

A review of validated youth prevention and positive youth development programs in Asia

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Abstract

In view of the intensification of adolescent developmental issues in different Asian contexts, there is an urgent need for developing prevention and positive youth development programs in different Asian communities. In this paper, adolescent prevention and positive youth development programs in Asia which have been evaluated by studies adopting true experimental or quasi-experimental designs are reviewed. Several observations are highlighted from this review. First, compared with Western societies, the number of validated programs in different Asian communities was extremely low. Second, there were comparatively more programs addressing substance abuse than other mental health problems. Third, compared with evaluated prevention programs, there were very few positive youth development programs. Finally, there were very few rigorously designed evaluative studies of prevention and positive youth development programs over a long period of time.

Keywords: adolescent developmental issues; Asia; Asian communities; positive youth development; prevention; review.

Introduction

A survey of the literature shows that adolescent risk behavior is increasing in Asia. According to the Regional Center

for East Asia and the Pacific at the United Nations Office on Drugs and Crime, heroin and amphetamine type stimulants abuse were the major problems in Southeast Asia (1). For example, the prevalence of cough medicine abuse (i.e., drugs that can be purchased over the counter) was serious in some Asian countries and codeine was illegally used for abuse purpose in Bangladesh, Malaysia, and Myanmar. In Malaysia and Myanmar, cough medicines containing codeine were often used in combination with other drugs (1). In addition to the illicit use of cannabis and alcohol in Nepal, licit codeine-based medicines had continued to be abused (2). According to a report of Medical Tribune Online (3), the situation in Malaysia was so bad that the Drug Control Authority banned all codeine-based cough preparations beginning January 1, 2003. Additionally, increased abuse of cough mixture was reported in Japan (4, 5) and India (6, 7). In Taiwan, the Investigation Bureau of the Ministry of Justice reported that tramadol (a painkiller similar to codeine) has become a substance of choice for drug addicts (8).

With regard to China, problems of illicit drug use have quickly spread and reached epidemic levels in the past 10 years. According to the National Narcotics Control Commission, the number of registered drug users increased from 70,000 in 1990 to 1.16 million at the end of 2005, and the estimated number of actual users was 3.5 million in 2004 (9). Within China, illicit drug use has been most evident in areas of Yunnan, Sichuan, Gansu, and Guangdong Provinces. In a large screening study with more than 50,000 participants aged 15 years or above living in several heavily populated areas, Hao and colleagues reported that the prevalence of lifetime illicit drug use was 1.08% in 1993 and 1.52% in 2000 (10). Heroin appeared to be the most abused drug, with a new trend being the increasing use of newer drugs, including ecstasy and methamphetamine. In Japan, the prevalence of drug abuse is relatively low compared with that in other Asian countries. The National Ministry of Health, Labor and Welfare in Japan conducted a survey on drug abuse in 2002 and reported that the population of drug (methamphetamine and cannabis) abuse in junior high school was only 0.65% (11). This could be due to the keen public awareness of drug abuse problems in Japanese society and the government's tough stance on illegal drug use. For example, special laws regulating cannabis, narcotics and psychotropics, stimulants, opium, toluene, thinner, and other substances have been strictly enforced. However, a recent report shows that the current climate of drug abuse in Japan is changing for the worse (12). The abuse of methamphetamine is expanding nationwide and rejection of drug use is gradually weakening in the young generation. Apart from methamphetamine, the abuse of ecstasy, heroin, and solvent is increasing at an alarming pace. As such, Japanese researchers

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have argued for stricter law enforcement and more intensive prevention activities being implemented to effectively prevent adolescents from using illegal drugs.

There are also studies showing that pathological gambling deserves our attention. The Center for Social Policy Studies of the Department of Applied Social Sciences and the General Education Center of the Hong Kong Polytechnic University (2002) conducted a ground-breaking study of gambling among the general public in Hong Kong. Results indicated that gambling activities were very common in Hong Kong, with Mark Six lottery (64.2%), social gambling (e.g., playing "mahjong" and cards with friends and relatives) (45.9%), and horse racing (30.4%) as the most popular gambling activities (13). Using the DSM-IV criteria for assessing pathological gambling, the researchers found that 1.85% of the 2004 respondents could be classified as "probable pathological gamblers" (i.e., respondents displaying five or more symptoms). Based on the responses of 748 secondary school students to self-report measures, the Young Men's Christian Association of Hong Kong (2003) reported that 3%–5% of the respondents could be classified as pathological gamblers and 12.9% were problem gamblers. Ozorio and Fong conducted the first scientific study on pathological gambling in Macau (14). Utilizing a computer-assisted random digit dialing method ($n=1121$ interviewees), the results showed that three most popular forms of gambling included social gambling, Mark Six lottery, and soccer/basketball betting. Based on the DSM-IV Gambling Behavior Index, the authors found that 1.78% and 2.5% of the respondents could be classified as probable pathological gamblers and problem pathological gamblers, respectively.

In Singapore, the Ministry of Community Development, Youth and Sports conducted a large-scale survey during November 2007 to January 2008 (15). In the survey, 54% of Singapore residents aged 18 years and above reported that they had engaged in at least one form of gambling activity over a 1-year period. Among the participants, 1.2% was classified as possible pathological gamblers. In Korea, a nationwide epidemiological study in 2006–2007 surveyed 5333 Korean adults aged 18–64 years and assessed participants for pathological/problem gambling using the Korean version of the Diagnostic Interview Schedule (16). The results showed that lifetime prevalence rates of pathological gambling and problem gambling were 0.8% and 3.0%, respectively. More importantly, 79.1% of the pathological gamblers and 62.0% of problem gamblers had at least one psychiatric disorder, as compared with the control level of 28.1%. Pathological/problem gambling was positively associated with alcoholism, nicotine dependence, mood disorder, anxiety disorder, and suicidality. These findings highlight the importance of preventing pathological/problem gambling and the necessity of involving concomitant treatment for comorbid conditions while treating pathological gambling.

It is worth noting that the success in the gambling industry in Macau has inspired other Asian cities and countries to build new casinos. Gambling business is expanding rapidly throughout Asia. For example, Singapore opened a pair of casino complexes in the past few years. The Philippine

government is planning to open a 100-acre gaming complex that will employ 40,000 Filipinos in Manila Bay. Governments in Taiwan, Thailand, and Japan are considering legalizing casinos. This has potentially increased the risk of pathological gambling among local people because of the increased access to gambling. As predicted by Volberg, a famous gambling researcher, the introduction of gambling in the region typically leads to a 3- to 4-fold increase in gambling addiction rates within 5 years (17).

Another example of adolescent developmental issues is Internet addiction. In the Asian contexts, Lee and his associates reported that 4% and 20.4% of the adolescent respondents ($n=627$) from Korea could be classified as high-risk Internet users and potential risk Internet users, respectively (18). With reference to adolescents from the high-risk user group, 28% of them did not recognize the degree of severity of Internet addiction, and 24% of them had difficulty in controlling the amount of time playing an online game. In another study conducted by Kim and his associates in Korea, 1.6% and 37.9% of the high-school students respondents ($n=1573$) were identified as Internet addicts and possible Internet addicts, respectively (19). Regarding Internet addiction problems among adolescents in Chinese societies, prevalence studies have been conducted in mainland China, Taiwan, and Hong Kong. In a study examining Internet behavior in 2620 adolescents from mainland China, 2.4% of the respondents were diagnosed as Internet addicts (20). Another study with a sample of 3557 first-year university students in Shanxi reported 6.44% of the students having Internet addiction (21). In Taiwan, Yang and Tung conducted a study on 1708 high-school adolescents, 13.8% of the respondents were classified as Internet addicts, who were also found to have lower self-esteem, higher level of depressed mood and feelings of sadness, poorer interpersonal relationships, and more negative self-concepts when compared with their non-addicted counterparts (22). Another study conducted by Ko and associates in Taiwan reported that 18.18% of the adolescent respondents ($n=517$) were Internet addicts (23). In Hong Kong, Leung investigated 699 adolescents and found that 37.9% of the respondents were identified as Internet addicts (24). In the study conducted by the Working Group of @er.com, Shek and Tang estimated that approximately 20% of the respondents from Hong Kong could be classified as Internet addicts (25).

In view of the increasing adolescent developmental problems in Asia, one relevant question that should be asked is whether there are validated adolescent prevention and positive youth development programs in different Asian communities so that adolescent risk behavior can be prevented and positive development can be promoted. As such, this review study was conducted to examine adolescent prevention and positive youth development programs in Asia.

Methods

Because both adolescent prevention and positive youth development programs are relatively few in the Asian context, the initial search aims to be inclusive than limiting. In July 2010, the present authors

conducted a detailed survey of the literature published during the period of 1990–2010 in seven major academic databases (including PsycINFO, MEDLINE, ERIC, Web of Science, Sociological Abstracts, Social Service Abstracts, Chinese Electronic Periodical Services) and the Internet. Key search terms included “promot* OR prevent* OR interven* OR positive youth development”, “youth* OR child* OR adoles* OR student*”, “program* OR project* OR curricul*”, and “China OR Chinese OR Hong Kong OR Taiwan* OR Maca* OR Japan* OR Singapor* OR Thai* OR India* OR Asia*”.

Programs were included if they met the following four selection criteria: (a) the program focused on youth population which was defined a priori as individuals younger than 25 years of age; (b) the program addressed risk behaviors, and/or mental health problems, and/or promotes the development of one or more positive youth development constructs, as proposed by Catalano and colleagues (26); (c) the program developed in Asian countries or developed in other areas but was validated in the Asian context; and (d) the program must be tested by rigorously designed evaluative study with evaluative findings being published on the above-mentioned seven databases.

It should be noted that although various research designs were employed in the evaluative studies of different programs, those with use of a true experimental design or quasi-experimental design were the focus of the present literature review.

Results

This review showed that there were 63 programs on adolescent prevention and positive development (including 25 programs on the physical health domain, 24 programs on mental health and risk behavior domain, and 14 programs on positive youth development domain) in the Asian context, with 213 published papers. These included 11 programs and 144 papers (121 papers from the Project P.A.T.H.S.) from Hong Kong, 41 programs and 50 papers from mainland China, Taiwan, and Macau, and 11 programs and 19 papers from other Asian countries (Table 1). This review showed that different evaluation designs, ranging from randomized trials to case studies, were employed to evaluate such programs.

With specific reference to those programs that have been evaluated by experimental designs and quasi-experimental designs with control groups, this review identified a total of 39 programs, which included five programs from Hong Kong, 32 programs from mainland China, Taiwan, and Macau, and two

programs from other Asian countries. Among these programs, 17 of them were related to physical health, 15 were related to mental health and risk behavior, and 7 were related to positive youth development (Table 1). With specific attention given to those programs focusing on mental health, risk behavior, and positive youth development (Table 2), it was observed that most programs were related to adolescent risk behavior, with smoking prevention constituting the majority of the programs under review.

In comparison with numerous studies on youth prevention and positive youth development programs conducted in the West, particularly the North American context (27), this review showed that fewer studies had been carried out in the Asian context.

Smoking prevention

There were several smoking prevention programs in mainland China. Chen et al. evaluated a smoking prevention program entitled SAFT (Stay Away from Tobacco) in Beijing, with seven interrelated sessions carried out in the classroom settings, including basic facts of tobacco, refusal skills, and understanding advertisement messages (28). Results showed that there were reductions in the prevalence of smoking and the predicted smoking rates among students in the experimental groups. In the “Wuhan Smoking Prevention Trial”, a school-based social normative smoking prevention curriculum building upon social learning and person perception principles (13-week lessons) was implemented, with health educators trained in the United States from the Wuhan Center for Disease Control and Prevention delivering the lessons (29). Regarding smoking at the 1-year follow-up, boys in the program group demonstrated a significant reduction in recent smoking relative to the control group. In another school-based tobacco prevention program in Guangzhou, interventions at community, school, family, peer, and individual levels were carried out (30). At the 1-year follow-up, the multilevel intervention reduced the probability of baseline experimental smokers escalating to regular smoker in the total sample. Lee et al. examined the impacts of a school-wide no smoking strategy and a classroom-based smoking prevention curriculum

Table 1 Numbers of adolescent preventive programs and positive youth development programs in Asia.

	Mental health and risk behavior	Positive youth development	Physical health	Total
All programs identified				
Hong Kong	2	8	1	11
China, Taiwan, and Macau	13	6	22	41
Other Asian countries	9	0	2	11
Total	24	14	25	63
Rigorously evaluated programs				
Hong Kong	1	4	0	5
China, Taiwan, and Macau	12	3	17	32
Other Asian countries	2	0	0	2
Total	15	7	17	39

Note: Rigorously evaluated programs refer to programs that were evaluated by experimental/quasi-experimental studies.

Table 2 Rigorously evaluated programs in domains of risk behavior, mental health, and positive youth development.

Program no.	Program title	Domain	Region	No. of papers
Program I	• Hong Kong ASTRO Project	Risk behavior: drug/substance	Hong Kong	1
Program II	• A community-based drug prevention program in Yunnan	Risk behavior: drug/substance	China	1
Program III	• An alcohol education program for high-school students in Wuhan	Risk behavior: alcohol	China	1
Program IV	• “Stay Away from Tobacco” (SAFT) in Beijing	Risk behavior: tobacco	China	1
Program V	• “Wuhan Smoking Prevention Trial” (WSPT)	Risk behavior: tobacco	China	3
Program VI	• A school-based tobacco prevention program in Guangzhou	Risk behavior: tobacco	China	1
Program VII	• A CAI-based substance prevention intervention for high-risk adolescents (Chinese)	Risk behavior: drug/substance	Taiwan	1
Program VIII	• A multimedia anti-drug program (Chinese)	Risk behavior: drug/substance	Taiwan	1
Program IX	• A group-based drug prevention program	Risk behavior: drug/substance	Taiwan	1
Program X	• An intervention program to prevent aboriginal adolescents from using tobacco, alcohol, and betel quid (Chinese)	Risk behavior: tobacco, alcohol, and betel quid	Taiwan	1
Program XI	• A school-wide no smoking strategy and a classroom-based smoking prevention curriculum	Risk behavior: tobacco	Taiwan	1
Program XII	• A tobacco prevention program	Risk behavior: tobacco	Taiwan	1
Program XIII	• MYTRI country wide	Risk behavior: tobacco	India	8
Program XIV	• Penn Optimism Program – Chinese version (POP)	Mental health: depression	China	1
Program XV	• A school-based depression prevention program	Mental health: depression	Japan	1
Program XVI	• A cognitive career-based group counseling program	Positive youth development: career maturity	Taiwan	1
Program XVII	• Project P.A.T.H.S.	Positive youth development	Hong Kong	121
Program XVIII	• A character Education Program	Positive youth development	Hong Kong	1
Program XIX	• A classroom-based forgiveness program	Positive youth development	Hong Kong	1
Program XX	• Hong Kong Healthy Schools Award Scheme (HKHSA)	Positive youth development	Hong Kong	2
Program XXI	• A holistic resilience promotion and depression prevention program	Positive youth development	China	1
Program XXII	• A 12-week forgiveness-based intervention program	Positive youth development	Taiwan	1

on the smoking behavior of junior high-school students in Taiwan (31). Six 45-min sessions were developed for the classroom-based smoking prevention curriculum. Although the intervention had no demonstrable effect on smoking behavior, students in the experimental group showed better attitudes towards resisting smoking than the control group. In India, a 2-year multicomponent school-based intervention was designed to reduce tobacco use rates among adolescents in 16 schools in Delhi and 16 schools in Chennai, in which four primary components were involved, including classroom curriculum, school posters, postcards to parents, and peer-led health activism at school, home, and community levels (32, 33). Findings showed that students in the intervention group were significantly less likely than were students in the control group to exhibit increased cigarette smoking behaviors over the 2-year study period. They were also less likely to intend to smoke or chew tobacco in the future.

Drug prevention

With reference to drug prevention programs, Wu et al. conducted a community-based trial to prevent drug use among youths (559 males in the control villages and 748 males in the intervention villages) in Yunnan, China, with the local government and department leaders, village leaders, health workers, and school teachers involved in the intervention implementation (34). Results showed that there was a 2.7-fold greater reduction in drug use initiation in the intervention area. Compared with the control area, knowledge, attitudes, and recognition of drug problems were all significantly better in the intervention area. In Taiwan, Yen et al. examined the effectiveness of a multimedia anti-drug program for adolescents to increase their knowledge about consequences of drug use, to strengthen commitment to deny drug use, and to refine their drug refusal skills (35). Based on a sample of 445

high-school students ($n=231$ for the experimental group and $n=214$ for the control group), the researchers reported that after the intervention students in the experimental group had better knowledge and refusal attitudes towards drug use than students in the control group.

In Hong Kong, although many local organizations provide drug prevention programs for young people, such programs often lack vigorous evaluation. Lam et al. developed and evaluated a pioneering drug prevention program (Project Astro MIND), which consisted of three sequential and developmentally appropriate programs (ASTRO Kids, ASTRO Teens, and ASTRO Leaders) designed for children and adolescents (36). Topics in the group sessions covered risk and protective factors in adolescent substance abuse, adolescent development, and life skills. A longitudinal pretest-posttest control group design was employed to evaluate the effectiveness of the project. For participants in the experimental groups (122 ASTRO Kids and 217 ASTRO Teens participants) and the control groups (213 ASTRO Kids and 201 ASTRO Teens controls), they were required to respond to a series of objective outcome measures, including measures of social skills, attitudes towards drugs, drug refusal skills, actual usage of drugs, behavioral intention, drug and sex knowledge, stress and psychological well-being at pretest and different time points of posttests. Results showed that ASTRO Kids and ASTRO Teens programs were effective in increasing the social skills, refusal skills, drug knowledge, and sex knowledge of the participants. Compared with control participants, program participants also had less favorable attitudes towards taking drugs at posttest.

Mental health issues

There were very few rigorously evaluated mental health programs in Asia. To prevent depressive symptoms in Chinese children, Yu and Seligman examined an intervention program (Penn Optimism Program – Chinese version) implemented by teachers among 220 students at risk for future depression with 104 participants in the experimental group and 116 participants in the control group (37). Results showed that compared with the control group, depressive symptoms significantly decreased for children in the treatment group at immediate posttest, 3-month, and 6-month follow-ups.

In response to the lack of preventive programs for depression in Japan, Kurakake and Yamasaki developed a project which attempted to modify cognitive, emotional, and behavioral distortions that lead to depression in elementary students (38). Short-term follow-up data showed that the program was effective in reducing participants' depressive mood and improving their assertiveness and anger control.

Positive youth development programs

Consistent with previous findings that most positive youth development programs were conducted in the West (27), the present review identified a total of seven stringently evaluated programs aiming at promoting positive development among Asian adolescents. Peng and Johanson examined

career maturity and state anxiety of Taiwanese college student athletes (65 participants) given cognitive career-oriented group counseling (39). Topics of the group counseling program included understanding career beliefs, improving self-concept, and training in assertive skills. Although students in the treatment group overall exhibited lower levels of state anxiety than the control group, no significant treatment effects were detected in participants' career maturity scores. Based on a process model of forgiveness, Hui and Ho developed a 20-unit forgiveness program for Hong Kong adolescents, which was conducted by teachers in the classroom setting (40). Although students' self-esteem and hope were not significantly improved after participating in the program, they obtained a better understanding of forgiveness, held a more positive attitude toward their offenders, and were more willing to apply forgiveness as a strategy in their lives. Cheung and Lee evaluated a character education program which attempted to improve social competence in secondary school students among 664 students (41). Results showed that the program contributed to social competence in the participants. In China, Stewart and Sun reported the application of a holistic intervention program to promote resilience and prevent depression in primary school students. The two-year health-promotion program adopted a whole-school (holistic) approach to promoting students' development in school, family, and community settings (42). Different strategies used in the project included building a supportive environment in schools, embedding the resilience concept in the curriculum and extracurricular activities, and building partnerships between school, family, and community. Based on a sample of 8399 students from grades 3 to 6 in 14 primary schools, it was reported that the program significantly reduced subclinical depressive symptoms in intervention schools.

Perhaps the largest positive youth development program implemented in Asia is the Project P.A.T.H.S. in Hong Kong. In the Project P.A.T.H.S., a positive youth development program based on a curricula approach was implemented in approximately half of the total number of secondary schools ($n=220+$) in Hong Kong (43). The conceptual model of the program was based on the 15 positive youth development constructs identified by Catalano et al. (26, 44).

Utilizing the principle of triangulation, various evaluation strategies have been used to evaluate the program (45), including: (a) objective outcome evaluation – a randomized group trial with 24 experimental schools and 24 control schools initially had been carried out (46); (b) subjective outcome evaluation – both students and program implementers were invited to complete subjective outcome evaluation forms after completion of the program (47, 48); (c) process evaluation – systematic observations were carried out in randomly selected schools to understand the program implementation details (49); (d) interim evaluation – interim evaluation was conducted by randomly selecting approximately half of the participating schools in the Experimental and Full Implementation Phases (50); and (e) qualitative evaluation – focus group interviews, individual interviews, case studies, student logs, student products, and repertory grid tests were conducted (51–53).

Generally speaking, triangulation of the available evaluation findings showed that different stakeholders had positive views about the Project P.A.T.H.S. and they perceived the program to be beneficial to the development of the program participants (45). Most importantly, the findings suggest that the project is effective in promoting positive youth development among Chinese adolescents in Hong Kong. Added to this, analyses using individual growth curve modeling based on 6 waves of data collected in the junior secondary years showed that compared with the control participants, the experimental participants showed better positive youth development indexed by different indicators and they exhibited lower levels of risk behavior, including substance abuse (54).

Discussion

This review shows that the number of validated adolescent prevention and positive youth development programs in Asia is on the low side, especially when such programs are compared with those in Western contexts. There are several possible factors leading to this observed phenomenon. First, the foundation of prevention science and positive youth development is weak in Asia. Compared to the development of biomedical research, the development of psychosocial intervention is still at its infancy in Asian countries. The related knowledge base is also weak. Second, there is a common belief among Asians that children and adolescents will “automatically” grow up. As such, the effort spent on prevention and positive youth development programs is insufficient. Actually, Asian people do not attach a high value on prevention. Such cultural beliefs definitely undermine the development of prevention and positive youth development programs in Asia. Third, in contrast to the West where the government plays an important role in the development of scientific prevention and positive youth development programs, governments in different Asian communities do not spend much effort and financial support on preventive programs. Finally, the spirit of evidence-based practice and policies is just at its beginning stage in Asia. For example, as commented by Shek et al., the emphasis on evidence-based social welfare programs in Hong Kong was far from enough. Similar observations can be seen in other parts of Asia (55).

The present review also reveals that there are comparatively more prevention programs than positive youth development programs in Asia. There are several possible explanations for this observation. First, Asian parents are very concerned about problem behaviors of their children. For example, in an attempt to look at the characteristics of an ideal child, Chinese parents focused on academic excellence, obedience to parents, and not to engage in problem behavior, whereas “healthy development” was only mentioned by few parents. Second, although nobody would dispute the importance of holistic youth development, effort is commonly put on minimizing adolescent risk behaviors. Third, governments are also more concerned about removal of adolescent developmental problems. For example, adolescent substance abuse is primarily regarded as a security problem rather than a health

issue in Hong Kong and mainland China. As the literature suggests, the adoption of a positive youth development perspective requires a paradigm shift in different stakeholders from focusing on youth problems to youth strengths.

Conceptually speaking, there might not be any major differences between the adolescent prevention approach and positive youth development approach. According to Catalano and colleagues, there are several attributes of the prevention science perspective (26). These include: (a) identification of risk and protective factors; (b) adoption of a developmental perspective; (c) assertion that problem behaviors share many common antecedents; and (d) assertion that risk and protective factors change youth outcomes. By contrast, several characteristics associated with the positive youth development approach were identified: (a) emphasis on integrated youth development (i.e., focusing on a range of youth developmental possibilities and problems) rather than dealing with a single youth problem; (b) upholding the belief that “problem-free is not fully prepared”; (c) emphasis of person-in-environment perspective; and (d) focus on developmental models on how young people grow, learn, and change. In their discussion of the positive youth development approach, Catalano et al. (26, 44) pointed out that the attributes of positive youth development and characteristics of the prevention science approach are compatible and both approaches could be cooperative rather than competitive. Thus, there is much room for reflection regarding the role of prevention and positive youth development programs in Asia.

Looking into the future, researchers in the field of child and adolescent development should focus on the following areas. First, we should rethink about the importance of primary prevention programs because the current effort in different Asian communities is commonly put on secondary and tertiary prevention initiatives. From a public health perspective, it is always desirable to focus on primary prevention initiatives to minimize the probability of the occurrence of psychosocial problems because both personal and social costs of illnesses are huge. Second, there is a need to rethink about the role of positive youth development in adolescent development. In addition to adopting a strength perspective in viewing adolescent behavior, a positive youth development approach also suggests that the lack of psychosocial competencies could be a root cause of adolescent risk behavior.

The third task that youth researchers and practitioners should undertake is to develop more adolescent prevention and positive youth development programs. In view of the fact that the Asian population is extremely huge in comparison to the global population, the available adolescent prevention and positive youth development programs are simply out of proportion. In fact, prevention and positive youth development programs developed in Western cultures which focus on individual autonomy might not be totally applicable to Asian cultures where collective interests are emphasized. Hence, the call for the development of indigenous adolescent prevention and positive youth development programs is valid.

Fourth, one important task that should be carried out is to systematically evaluate the developed programs. In the area of biomedical treatment, it is a common practice to carry out

rigorous evaluation before certain preventive measures can be used safely. For example, we cannot simply say that a vaccine comprising orange juice, milk, and honey can effectively prevent influenza. Unfortunately, there are many “home-baked” adolescent prevention and positive youth development programs in Asia. It is very often that program developers consider a program as effective simply because they have ‘good’ feelings about the program. As such, it is important to ask why Asian practitioners and researchers place a lower standard of proof for psychosocial programs. Finally, similar to the research done in North America, it is important to set up databases to document adolescent prevention and positive youth development programs that are exemplary, effective, promising, or ineffective.

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