Evaluation of the Project P.A.T.H.S. in Mainland China: Views of the program implementers in senior high schools

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Abstract

The present study investigated program implementers' views on the Tin Ka Ping Project P.A.T.H.S. in its first year of implementation in senior high schools in mainland China. After completion of the program, 33 program implementers completed the Subjective Outcome Evaluation Form (Form B). Results showed that over 90% of the implementers had positive views of program content, their self-performance and program effectiveness. In line with previous evaluation studies, perceived worker performance was found to predict perceived program effectiveness. Nevertheless, program content did not predict program effectiveness. Findings of the present study underscore the benefits of implementing the Project P.A.T.H.S. in senior high schools in mainland China.

Keywords: Project P.A.T.H.S., positive youth development, subjective outcome evaluation, program implementers

Introduction

While adolescence is often regarded as a period with rapid physical development, it is also a transitional period during which adolescents have to go through many challenges (1). According to World Health Organization (WHO), adolescents may engage in a range of risk behaviors and health issues, including violent behaviors, alcohol and drug abuse, tobacco use, self-harm, and mental health issues (2). These health compromising behaviors often have negative impacts on the current and future health of adolescents (3). Based on the statistics of WHO (2), health compromising behaviors among adolescents are prevalent throughout the world.

The problem of health comprising behaviors among adolescents have also drawn public attention in China. In the study of Hesketh, Ding, and Tomkins (4), it was found that nearly 16% of the junior and senior school students responding to the survey were

ever smokers. Alcohol use among Chinese adolescents is another serious problem that more attention should be paid. A meta-analytic study of Feng and Newman (5) indicated that over 35% of male students and over 20% of female students in senior high schools had used alcohol in the last 30 days. Regarding illicit drug use, the prevalence rate was about 4% based on a survey of 15 secondary schools in Wuhan (6). A large-scale study (7) investigated self-harm behaviors among secondary school students in China, and the findings suggested that 17% of the students had injured themselves deliberately in the past 12 months, which was higher that Western countries (7, 8).

Mental health issue is another leading cause of health problem among adolescents (9). According to a large-scale survey in China, approximately 10% of Chinese school children had suffered from one or more types of psychiatric disorders (10). Correspondingly, it was estimated that every trained child psychiatrist has to serve more than 40,000 children with behavioral and emotional problems in mainland China (11). Thus, prevention of health compromising behaviors and mental health problems among children and adolescents is an urgent and important job in mainland China. Unfortunately, there is a lack of prevention programs designed for Chinese adolescents.

Both individual and contextual factors affect adolescent behavior and shape their development (12). Turbin et al. (13) suggested that adolescent involvement in health-promoting behaviors were more likely to be affected by protective and risk factors in social context (e.g., family and peers), rather than by their individual-level factors. Therefore, providing prevention in the social context would be effective to reduce the risk of adolescent behavior problems and psychiatric disorders. As school is an important place for adolescents to learn knowledge, develop social skills and build social support (1), it would be appropriate to implement prevention programs in school setting, since Chinese adolescents spend more than 8 hours at school each day (14). Therefore, a school-based positive youth development (PYD) program for the general adolescent population is a promising approach to promote holistic development in adolescents.

With respect to the above-mentioned issues, a PYD program entitled "P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme" was initiated in Hong Kong in the 2005-2006 academic year and then piloted in mainland China from 2007-2008 academic year to 2009-2010 academic year (15, 16). The initial version of the Project P.A.T.H.S. was designed by the first author and his collaborators from five universities in Hong Kong and funded by The Hong Kong Jockey Club Charities Trust. Two tiers of programs were included in the project to help adolescents with different levels of need. The Tier 1 Program provides a series of curricula-based training programs to the general adolescent population in junior secondary schools that students participate in 10 to 20 hours of training on 15 PYD constructs in each school year, whereas the Tier 2 Program is designed for one-fifth of the students who have greater psychosocial needs (17).

Because of the prominent success in the implementation of the project in Hong Kong, a pilot project was funded by Tin Ka Ping Foundation and implemented in four schools in mainland China (including Shanghai, Suzhou, Changzhou and Yangzhou) in 2011-2014. As a transplant of the Project P.A.T.H.S. (i.e., Tin Ka Ping P.A.T.H.S. Project), the pilot project had very good performance. Thus, a second phase of the project was funded to fully implement the project from 2014-2015 academic year (18,19). In the academic year of 2015-2016, a total of 30 secondary schools joined the project and the curriculum for senior high schools was also developed. To facilitate program implementation, a series of in-service training programs were provided to school teachers and social workers from participating schools.

Subjective outcome evaluation is a useful approach to gather feedback from stakeholders of programs (e.g., program participants and implement-ters) and assess their satisfaction. The views of the stakeholders can provide ideas to improve program content and process, which have implications to the application of the program in the general population. Previous evaluation studies using subjective outcome evaluation approach showed that both students and school teachers held very positive views toward the project, which echoes the results of qualitative evaluation and objective outcome evaluation of the

project (18-21). However, the perceptions of program implementers from senior schools are still unknown.

As implementers are an indispensable part of a program, the feedback from these well-trained professionals in the field of positive adolescent development could be very helpful to improve program content. Moreover, their first-hand experience of delivering program to students would provide practical data to review the program, as they would not adapt materials which are not fit in their situation (22). Implementers could review their own practice when they are doing evaluation, and such evaluation could provide them with a sense of respect and fairness (23).

The purpose of the present study was to examine program implementers' perceptions toward the project implemented in senior high schools in China. Subjective outcome evaluation approach was used to collect feedback of implementers who delivered the senior curriculum. As there are very few programs focusing on promoting holistic and positive development for students of senior high schools in mainland China, the evaluation study can provide good insight into the efficacy of the Project P.A.T.H.S. and the factors associated with program success. Three sets of research questions and hypotheses were examined in the present study:

- What are program implementers' perceptions of the project implemented in senior high school? Would the findings be consistent with the findings of previous evaluation studies of programs conducted in junior secondary school? Based on previous studies, it was expected that a majority of the respondents (at least 80%) would have positive view of the program (Hypothesis 1).
- Are there any significant inter-relationships among the three aspects of subjective outcome evaluation? Based on the results of previous findings, we hypothesized that the perceived program effectiveness would be significantly associated with program content (Hypothesis 2a) and perceived worker performance (Hypothesis 2b).

- What are the predictors of perceived effectiveness of the program? Based on the findings of previous study, we hypothesized that program content and perceived worker performance would predict the effectiveness of the project (Hypothesis 3a and 3b, respectively).

Methods

In the academic year of 2015-2016, the Tin Ka Ping P.A.T.H.S. Project was implemented in 30 junior and/or senior high schools in mainland China. To explore program implementers' viewpoints toward the program and their self-performance, and to evaluate program effectiveness, school teachers who taught the senior school programs were invited to complete the Subjective Outcome Evaluation Form for Instructors (Form B) after program curriculum was finished.

A total of 33 implementers from four senior secondary schools in mainland China, with a range from five to twelve teachers in each school, have submitted the Form B after the completion of program. To ensure survey response quality, an evaluation manual with a clear guideline on the completion of Form B was provided to the teachers before they started to fill in the evaluation form. Relevant training on evaluation was also included in different training workshops.

Instruments

The Subjective Outcome Evaluation Form for Instructors (Form B) has been widely applied over the past decade and evaluation studies of the project demonstrate that Form B is a valid and reliable measure gathering feedback from program implementers of the project (24). Form B consists of both open-ended questions that provide qualitative data and quantitative scales. As shown in Table 1, the three subscales used in Form B have demonstrated very good internal consistency with Cronbach's αs above .90. Due to space limitation, the present study focused on the quantitative data collected from the following items/subscales:

- A 6-point Likert scale assessing the implementers' perceptions of the program content (10 items);
- A 6-point Likert scale assessing the implementers' perceptions of self-performance (10 items);
- A 5-point Likert scale assessing the implementers' perceptions of program effectiveness (16 items);

- One item assessing the degree to which implementers would recommend other students to join the program;
- One item assessing the degree to which teachers would teach similar curriculum in the future;
- One item assessing implementers' view toward their professional growth through the program.

Table 1. Mean, standard deviations, Cronbach's alphas, and mean of inter-item correlations

	M	SD	α	Mean[#]
Program Content (10 items)	5.17	0.87	.97	.75
Program Implementers (10 items)	5.08	0.89	.97	.78
Program Effectiveness (16 items)	4.10	0.77	.98	.72
Total Effectiveness (36 items)	4.66	0.78	.99	.66

Note: [#] Mean inter-item correlations.

Data analyses

First, reliability analyses were conducted to examine the internal consistency of the three subscales in Form B and the inter-item correlations among them. Second, descriptive analyses were performed to compute the percentage of positive responses of implementers' perception of program components (program content and implementers' self-performance) and program effectiveness. Third, to examine the correlations between program content, implementers' self-performance and program effectiveness, Pearson correlation analysis was performed. Finally, multiple regression analysis was conducted to test the potential predictors of perceived program effectiveness, including program content and implementers' perceived self-performance. All statistical analysis was performed using SPSS 23.0.

Results

Program implementers' perceptions of program content, self-performance and program effectiveness are shown in Tables 2-4, respectively. Generally speaking, their views toward the aspects measured in Form B were very positive. Over 96% of the respondents had positive responses on eight out of ten items regarding program content, such as design of the program, program activities, atmosphere in the classroom, student classroom participation, theoretical support and teacher's interest toward the curriculum. Over 90% of the respondents agreed that "the objectives of the curriculum are very clear," and "there was much peer interaction amongst the students". Overall speaking, the respondents perceived positive features of program content (see Table 2). Similarly, the majority of the respondents also had positive perceptions toward their own performance. Seven out of ten questions regarding implementers' perceived self-performance received positive responses from over 96% of the respondents (see Table 3).

Results in Table 4 indicated that there were a number of perceived benefits of the project. Over 96% of the respondents agreed that the program could strength students' bonding with their families, teachers and classmates, enhance students' resilience and their competence in regard to social skills, emotion capital and cognitive functioning, and increase students' self-awareness and self-confidence, etc. The great majority (97%) of the respondents agreed that the program enriched students' overall development. From the program implementers'

subjective views toward other aspects of the program, all of them (100%) would suggest the students who have similar needs join the program. In addition, 97% of the respondents had intention to teach similar programs again in the future, and over 93% of respondents perceived the program as helpful in their professional growth (Table 5). In short, the findings supported Hypothesis 1.

Table 2. Summary of the program implementers' perceptions toward the program content

		N	Mean	SD	Respondents with Positive Responses (Options 4-6)	
					n	%
1.	The objectives of the curriculum are very clear.	32	5.22	1.04	30	93.8
2.	The design of the curriculum is very good.	32	5.06	0.91	31	96.9
3.	The activities were carefully planned.	32	5.19	0.93	31	96.9
4.	The classroom atmosphere was very pleasant.	32	5.19	1.00	31	96.9
5.	There was much peer interaction amongst the students.	32	5.19	1.12	30	93.8
6.	Students participated actively during lessons (including discussions, sharing, games, etc.)	32	5.16	0.95	31	96.9
7.	The program has a strong and sound theoretical support.	32	4.88	0.98	31	96.9
8.	The teaching experience I encountered enhanced my interest towards the lessons.	32	5.16	0.99	31	96.9
9.	Overall speaking, I have very positive evaluation of the program.	32	5.25	1.02	31	96.9
10.	On the whole, students like this curriculum very much.	32	5.41	0.98	31	96.9

Note: All items are on a 6-point Likert scale with 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree. Only respondents with positive responses (Options 4-6) are shown in the table.

Table 3. Summary of the program implementers' perceptions toward their own performance

		N	Mean	SD	Respondents with Positive Responses (Options 4-6)	
					n	%
1.	I have a good mastery of the curriculum	32	4.88	1.07	29	90.6
2.	I prepared well for the lessons.	32	4.94	1.05	30	93.8
3.	My teaching skills were good.	32	4.75	0.98	30	93.8
4.	I have good professional attitudes.	32	5.00	1.02	31	96.9
5.	I was very involved.	32	5.06	0.95	31	96.9
6.	I gained a lot during the course of instruction.	32	5.09	1.00	31	96.9
7.	I cared for the students.	32	5.28	0.99	31	96.9
8.	I was ready to offer help to students when needed.	32	5.41	0.98	31	96.9
9.	I had much interaction with the students.	32	5.19	0.97	31	96.9
10.	Overall speaking, I have very positive evaluation of myself as an instructor.	32	5.19	0.93	31	96.9

Note: All items are on a 6-point Likert scale with 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree. Only respondents with positive responses (Options 4-6) are shown in the table.

Table 4. Summary of the program implementers' perceptions toward the program effectiveness

The extent to which the Tier 1 Program (i.e., the program in which all students have joined) has helped your students:	N	Mean	SD	Respondents with Positive Responses (Options 3-5)	
				n	%
1. It has strengthened students' bonding with teachers, classmates and their families.	33	4.18	0.88	32	97.0
2. It has strengthened students' resilience in adverse conditions.	33	4.03	0.85	32	97.0
3. It has enhanced students' social competence.	33	4.30	0.85	32	97.0
4. It has improved students' ability in handling and expressing emotions.	33	4.39	0.83	32	97.0
5. It has enhanced students' cognitive competence.	33	3.97	0.88	32	97.0
6. Students' ability to resist harmful influences has been improved.	33	4.03	0.95	31	93.9
7. It has strengthened students' ability to distinguish between the good and the bad.	33	4.09	0.95	31	93.9
8. It has increased students' competence in making sensible and wise choices.	33	3.91	0.91	31	93.9
9. It has helped students to have life reflections.	33	3.94	0.90	32	97.0
10. It has reinforced students' self-confidence.	32	4.19	0.78	31	96.9
11. It has increased students' self-awareness.	32	4.31	0.86	31	96.9
12. It has helped students to face the future with a positive attitude.	33	4.30	0.81	32	97.0
13. It has helped students to cultivate compassion and care about others.	33	4.06	0.90	32	97.0
14. It has encouraged students to care about the community.	33	3.55	1.00	30	90.9
15. It has promoted students' sense of responsibility in serving the society.	33	3.94	1.06	30	90.9
16. It has enriched the overall development of the students.	33	4.30	0.85	32	97.0

Note: All items are on a 5-point Likert scale with 1 = unhelpful, 2 = not very helpful, 3 = slightly helpful, 4 = helpful, 5 = very helpful. Only respondents with positive responses (Options 3-5) are shown in the table.

Table 5. Other aspects of subjective outcome evaluation based on the program implementers' perceptions

		N	Mean	SD	Respondents with Positive Responses	
					n	%
Q3.	If you have a student/client whose needs and conditions are similar to those of your students who have joined the program, will you suggest him/her to participate in this program?	33	3.58	0.50	33	100
Q4.	If there is a chance, will you teach similar programs again in the future?	33	3.58	0.56	32	97.0
Q5.	Do you think the implementation of the program has helped you in your professional growth (e.g. enhancement of your skills)?	32	4.28	0.89	30	93.8

Note: For Q3 & Q4, the item is on a 4-point Likert scale with 1 = definitely will not teach, 2 = will not teach, 3 = will teach, 4 = definitely will teach. Only respondents with positive responses (Options 3-4) are shown in the table. For Q5, the item is on a 5-point Likert scale with 1 = unhelpful, 2 = not very helpful, 3 = slightly helpful, 4 = helpful, 5 = very helpful. Only respondents with positive responses (Options 3-5) are shown in the table.

Table 6. Correlation coefficients on the relationship between program components and program effectiveness

Variable	1	2	3
1. Program Content (10 items)	–	–	–
2. Program Implementers (10 items)	.92**	–	–
3. Program Effectiveness	.73**	.77**	–

** p < .01.

Table 7. Multiple regression analyses predicting program effectiveness

	Predictors			
	Program Content	Program Implementers	Model	
	β^a	β^a	R	R^2
Program Effectiveness	.12	.65*	.77	.59

Note: Missing values were replaced with mean ; [a] Standardized coefficients ; * *p* < .05.

The results of correlation analyses showed that program content, program implementers' perceived worker performance and program effectiveness were significantly associated with each other (rs ranged from .73 to .92, ps < .01; see Table 6). The findings gave support to Hypotheses 2a and 2b. Table 7 presents the results of multiple regression analysis. Consistent with Hypothesis 3b, the overall perception of program implementers' self-performance predicted program effectiveness (β = .65, p < .05). However, Hypothesis 3a was rejected, as program content was not a significant predictor of the benefits of the program based on the data of the present study. This model explained 59% of the variance of program effectiveness.

Discussion

To promote students' whole person development in senior high schools, innovative units and topics based on PYD constructs were developed and incorporated into the senior curriculum of P.A.T.H.S. programs in mainland China. This initiative is ground-breaking in different Chinese communities. Utilizing the subjective outcome evaluation approach, this study examined stakeholder satisfaction of program components (quality of content and implementers) and program effectiveness based on the perceptions of program implementers who taught the senior curriculum of Tier 1 Program in the academic year of

2015-2016. Generally speaking, the great majority of the implementers who responded to the survey were satisfied with the project and recognized its positive influences on adolescent development. The present study replicated the previous evaluation findings in junior secondary schools (24, 25).

As the first subjective evaluation regarding implementers' views of senior school program, several observations can be highlighted. First, approx.-imately 97% of the respondents held positive views toward program content, self-performance and benefits of the program. Second, relatively fewer teachers (90.9%) agreed that the program promoted students' sense of social responsibility and encouraged them to care more about community development, which was consistent with previous evaluation findings (25,26). One explanation is that community involvement is more difficult to observe, as activities in the project are mainly conducted within school settings. However, the findings can still be regarded as very positive. Third, this study replicated the relationships among the three aspects of subjective outcome evaluation that both program content and implementers' self-performance had strong and positive relationships with program effectiveness. Fourth, the performance of program implementers was identified as a significant predictor of positive effects of the program. However, in contrast to previous studies based on student participants, program effectiveness was not statist-ically significant.

There are several reasons why the project was successful and positive feedbacks were received. First, the remarkable success of the junior school programs in Hong Kong and mainland China provides experience and materials for implementing similar programs in senior secondary schools. Second, as implementers in the present study were school teachers who aspired to pass on their knowledge and positive attitude toward life to students, they would have a higher motivation to deliver the program. Third, teaching and learning behavior expected in PYD programs is different from traditional way of education in China. Because different teaching and learning methods are used in the programs, including group discussion, role play, self-reflections, and multimedia teaching, students can be more actively involved (17). Fourth, in-service training programs for teachers can help strengthen their understanding of PYD constructs and program content (15). Implementers would be more likely to evaluate their performance and the program positively if they observe that students have positive changes after attending the program (27).

The findings in the present study would be a good reference for similar research and programs in the future, which provide a synthesis of stakeholder satisfaction on program implementation and effectiveness. It is important to collect the views of program implementers, since they play the role of a medium between program participants and program operation. As an indispensable factor contributing to an effective program in the 5P model (i.e., policy, program, place, process and people), program implementers have crucial influence on program effectiveness (28). In future studies, researchers may investigate if implementers' perceptions are consistent with students' subjective and objective evaluation of the program.

The present study has several limitations. First, because this is an initial evaluation study of the senior school program of Project P.A.T.H.S., the sample size is relatively small. Hence, the findings could only represent the views of teachers in a few project schools. Second, as few schools joined the evaluation, it is unclear if implementers teaching different grades have different views on the program. Third, only quantitative data were reported in this study. Obviously, a more comprehensive picture of imple-

menters' feedback on the program requires both quantitative and qualitative evaluation. It will therefore be helpful to include more teachers using different evaluation methods in future evaluation studies.

Despite these limitations, the results of this study demonstrated that the Tier 1 Program of the Tin Ka Ping P.A.T.H.S. Project in mainland senior high schools was positively evaluated by program implementers and they had positive effects on adolescent development, which is pioneer in the Chinese contexts. In view of the limited international and local research on positive youth development programs in China, the present study provides an insight into the initial application of Tin Ka Ping P.A.T.H.S. Project among senior high school students and teachers.

Acknowledgments

Ethical compliance

The authors have stated all possible conflicts of interest within this work. The authors have stated all sources of funding for this work. If this work involved human participants, informed consent was received from each individual. If this work involved human participants, it was conducted in accordance with the 1964 Declaration of Helsinki. If this work involved experiments with animals, it was conducted in accordance with the related institutions' research ethics guidelines.

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