Positive youth development program targeting students with greater psychosocial needs: Project P.A.T.H.S. in Hong Kong

Daniel T.L. Shek[1-5,*]**, Rachel C.F. Sun**[6] **and Pik Fong Tsui**[1]

[1] Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hong Kong, PR China
[2] Public Policy Research Institute, The Hong Kong Polytechnic University, Hong Kong, PR China
[3] East China Normal University, Shanghai, PR China
[4] Kiang Wu Nursing College of Macau, Macau, PR China
[5] Department of Pediatrics, Division of Adolescent Medicine, Kentucky Children's Hospital, University of Kentucky College of Medicine, Lexington, KY, USA
[6] Faculty of Education, The University of Hong Kong, Hong Kong, PR China

Abstract

The Tier 2 Program of the Project P.A.T.H.S. targets adolescents with greater psychosocial needs. Based on subjective outcome evaluation data collected from 2173 participants recruited in 52 schools, 257 conclusions were reported by the program implementers in the evaluation reports. These conclusions were further analyzed via secondary data analyses. Although most of the conclusions concerning perceptions of the Tier 2 Program, instructors, and program effectiveness were positive in nature, there were also conclusions on the difficulties encountered and suggestions for improvements. Consistent with the previous evaluation findings, the present study suggests that the Tier 2 Program was well received by different stakeholders and the program was beneficial to the development of the program participants in the first year of the Experimental Implementation Phase.

Keywords: Chinese adolescents; positive youth development; secondary data analysis; subjective outcome evaluation.

Introduction

To enhance the holistic development of adolescents in Hong Kong, The Hong Kong Jockey Club Charities Trust approved a total of HK$400 million to launch the Project P.A.T.H.S.

*Corresponding author: Professor Daniel T.L. Shek, Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hunghom, Hong Kong, PR China
Phone: +(852) 2766 5652, Fax: +(852) 2773 6546,
E-mail: daniel.shek@polyu.edu.hk

(**P**ositive **A**dolescent **T**raining through **H**olistic **S**ocial Programs) for junior secondary students in Hong Kong in 2004. The project started its Experimental Implementation Phase in the 2005/2006 school year. Project P.A.T.H.S. consists of two tiers of programs (Tier 1 and Tier 2 Programs). The Tier 1 Program is a curriculum-based program to build up the psychosocial competencies of Secondary 1–3 students in the participating schools, whereas the Tier 2 Program is provided to students with greater psychosocial needs. Because the research findings suggested that approximately one-fifth of adolescents would need intervention in greater intensity, the social workers of each school would tailor-make special programs to fit students' needs. The target participants of the Tier 2 Program are identified via multiple sources, including objective assessment tools, teachers' recommendations, student records and/or workers' observations. Because the Tier 1 Program aims to develop students' competence under the framework of the 15 positive youth development constructs (1, 2), workers are required to input the elements of those constructs into the activity plans when they are designing the Tier 2 Program. Because of the overwhelming success of the project, the project was extended in 2009 with an additional earmarked grant of HK$350 million.

Evaluation studies examining the effectiveness of the Tier 2 Program have been carried out (3–5). In these studies, four major types of program modes were commonly identified, namely (i) programs based on the adventure-based counseling (ABC) approach, (ii) programs concentrated on volunteer training and services (VTS), (iii) programs incorporating both adventure-based counseling and volunteer training elements, and (iv) other programs not covered in the preceding categories. ABC can be regarded as a counseling approach that attempts to adopt "walk therapy" instead of "talk therapy" to provide risk and challenge experiences to participants in order to release their potential (6). It combines different counseling models and educational theories, including cognitive theory, rational emotive theory, behavioral theory, reality theory, experiential learning, etc. (7). Comprising experiential learning as well as group counseling components, there is evidence suggesting that ABC could enhance participants' self-esteem, problem-solving skills, communication skills, and interpersonal skills (6–9). Another program mode which also utilizes experiential learning experience is VTS. Again, service-learning helps to enhance adolescents' caring and prosocial behaviors (10, 11).

The effectiveness of the Tier 1 Program of Project P.A.T.H.S. in the 2005/2006 school year was examined using different strategies (12–14). Shek and Lee (15) previously studied the effectiveness of the Tier 2 Program of the Project P.A.T.H.S. in the first year of the Experimental Implementation Phase by analyzing the subjective outcome evaluation for participants

(Form C). The results showed that participants had positive views towards the program, instructors, and effectiveness of the program. As each school was required to provide five conclusions in the evaluation report, secondary data analyses were carried out to further understand the effectiveness of the Tier 2 Program by integrating the subjective outcome evaluation data from the participants and professional evaluation of the program implementers.

Secondary analysis, regarded as "the re-analysis of data for the purpose of answering the original research questions with better statistical techniques, or answering" [(16), p. 3] is known for time-saving and cost-saving (17). In this study, we use the data completed and analyzed by program implementers to further examine the effectiveness of the Tier 2 Program. Although there are objections to the use of data collected from program implementers for analysis such as worrying about the subjectivity of interpretations, the program implementers are still in a good position to help evaluate the program as they are professionals (either social workers or teachers), whose jobs are to carry out program implementation and evaluation tasks, and they are also trained to conduct evaluation research (18). Moreover, this project has provided training for social workers regarding the collection and analysis of the data using Form C. As such, we can state that the data collected and analyzed by the program implementers can be regarded as trustworthy.

In this study, 257 conclusions included in the 52 evaluation reports were analyzed and interpreted. The views towards the program, instructors, and perceived effectiveness through the eyes of the program implementers were presented and discussed. Because the 2005/2006 study cohort is the beginning of the Experimental Implementation Phase of the Project P.A.T.H.S., its data can be regarded as a baseline and is important for further comparison of the same project.

Methods

Dataset for secondary data analyses

There were 52 schools joining the Secondary 1 level of the Project P.A.T.H.S. in the Experimental Implementation Phase in the 2005/2006 school year. The Tier 2 Program of these 52 schools involved a total of 3072 participants, of which 2718 were Secondary 1 students identified by teachers, parents, and/or self-administered questionnaires as having greater psychosocial needs, and 354 participants were parents and teachers of those identified students. The mean number of participants joining the Tier 2 Program per school was 59.08 (range: 21–274) and the average number of sessions provided per school (normally 1.5–3 h per session) was 19.53 (range: 1–63 sessions). The ABC approach and VTS were the two major program elements indentified in the Tier 2 Program in the 52 schools of the present study.

After completing the Tier 2 Program, a total of 2173 participants (mean=41.79 participants per school, range: 20–151) responded to the Subjective Outcome Evaluation Form (Form C) which was developed by Shek et al. (19). The overall response rate was 70.74%. In brief, Form C assesses participants' perceptions of the program, workers, and effectiveness of the program. There are also open-ended questions regarding participants' appreciation of the program,

their opinion about instructors, the things they learned in the program as well as areas for improvements. Details of the Form C design can be found in Shek and Sun (3).

To facilitate program evaluation, the Research Team developed an evaluation manual with standardized instructions for collecting the subjective outcome evaluation data (19). Moreover, social workers were trained during the 20-h training workshops on how to collect and analyze the data using Form C. Based on the evaluation data collected in each school, the responsible worker in each school was required to complete an Evaluation Report where quantitative and qualitative findings based on Form C were summarized and described. In the last section of the report, the worker preparing the report in each school was requested to write down five conclusions regarding the program, instructors, and its effectiveness, which would provide an overall picture of the Tier 2 Program.

Data analyses

The data were analyzed using general qualitative analyses techniques (20) by two trained research assistants, of which one has a Bachelor's Degree of Social Work and the other has a Bachelor's Degree of Social Sciences. The final coding and categorization was further cross-checked by a colleague with a Master's Degree of Social Work. There were three steps in the data analysis process. First, raw codes were developed for words, phrases, and/or sentences that formed meaningful units in each conclusion at the raw response level. Second, the codes were further combined to reflect higher order attributes at the category of codes level. For example, the response of "satisfied with the program" at the raw response level could be subsumed under the category of "satisfaction level", which could be further subsumed under the broad theme of "views of the stakeholders of the program" (Table 1).

To safeguard the credibility of the data collected, the first author who designed the P.A.T.H.S. program did not participate in the data analysis process for he was conscious of his own biases and expectation of the program in the present qualitative analyses. In addition to minimize the possible biases involved, both intra- and inter-rater reliability on the coding were calculated. For intra-rater reliability, each of the two research colleagues (one was responsible for coding and the other was responsible for cross-checking) coded 20 randomly selected responses without looking at the original codes given. For inter-rater reliability, another two research staff (one with a Doctoral Degree and one with a Master's Degree) who had not been involved in the data analyses coded the same 20 randomly selected responses independently without knowing the original codes given at the end of the scoring process.

Following the principles of qualitative analyses proposed by Shek et al. (21), the following attributes of the study regarding data collection and analyses were highlighted. First, a general qualitative orientation was adopted. Second, the sources of data (e.g., number of participants) for analyses were described. Third, the issues of biases and ideological preoccupation were addressed. Fourth, inter- and intra-rater reliability information was presented. Fifth, the categorized data were kept by a systematic filing system to ensure that the findings are auditable. Finally, possible explanations, including alternative explanations, were considered.

Results

In the 52 Tier 2 reports received, one school listed out only three conclusions and one school listed out only four

Table 1   Views of the stakeholders on the program.

Category	Responses	Nature of the response				Total
		Positive	Neutral	Negative	Undecided	
Satisfaction level	Students' active participation	4				4
	Liked the program	7				7
	Satisfied with the program	9				9
	Positive comments	4				4
	Subtotal	24	0	0	0	24
Program content	Amusing	1				1
	Program was able to achieve the goals	2				2
	Challenging	3				3
	Helped oneself to make a breakthrough	1				1
	Diversified	6				6
	Activities were meaningful and substantial	1				1
	Experiential learning	13				13
	Good activity design	5				5
	Students liked interactive/outdoor activities	4				4
	Students liked small group activities	1				1
	Interesting	1				1
	Educational	1				1
	Lively	1				1
	Exciting	1				1
	Creative	1				1
	Matched with student needs and interests	12				12
	Provided positive experiences	3				3
	Subtotal	57	0	0	0	57
Program arrangement	Satisfied with the program arrangement	5				5
	Time constraint			1		1
	Subtotal	5	0	1	0	6
Perceived successful factors	Harmonious atmosphere	3				3
	Both group learning and experiential learning were effective	2				2
	Discussion between instructors	1				1
	Subtotal	6	0	0	0	6
Others	Good atmosphere	3				3
	Worth to continue	3				3
	Good cooperation between school and instructors	1				1
	Subtotal	7				7
Total responses		99	0	1	0	100

conclusions. As such, a total of 257 conclusions were collected and 411 meaningful units were extracted. These raw responses were further categorized into several categories, including views of the stakeholders on the program (Table 1), views towards instructors (Table 2), perceived effectiveness of the program (Table 3), as well as difficulties encountered and recommendations to the program (Table 4). Regarding the conclusions related to the stakeholders' perceptions of the program, results in Table 1 show that most of the responses were positive in nature in the areas of satisfaction, program content, program arrangement, perceived successful factors and others. Among the 100 responses, 99 responses were classified as positive (99%). The intra-rater agreement percentage and inter-rater agreement percentage of the positivity of the coding were 100% and 100%, respectively, suggesting that the coding was very consistent.

For the perceptions of the program implementers, findings in Table 2 show that all the 56 responses were positive in nature (100%). Both the intra-rater and inter-rater agreement

percentages of the positivity of the coding were 100%. These findings suggest that program implementers had a very positive perception about themselves.

The responses related to perceived effectiveness of the program are shown in Table 3. There were a total of 204 meaningful units that could be categorized into several levels, including perceived general effectiveness, societal level, familial level, interpersonal level (general interpersonal competence and specific interpersonal competence), personal level (positive self-image, ways to face adversity, behavioral competence, persistence and motivation, autonomy, responsibility, cognitive and emotional competence, and experiences or exploration) and others. All 204 responses were positive in nature (100%). The intra-rater and inter-rater agreement percentage on the categories of the coding were 90% and 85%, respectively.

Table 4 shows the program participants' responses on the difficulties encountered in the program content and arrangement, and other difficulties (n=19) and responses

Table 2   Responses on views towards instructors.

Category	Responses	Nature of the response				Total
		Positive	Neutral	Negative	Undecided	
General appreciation	Satisfied with the workers	12				12
	Positive comments	3				3
	Subtotal	15	0	0	0	15
Specific appreciation	Showed devotion	1				1
	Professional attitude	9				9
	Caring attitude	3				3
	Understood the students' needs	1				1
	Appreciated the instructors' professional knowledge	6				6
	Professional teaching skill	13				13
	Appreciated the instructors' ability of program arrangement	1				1
	Instructor's attitude and performance had positive impact on students' learning	2				2
	Well-prepared	4				4
	Communicated with students	1				1
	Subtotal	41	0	0	0	41
Total responses		56	0	0	0	56

on recommendations to the program (content, format and arrangement, time and implementation, n=32). The intra-rater agreement percentage of the categories of code was 92.5% and inter-rater agreement percentage was 97.5%.

Discussion

This study attempted to analyze secondary data to examine the effectiveness of the Tier 2 Program of the Secondary 1 level in the Experimental Implementation Phase of the Project P.A.T.H.S. Results showed that the responses related to perceptions of the Tier 2 Program, instructors, and effectiveness of the program were positive in nature. These findings are consistent with the previous studies analyzing the subjective outcome evaluation of the Tier 2 Program of the same cohort (15), as well as other studies analyzing data gathered from other cohorts of students (3–5). In short, the study suggests that the Tier 2 Program of the Project P.A.T.H.S. is effective in promoting the holistic development of the program participants.

From Table 1, we can see many responses related to views towards the program were about "experiential learning" and "meet students' needs and interests". As the Tier 2 Program was tailored by social workers of individual schools to cater for the needs of students, it was not surprising to find out that participants regarded the Tier 2 Program as meeting their interests and needs. Concerning the experiential learning, ABC and VTS were two major program modes in the Tier 2 Program and they employed experiential learning theory. Experiential learning helps individuals construct meaning and acquire knowledge by experience. The knowledge constructed in an individual's mind can be expressed and transferred to new situations (22). Participants learn new skills and gain new experiences in the ABC and VTS activities. To echo the benefits of ABC and VTS program modes (Table 3) (6–11) in enhancing

participants' competences in different areas, we found most of the responses fell into the subcategory of "specific interpersonal competence" (n=41) and "positive self-image" (n=31) such as "improved students' social skills", "enhanced team spirit and team work", "enhanced students' self-confidence", and "appreciated or recognized one's self". Although VTS can foster voluntarism and increase participants' concerns for others, only one response in Table 3 related to the effectiveness of the Tier 2 Program is about "enhanced social responsibility and participation". This could be because Secondary 1 students have just been promoted to secondary school and they try their best to strengthen their personal qualities in order to adjust to the new environment instead of turning outside to care about the society.

These findings are important as far as intervention for adolescents with greater psychosocial needs is concerned. According to Shek (23), there are several adolescent developmental issues and problems in Hong Kong that deserve the attention of social workers and teaching professionals. These included increasing adolescent substance abuse statistics, Internet use problems and Internet addiction among young people, worrying trends in adolescent sexuality, phenomena on bullying among young people, and adolescent materialistic orientation. Adolescents displaying such "at-risk" behavior should be identified as early as possible and intervention should be given as soon as possible. Obviously, the present findings suggest that the Tier 2 Program, particularly those incorporating elements of ABC and voluntary service are effective in helping young people with greater psychosocial needs.

Although the present study suggests that the Tier 2 Program of Project P.A.T.H.S. was effective in this cohort of participants, there were some limitations of this study. First, it is noteworthy that the findings were based on subjective outcome evaluation data from the program participants only. As such, further subjective outcome evaluation studies based on

Table 3   Responses on perceived program effectiveness.

Category	Subcategory	Responses	Nature of the response				Total
			Positive	Neutral	Negative	Undecided	
Perceived general effectiveness	–	Could help students' development	22				22
		Had positive impact on the students' development	17				17
		Subtotal	39	0	0	0	39
Societal level	–	Enhanced social responsibility and participation	1				1
		Subtotal	1	0	0	0	1
Familial level	–	Strengthened the family bonding	2				2
		Subtotal	2	0	0	0	2
Interpersonal level	General interpersonal competence	Peer relationship enhancement	10				10
		Teacher-student relationship enhancement	8				8
		Subtotal	18	0	0	0	18
	Specific interpersonal competence	Improved communication skill	4				4
		Improved social skill	12				12
		Improved leadership skill	1				1
		Supported and encouraged one another and gained mutual understanding	6				6
		Team spirit/team work	15				15
		Improved conflict resolution skill	1				1
		Appreciated/respected others	2				2
		Subtotal	41	0	0	0	41
Personal level	Positive self-image	Enhanced self-confidence	12				12
		Enhanced self-understanding	2				2
		Enhanced self-efficacy	3				3
		Enhanced self-concept	2				2
		Appreciated or recognized one's self/respected one's self	10				10
		Realized the importance of self-effort	2				2
		Subtotal	31	0	0	0	31
	Ways to face adversity	Optimistic	2				2
		Cultivation of resilience	8				8
		Subtotal	10	0	0	0	10
	Behavioral competence	Behavioral control/changed in behavior	3				3
		Enhanced problem-solving skill	19				19
		Goal setting	1				1
		Expression ability	3				3
		Learnt to be self-disciplined	1				1
		Subtotal	27	0	0	0	27
	Persistence and motivation	Enhanced persistence	1				1
		Promoted motivation to learn	1				1
		Active and took initiative	1				1
		Enhanced motive	1				1
		Subtotal	4	0	0	0	4
	Autonomy	Autonomy	6				6
		Subtotal	6	0	0	0	6
	Responsibility	Promoted the sense of responsibility	2				2
		Subtotal	2	0	0	0	2
	Cognitive and emotional competence	Analytical ability	1				1
		Promoted self-reflection	4				4
		Gained a rational mind	1				1

Table 3   (Continued)

Category	Subcategory	Responses	Nature of the response				Total
			Positive	Neutral	Negative	Undecided	
		Emotional control	4				4
		Subtotal	10	0	0	0	10
	Experience/exploration	Challenged one's self	2				2
		Widen one's horizon	1				1
		Explored one's potential	1				1
		Gained successful experiences	1				1
		Subtotal	5	0	0	0	5
Others	–	Strengthened the school bonding	4				4
		Enhanced instructors' understanding about the students and their changes	4				4
		Subtotal	8	0	0	0	8
Total responses			204	0	0	0	204

Table 4   Responses on the encountered difficulties and recommendations to the program.

Category	Subcategory	Responses	Total
Encountered difficulties	Difficulties in program content and arrangement	Time conflict with other school activities	4
		Insufficient time and manpower to provide support to all participants	2
		Insufficient support to non-Chinese students	1
		Spent much time in preparation work	1
		Could not balance the time and the information	1
		Subtotal	9
	Other difficulties	Low attendance or participation	4
		Limited students' improvement in the program	2
		Low student interest or motive	2
		Gender differences in performance	1
		Much punishment could have negative impact on students' performance	1
		Subtotal	10
Recommendations	Content	Be aware of the cultural differences compared to non-Chinese students	1
		Program design should match with the students' needs	3
		Increase the variety of activities	2
		Include more protective/preventive factors into the program	1
		Add more elements	1
		Students require ongoing support to strengthen their emotional control	1
		Subtotal	9
	Format/arrangement	Increase flexibility in program arrangement	4
		Arrange more outdoor and small group activities	1
		Maximize or regulate the number of participants	2
		Consider students' comments in program arrangement	1
		Consider parents' observation and comments	1
		Program should take the students' significant others into account	1
		Subtotal	10
	Time	Regulate the time according to students' needs	2
		Increase activity time	2
		Allow weekend activities	1
		Subtotal	5
	Program implementation	Regulate the manpower	1
		Increase time for practice and internalize the learning materials	2
		Hold a debriefing session prior to the program implementation	2
		Prolong the program period	1
		Develop more promotion strategies prior to the program implementation	1
		Modify the participant-selection method	1
		Subtotal	8
Total responses			51

the responses of the program implementers would be helpful. Second, as the program implementers integrated the evaluation data and wrote the conclusions, it is possible that subjective biases could contribute to the conclusions. However, as the program implementers were professionals and they had received training, it is not likely that they were blinded by their subjective perceptions. Finally, as the data were collected at a single point of time, there is a need to understand the long-term effectiveness of the Tier 2 Program over time. Despite these limitations, the present study provides evidence for the effectiveness of the Tier 2 Program of the Project P.A.T.H.S. in Hong Kong. In conjunction with other positive evaluation findings on the Tier 1 Program which is a curricular-based program designed for junior secondary school students in Hong Kong (24–26), the present findings suggest that the Project P.A.T.H.S. is a positive youth development program which can promote positive youth development in Hong Kong.

Acknowledgements

References

1. Shek DTL, Ma HK. Design of a positive youth development program in Hong Kong. Int J Adolesc Med Health 2006;18: 315–27.
2. Ma HK, Sun RCF. Development of a positive youth development program in Hong Kong: overview of the proposed curriculum for the junior secondary school years. Int J Adolesc Med Health 2006;18:417–31.
3. Shek DTL, Sun RCF. Evaluation of positive youth development programs that help Secondary 2 students with greater psychosocial needs. Int Public Health J 2009;1:335–46.
4. Lee TY, Shek DTL. Positive youth development programs targeting students with greater psychosocial needs: a replication. ScientificWorldJournal 2010;10:261–72.
5. Shek DTL, Ma CMS. Subjective outcome evaluation findings: factors related to the perceived effectiveness of the Tier 2 Program of the Project P.A.T.H.S. ScientificWorldJournal 2010;10: 250–60.
6. Nassar-McMillan SC, Cashwell CS. Building self-esteem of children and adolescents through adventure-based counseling. J Humanist Educ Dev 1997;36:59–67.
7. Fletcher TB, Hinkle JS. Adventure based counseling: an innovation in counseling. J Couns Dev 2002;80:277–85.
8. Glass JS, Benshoff JM. Facilitating group cohesion among adolescents through challenge course experiences. J Exp Educ 2002;25: 268–77.
9. Moote GT Jr, Wodarski JS. The acquisition of life skills through adventure-based activities and programs: a review of literature. Adolescence 1997;32:143–67.
10. Hecht D, Fusco D, Schine J, Berkson N. Assessing caring in young adolescent students participating in service learning. Paper presented at the Annual Convention of the American Psychological Association (103rd, New York, August 11–15, 1995). Available from: http://www.eric.ed.gov/PDFS/ED417010.pdf.
11. Cheung CK. Experiential learning strategies for promoting adolescents' voluntarism in Hong Kong. Child Youth Care Forum 2006;35:57–78.
12. Shek DTL. Evaluation of a positive youth development program in Hong Kong: secondary data analyses of conclusions drawn by the program implementers. Int J Child Adolesc Health 2008;1:145–58.
13. Shek DTL, Sun RCF. Using student weekly diary to evaluate positive youth development programs: the case of Project P.A.T.H.S. in Hong Kong. J Child Adolesc Health 2008;1:93–102.
14. Shek DTL, Shik AWY. Qualitative evaluation of the Project P.A.T.H.S. in Hong Kong: findings based on the program implementers. Int J Child Adolesc Health 2010;3:67–78.
15. Shek DTL, Lee TY. Subjective outcome evaluation of a positive youth development program in Hong Kong: students with greater psychosocial needs. Int J Child Adolesc Health 2008;1:103–13.
16. Glass GV. Primary, secondary and meta-analysis of research. Educ Res 1976;5:3–8.
17. Smith E. Pitfalls and promises: the use of secondary data analysis in educational research. Br J Educ Stud 2008;56:323–39.
18. Shek DTL. Evaluation of the Tier 1 Program of Project P.A.T.H.S.: secondary data analyses of conclusions drawn by the program implementers. ScientificWorldJournal 2008;8:22–34.
19. Shek DTL, Siu AMH, Lui JHY, Lung DWM. P.A.T.H.S. to adulthood: a Jockey Club Youth Enhancement Scheme (evaluation manual). Hong Kong: the Chinese University of Hong Kong, Social Welfare Practice and Research Centre, 2006.
20. Miles MB, Huberman AM. Qualitative data analysis. Thousand Oaks, CA: Sage, 1994.
21. Shek DTL, Tang V, Han XY. Quality of qualitative evaluation studies in the social work literature: evidence that constitutes a wakeup call. Res Soc Work Pract 2005;15:180–94.
22. Fenwick TJ. Expanding conceptions of learning: a review of the five contemporary perspectives on cognition. Adult Educ Q 2000;50:243–72.
23. Shek DTL. Adolescent developmental issues in Hong Kong: relevance to positive youth development programs in Hong Kong. Int J Adolesc Med Health 2006;18:341–54.
24. Shek DTL, Sun RCF. Subjective outcome evaluation based on secondary data analyses: the Project P.A.T.H.S. in Hong Kong. ScientificWorldJournal 2010;10:224–37.
25. Shek DTL, Sun RCF, Tang CYP. Focus group evaluation from the perspective of program implementers: findings based on the secondary 2 program. ScientificWorldJournal 2009;9:992–1002.
26. Shek DTL, Sun RCF. Effectiveness of the Tier 1 Program of Project P.A.T.H.S.: findings based on three years of program implementation. ScientificWorldJournal 2010;10:1509–19.