique (Relaxation) Ideal Egogram (Self-understanding), Drawing (Be receptive to others)	May.	Volunteer work
	3	Trust walk (Understanding the importance of support) Assertion (How to response)		
	4	Breathing (Relaxation), Meditation (Concentration) Listening I: Active listening (Listening skill)	Jun.	
	5	Breathing technique (Relaxation), Meditation (Concentration) Listening II: Memories, Understanding images (Listening skill)		
	6	Getting together, Ideograph word chain (Non-verbal communication) Listening III: Understanding other's feeling (Sensing from his expression)	Jul.	
	7	Questions, Open-ended question/Close-ended question Listening IV: One way/Interactive communication (How to ask questions)	Sep.	AED training/ Sports festival
	8	Breathing technique (Relaxation), What do you wanna do? (Self-determination) Listening V: Relief activities (Rescue & support)		
	9	Breathing (Relaxation) Personality assessment, Stress check (Self-understanding)	Oct.	Cultural festival
	10	Breathing (Relaxation) Stress coping & Resilience (Self-understanding, Psychological recovery)		
Applied course	11	Getting together (Non-verbal communication) Mysterious treasure island (Communication competence, Cooperation)	Nov.	
	12	Falling backward (Feeling of reliability) Listening VI: Five steps for solving problems (Giving a helping hand to)	Dec.	
	13	My feeling (Self-disclosure) Listening VII: Conflict resolution, AL'S methods, Confidentiality	Jan.	

Also, the members of the clean-up committee were invited as the control group. Traditionally, the new academic year in Japan starts in April. Consequently, the participants engaged in a series of peer support training and activities beginning in April. The participants were assessed three times per year, the first assessment in April (before the programme starts), the second assessment in October (after 7 months), and the third assessment in the end of January (after 10 months). The four scales, which were IRS, RSES10, GHQ28 and ASSESS, were adopted to assess both the intervention and the control groups. At the end of January when the peer support programme completed, the peer supporters were asked to answer a questionnaire about their own supporting experiences.

Data Analysis

A series of analysis of variance was conducted with using IBM SPSS Statistics 25, to compare the values between the intervention group (peer supporters) and the control group. Also, the ASSESS's accessory (Kurihara & Inoue, 2010) was used to calculate ASSESS's data for both the intervention and the control groups. Before conducting the main analysis (e.g., ANOVA), authors ran the Levene's test to examine the homogeneity of variance. The results (IRS, 0.234; RSES10, 0.227; GHQ28, 0.631; Life satisfaction, 0.492; Teacher's support, 0.480; Friend's support, 0.323; Prosocial skills, 0.874; non-infringing relationship, 0.866; Learning adaption, 0.573) showed that all values significantly exceeded the significance level ($p < .05$). Thus, it was presumed that homogeneity of variances holds. In addition, this study applied multiple scales for the assessment, which might involve common method bias. Thus, Harman's single factor test was used to check the common method bias, and the result (40.503) indicated that there were no significant common methods biases across the scales.

Results

Effects of the Training and Activities

From the overall results (Table 3), among the intervention group (peer supporters) there were significant increases of the scores in IRS ($p < .001$), RSES10 ($p < .05$), Life satisfaction ($p < .05$), Teacher's support ($p < .01$), Friend's support ($p < .05$) and Prosocial skills ($p < .01$). Also, there was an increasing tendency in GHQ28, but this did not show the significant differences. On the contrary, among the control group, there was a significant increase in Friend's support. Also, there

was an increasing tendency in RSES10, but it was not significant. In both Non-infringing relationship and Learning adaption, there were no significant increases of the scores.

Table 3. Overall Results of ANOVA and Calculation of ASSESS

	A: Group		B: Time						ANOVA		Bonferroni
Scale	**Group**	***n***	**0 month**		**7 months**		**10 months**				
			M	***SD***	***M***	***SD***	***M***	***SD***	***F***		
IRS	Intervention group	37	21.1	4.1	24.0	3.9	23.2	4.1	A	.44	1<2*** 1<3**
									B	14.30***	
	Control group	39	22.6	4 .5	23.8	3.9	23.5	4.2	A×B	2.52†	
RSES10	Intervention group	37	31.6	6.1	33.7	5.3	33.3	6.5	A	.54	1<2* 1<3†
									B	6.63**	
	Control group	39	31.1	4.7	32.4	5.3	32.7	5.3	A×B	0.33	1<3†
GHQ 28	Intervention group	37	3.9	4.9	2.3	3.3	3.1	4.1	A	.50	1>2†
									B	2.47	
	Control group	39	3.7	3.1	3.6	3.0	3.4	2.9	A×B	1.98	
Life satisfaction	Intervention group	37	59	9.4	62	10.9	63	8.9	A	.05	1<3*
									B	1.27	
	Control group		57	9.3	59	10.2	58	11.1	A×B	4.37*	
Teacher's support	Intervention group	37	55	7.4	57	7.8	60	9.0	A	.14	1<3**
									B	1.42	
	Control group	39	58	9.3	58	11.0	57	10.7	A×B	4.75*	
Friend's support	Intervention group	37	50	7.6	54	10.1	53	7.8	A	.04	1<2* 1<3*
									B	6.51**	
	Control group	39	51	10.5	54	12.4	53	10.5	A×B	.23	
Prosocial skills	Intervention group	37	53	11.4	57	11.9	59	10.9	A	.09	1<3**
									B	4.44*	
	Control group	39	55	11.2	56	12.1	56	11.9	A×B	1.95	
Non-infringing relationship	Intervention group	37	53	11.8	51	11.4	50	11.9	A	3.28	
									B	.90	
	Control group	39	54	10.4	58	12.6	55	12.7	A×B	2.50	
Learning adaption	Intervention group	37	58	8.3	55	8.9	56	9.0	A	2.59	
									B	.50	
	Control group	39	53	9.0	54	8.9	54	10.5	A×B	1.86	

n: number of participants, *M*: mean, *T*: adaption level (standard deviation), *SD*: standard deviation, *F*: ANOVA, †*p*< .1, **p*< .05, ***p*< .01, ****p*< .001,

Correlation Coefficients Across Scales

As expected, there were strong correlations among three scales: IRS, RSES10, and GHQ28. From ASSESS's subordinate scales, there were correlations among "Life satisfaction", "Prosocial skills", and "Friend's support'. Also, the results showed that "Teacher's support" did not correlate with both RSES10 and 'Learning adaption". "Non-infringing relationship had correlations with all the others except "Learning adaption". "Learning adaption' had a weak correlation with RSES10, but it did not have correlations with others.

Table 4. Correlation Coefficient among Scales

		IRS	RSES	GHQ28	LS	TS	FS	PS	NR	LA
Interpersonal Relationship	r	1	.442**	-.340**	.384**	.243*	.416**	.541**	.280*	-0.007
Scale (IRS)	p		0.000	0.003	0.001	0.034	0.000	0.000	0.021	0.955
Rosenberg Self Esteem Scale	r	.442**	1	-.506**	.555**	0.036	.409**	.499**	.502**	.263*
(RSES10)	p	0.000		0.000	0.000	0.759	0.000	0.000	0.000	0.022
General Health Questionnaire	r	-.340**	-.506**	1	-.421**	-0.113	-.335**	-.408**	-.369**	-0.167
(GHQ28)	p	0.003	0.000		0.000	0.330	0.003	0.000	0.002	0.148
Life satisfaction	r	.384**	.555**	-.421**	1	.295**	.654**	.692**	.404**	0.096
(LS)	p	0.001	0.000	0.000		0.010	0.000	0.000	0.001	0.409
Teacher's Support	r	.243*	0.036	-0.113	.295**	1	.451**	.522**	0.166	-0.093
(TS)	p	0.034	0.759	0.330	0.010		0.000	0.000	0.176	0.426
Friend's Support	r	.416**	.409**	-.335**	.654**	.451**	1	.609**	.313**	-0.027
(FS)	p	0.000	0.000	0.003	0.000	0.000		0.000	0.009	0.820
Prosocial Skills	r	.541**	.499**	-.408**	.692**	.522**	.609**	1	.359**	0.011
(PS)	p	0.000	0.000	0.000	0.000	0.000	0.000		0.003	0.922
Non-intringing relationship	r	.280*	.502**	-.369**	.404**	0.166	.313**	.359**	1	0.060
(NR)	p	0.021	0.000	0.002	0.001	0.176	0.009	0.003		0.628
Learning adaption	r	-0.007	.263*	-0.167	0.096	-0.093	-0.027	0.011	0.060	1
(LA)	p	0.955	0.022	0.148	0.409	0.426	0.820	0.922	0.628	
	n	76	76	76	76	76	76	76	68	76

**. Correlation coefficient 1%; *. Correlation coefficient 5% (Two tailed test)

Peer Supporters' Activities

In accordance with the cycle of the peer support programme, the peer supporters (the intervention group) made their own plans, and joined their supporting activities. From the results of the questionnaire (see the table 5), the peer supporters joined 11 types of activities. More than 30% of peer supporters dedicated into the following activities, "Presentation at cultural festival (100%), "Greeting (78.4%)", "Care for classmates (40.5%), "Duty of school health committee (35.1)" and "Lend an ear to others (32.4%)" .

Table 5. Participant's Supporting Activities from a Questionnaire

Type of supporting activity	N	%
Presentation at cultural festival	37	100.0
Greeting	29	78.4
Care for classmates	15	40.5
Duty of school health committee	13	35.1
Lend an ear to others	12	32.4
Cleaning activities	9	24.3
Volunteer work	9	24.3
Public relation activities	8	21.6
Trying to make friends	7	18.9
Applying at lesson	2	5.4
Mediating quarrel	1	2.7

Discussion

Due to previous studies (e.g., Olweus & Endresen, 1998) indicating that male pupils, compared to female pupils, tend to resist participating in peer support activities, it was thought that in school environments with a higher proportion of male pupils, the peer support programme might not function as effectively. In this study, however, most scales showed positive changes seven months later. Among the intervention group, there was a significant increase in 6 scales/sub-scales out of 9 scales, which included IRS, RSES10, Life satisfaction, Teacher's support, Friend's support, and Prosocial skills. On the contrary, among the control group, there was a significant increase in Friend's support. By comparing with the control group, it seemed that the peer support programme gave positive influences on the intervention group (peer supporters). This meant that with a bit of ingenuity, the peer support programme was able to exert positive influence on the peer supporters in the male-dominated school. Especially, among the intervention group, there were significant increases after 7 months in IRS, RSES10 and Friend's support. As Kato (2023) mentioned, it is considered that peer supporters in Japan have a strong tendency to believe in the potential of other pupils and strive to create a supportive environment. In this sense, the positive effects in Friend's support in the early stages can be seen as indicating that other

pupils who interacted with peer supporters experienced improvements in their own social skills. Also, there were significant increases after 10 months in Life satisfaction, Teacher's support, and Prosocial skills. Life satisfaction was used to indicate the overall satisfaction level of pupils. Therefore, it appeared that positive effects across the other six scales, including Teacher's support, were reflected in life satisfaction. Regarding a significant increase in Teacher's support, a school nurse who took the lead of the peer support programme, looked after the participants (the peer supporters), and had a good relationship with them. This seemed to contribute to pupil's increasing tendency in Teacher's support at the end of the programme. Also, 3 scales/subscales out of 9 scales, which included GHQ28, Non-infringing relationship and Learning adaption did not show significant changes. In GHQ28, it was not significant, but, there was a positive influence. GHQ28 was developed for the early detection of mental illness in adults (Jackson, 2007), and several studies (e.g., Daibo & Nakano, 1987) provided sufficient evidence demonstrating the validity and reliability of the Japanese version of GHQ28. Previous studies on peer support (e.g., Kondo & Kato, 2023) indicated significant improvements in GHQ28, therefore, similar results were anticipated in this study. The reason for the lack of significant improvement in GHQ was not clear, however, at the very least, since it showed positive effects, it could be inferred that there might have been an influence from seasonal infectious diseases, such as influenza. Also, the possible reason for no significant increases in non-infringing relationship, was inferred that the school had a calm and healthy school climate all along, and any issues relating to infringement did not happen. In fact, in the results of the questionnaire (see the table 5), there was only one case on "Mediating quarrel". In Learning adaption, the results interestingly did not show any significant increases. Several qualitative studies (e.g., Kato, 2023) showed that after joining the peer support activities, many peer supporters reported that they could manage to improve their motivation for learning and academic records. In this study, it was expected that the peer support activities have strong links with the pupil's learning adaption level, however this was not the case. Also, at the first assessment (before the programme starts), there are a weak correlation between Learning adaption and RSES10, but other scales did not have any correlations with Learning adaption. This implied that at the school, there was no strong connection between Learning adaption and other factors of ASSESS. One of the possible reasons for this seemed that the participants did not feel it was necessity to actively give learning support to other pupils. In the peer support studies employing ASSESS, the results varied, with some (e.g., Hirose et al, 2014) indicating a significant improvement in learning adaptation and others (e.g., Ikejima & Fukui, 2012; Ikejima & Matsuyama, 2016; Matsunaga & Nishiyama, 2018) not. Given that most qualitative studies suggested positive effects reported by peer supporters in learning adaptation, further research on this matter is needed. Also, there were correlations among Teacher's support, Friend's support and Prosocial skills. This implied that improvement in their prosocial skills is directly related to improvement of relationships with teachers and/or friends. Since Teacher's support and Friend's support in ASSESS represent the level of support from teachers and friends, in a sense, the enrichment of peer support activities can be interpreted as improving relationships with teachers and friends, resulting in an enhancement of support from them. Thus, Teacher's support and Friend's support seemed to serve as effective indicators for measuring the quality of peer support programme in school environment.

As mentioned above, male pupils seemed to be reluctant to join peer support activities. Therefore, in this study, it took this issue into account and provide little creative support as follows.

1) Combining with Existing School Activities

Some duties of school health committee, such as care for a wounded person, the enlightenment of health activities, and support of health check, seemed to have a close relationship with the peer support activities. Thus, male pupils were able to smoothly join the programme without reluctance. Most male pupils chose to join the school health committee by themselves, thus, they seemed not to feel their conduct and activities unmanly.

2) Consideration for Planning

The peer supporters were encouraged to make their own plans to support others. When the peer supporter made their own plans, they were advised to start with simple support activities firstly, such as caring for others, greeting activities, and morning cleaning up, rather than difficult support activities, such as counselling (which uses active listening skill). This helped them to easily carry out their supporting activities without pressure.

3) Utilising School Events as Opportunities for Supporting Activities

This technical high school originally allocated some opportunities for pupils to show their works to others and communicate with ordinary people. These unique activities included repairing toys, assembling robots, presentations at primary and secondary schools, test drive of electric vehicles which were made by the pupils as a volunteer work, and so on. The strong field of pupils was used for their supporting activities, which helped them to smoothly provide supporting activities with a wide range of people, which were from young children to the elderly. In this way, there are several examples of peer support activities that have achieved significant results by effectively utilising unique school events and contributing to the local community (e.g., Suzuki et al, 2020).

4) Arranging Training Session Dates and Contents with the School Events

Training session dates and its contents were arranged according to the contents of the school events. This seemed to help the peer supporters to make appropriate plans for supporting activities, and this eventually enhanced the quality of the school events.

With consideration for the creative supports described above, a school nurse who was in charge of peer support programme, run the programme smoothly and built good relationships with the peer supporters. This seemed to contribute to improvement in pupil's prosocial skills and their high satisfactions of the activities even in the male-dominated technical high school.

Conclusion

This study had two main objectives: firstly, to investigate the impact of peer support utilising both new and existing scales; and secondly, to determine whether peer support is effective in schools where male pupils constitute the majority. For the evaluation utilising both new and existing scales, each scale yielded positive results, and also ASSESS showed the multiple evaluation in the peer support activities from the perspective of educational settings, such as relationships between teachers and pupils, aspects of learning, and satisfaction level in school life. Especially, the enrichment of peer support activities can be interpreted as improving relationships with teachers and friends, resulting in an enhancement of support from them. Thus, teacher's support and friend's support seemed to serve as useful indicators for measuring the quality of the peer support program. For the effectiveness of peer support predominantly involving male pupils, the results demonstrated a trend of high improvement and enhancement in most scales/subordinate scales, except for non-infringing relationships and learning adaption. This study, while just an example, demonstrated that peer support can be effectively implemented even in a male-dominant school environment and that the peer support programme gave positive influences on peer supporters.

Recommendations

There are several commendations for practitioners and future researchers. Firstly, engaging in ingenuity is important to successfully introduce a peer support programme to schools. Some schools may face challenges in implementing peer support. Therefore, as demonstrated in this study, utilising existing organizations and structures to put peer support into practice is considered beneficial. Secondly, it is important to study the impact of peer support on male pupils. As evident from the literature, there is a pronounced negative trend among male pupils in terms of participation rates and resistance to engagement in peer support activities compared to female pupils. Therefore, exploring effective ways to actively involve male pupils in peer support activities is considered important, as it is believed to contribute to more effective outcomes in peer support activities.

Limitations

Given that the sample of this study consists of pupils from a technical high school, there is room for consideration regarding whether similar results would emerge in regular high schools that aim for university admission. Thus, similar studies focusing primarily on male high school pupils, are needed to provide more conclusive answers about the impact of the peer support programme in the male-dominated high school.

Authorship Contribution Statement

Kondo: Conceptualization, design, data acquisition, material support, statistical analysis, supervision, writing. Kato: Design, editing, interpretation, revision of manuscript, statistical analysis, final approval.

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