

Comparative Study on Needs Assessment of Health Education for Adolescences

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I . Introduction

Health promotion is a new science which induces people to change their health behaviors, thereby reducing health risk factors. Recently, most health scientists have been developing health promotion conceptions and strategies not based on medical perspectives but based on health behavior change. It means health education has taken a core part in health promotion programs (WHO, 1984).

The strategies of community health control as health service, health legislation, and health education. Health education as the most effective strategy among them. Health education is not only a learning process of knowledge

related to maintaining and promoting people's health but also a development of strategies about desirable community or individual health behaviors. Many professionals of health promotion recommend school, community, and worksite as effective educational places. In particular, adolescents, in the intermediate period of their life span, can learn desirable health knowledge and behaviors in school, and these health information and obtained desirable behaviors affect their whole lives.

Modern viewpoints of health education focused not on leading people to get special health education lessons but on leading them to learn and obtain health knowledge by themselves. Thus the researchers should know what the participants' interests are and what they

want to know about health before developing health education programs (Girdano, 1986; Ward, 1986).

Health education needs are affected by education level, gender, race, income, culture and health status. In other words, the community and individual characteristics have a significant effect on constructing health education programs.

Among Asian countries, China has recently employed the market economy system, and thereby developed its economic status rapidly in just a short period. Economic change occurring in so short period of time has also brought about a rapid change of Chinese disease patterns and life style.

The Korean-Chinese have built their own independent Korean-Chinese cities in China under the major native Chinese culture. Korean-Chinese health status can be compared with Korean health status because their physique is almost same as native Koreans. Korean-Chinese can also reflect North Korean life style and health status much because independent Korean-Chinese cities are located close to North Korea geographically.

Therefore, the main purpose of this study is to propose some basic information about differences of health education needs by economic and cultural conditions, and constructing cross-cultural health education programs. The detailed purposes of this studies are (1) to compare health education needs by socio-

economic status among the three groups (Chinese, Korean-Chinese, and Korean), (2) to compare health behaviors of the three groups, (3) to describe health and disease patterns of the three groups, (4) to analyze health behaviors, health status and health education needs of the three groups, and (5) to determine what are important factors affecting the health education needs of 3 adolescent groups.

II. Subjects and Methodology

1. Subjects and Methods

This study investigated both China and Korea. In China, 615 freshmen and sophomore students of 3 high schools under the control of the city health bureau in Gilin Province were surveyed. Among them, 10 incomplete responses and 5 responses with low reliability were excluded. In Korea, 400 freshmen and sophomore students of 3 high schools in Seoul were investigated. Among them, 4 incomplete responses were excluded. Thus, 600 Chinese students (400 native Chinese, and 200 Korean-Chinese), and 396 Korean students, the total of 996 students were finally studied.

Self-administered questionnaires were used for this survey. The translation of the questionnaire from Korean to Chinese was done by a Korean-Chinese. Her major was health policy and came to Korea to continue the study. To allow for errors of translation and cultural

<Table 1> Selection of the variables

Measures	Variables
Demographic characteristics	Gender, Race, Grade, Economical level
Health behavior	Smoking, Drinking, Drug uses
Health status	Self-rating health status, Illness during the last 4 weeks, Hospitalization during the last year, Health concern
Health education needs	Health habits, Sex education, Disease control, Safety education, Drug abuse and addiction, Mental health, Environmental health

differences, a pre-test was conducted by both Chinese and Korean-Chinese. Based on the results of the pre-test, the form and contents of the questions were revised and supplemented.

Prior to performing a survey in China, the city health bureau asked 3 high school principals to allow the survey in their schools. The survey was completed under the control of teachers. The survey in China was conducted for 14 days from August 2 to August 15, 1999. Before conducting the survey in Korea, 3 teachers allowed the survey in their schools and also managed data collection in their schools. The survey in Korea was conducted for 9 days from September 10 to September 18, 1999.

2. The selection of the variables

The questionnaires included 4 groups of measures:

(1) demographic characteristics, (2) health behaviors, (3) health status, and (4) health

education needs.

The detailed variables are shown in <Table 1>.

1) Demographic characteristics and health status

The questionnaire included 4 demographic questions: Gender, Race, Grade, Economical level.

The researcher regarded health behaviors of smoking, drinking, drug uses, perceived health status, illness during the last 4 weeks, hospitalization during the last year, family illness, and health concern as health status measure.

2) Health education needs

Questions of health education needs were selected from reviewing content analysis studies of health education in high school, and the other studies related to health education needs assessment.

Health education needs of this study con-

sisted of 7 categories, 28 questions. The categories were health habits, sex education, disease control, safety education, drug abuse and addiction, mental health, and environmental health.

Using 5 Likert-scales, all responses were assigned from a score of 1, "absolutely don't want" to a score of 5, "absolutely want". The higher the score, the higher the health education needs. Cronbach's α of the total measures was 0.8233 as shown in <Table 2>.

<Table 2> Cronbach's α of health education needs measures

Categories	Cronbach's α
Disease control	0.8985
Sex education	0.8153
Health habits	0.7853
Safety education	0.7596
Drug abuse and addiction	0.9243
Environmental health	0.7849
Mental health	0.7955

III. Analysis

All collected data were computerized and SPSS(Win 10.0) - a statistical computer program - was utilized to analyze them. Frequency and percentage were used for demographic characteristics and health status. Mean and standard deviation were showed for participants' health education needs. The differen-

ces of health education needs among the 3 groups were analyzed by t-test and ANOVA (analysis of variance).

IV. Results

1. The Characteristics of the Subjects

1) Socio-economic Status

The freshmen students of the Chinese, the Korean-Chinese, and the Korean were 49.5%, 51.5%, and 41.8%. The gender distribution was similar cross the 3 groups.

More than 50% of students in each group answered that their economical level was in the middle class. More Chinese and Korean-Chinese students responded economical level was in upper class than the Korean students. Although relative economic status was higher in Korea than China, the response rate on economical level was lower in the Korean than the Chinese and the Korean-Chinese. The Korean students seemed to be less concerned about their economical level<Table 3>.

2) Health Behaviors

Table 4 shows the distribution of the health behaviors of smoking, drinking, drug uses by race.

The prevalence of smoking and drinking was quite high in Korean students. The low levels of smoking, drinking and drug uses in Chinese, and Korean Chinese. But more than

one third of Korean students had behaviors of smoking and drinking currently <Table 4>.

3) Health Behaviors and Health Status

During the last 4 weeks of the survey, 42.5% of Koreans, 12.5% of Korean-Chinese, and 11.5% of Chinese went to the health center, such as the clinic, a pharmacy, or an oriental clinic because of their illness. More Korean students contracted some illness than the Korean-Chinese and the Chinese. The main reason for using health centers was cold.

About 10.3% of Chinese and 15.5% of

Korean-Chinese responded that their health was 'bad' or 'very bad'. On the other hand, 22% of Korean students regarded their health as 'bad' or 'very bad'. Seventy seven point five percent of Chinese, and 72.5% of Korean-Chinese were very interested in health, but only 22.7% of Korean were interested in health. More Korean students felt their health was not good than the Chinese students, but they were little interested in health was a problematic point; probably, they had low interests in health education than other subjects <Table 5>.

<Table 3> Distribution of Personal variables

		Unit : Person(%)		
Variable	Value	Chinese	Korean-Chinese	Korean
Gender	Boy	188 (47.5)	103 (51.5)	167 (41.8)
	Girl	212 (53.0)	97 (49.5)	229 (58.2)
Grade	Freshman	198 (49.5)	103 (51.5)	167 (41.8)
	Sophomore	202 (50.5)	97 (49.5)	229 (58.2)
Economical Level	Upper	125 (31.3)	81 (40.5)	69 (17.5)
	Middle	211 (52.8)	77 (38.5)	262 (66.2)
	Low	64 (15.9)	42 (21.0)	65 (16.5)
Total		400 (100.0)	200 (100.0)	396 (100.0)

<Table 4> Distribution of health behaviors

		Unit : Person(%)		
Behaviors	Value	Chinese	Korean-Chinese	Korean
Smoking	Currently	28 (7.2)	11 (5.5)	132 (34.0)
	None	372 (92.8)	189 (94.5)	145 (66.0)
Drinking	Currently	34 (8.5)	12 (6.0)	136 (35.0)
	None	366 (91.5)	188 (94.0)	260 (65.0)
Drug uses	Currently	12 (0.3)	2 (0.1)	13 (3.0)
	None	388 (99.7)	198 (99.9)	383 (96.7)
Total		400 (100.0)	200 (100.0)	396 (100.0)

2. Health education needs

The pattern of the Chinese students' health education needs was similar to that of the Korean-Chinese students' health education needs, but the Korean students' health education needs were different from the two groups of students' health education needs. The Chinese and Korean-Chinese students were the most interested in the health habit category, and in turn, environmental health, safety education, and mental health categories. They were little interested in drug abuse and sex education categories. On the other hand, the Korean students were the most interested in mental health categories, and in turn, health habits, safety education, and drug abuse categories.

All the 3 groups of students were interested in health habits, safety education, and mental health. The Chinese and the Korean-Chinese students responded that they were not in-

terested in sex education. This could be attributed to the fact that sexual topics were not discussed openly in their cultures. The Korean students were very interested in stress management, but the Chinese and the Korean-Chinese students were not interested in that. Based on the above differences, the Korean students might experience heavy stress.

There were significant differences of health education needs among the Korean, the Korean-Chinese, and the Chinese students. ($P < 0.001$).

The health education needs of the Korean-Chinese students were the highest among the 3 groups. Next were those of the Chinese, and the last were Korean students' health education needs. Korean students receive some health education information in fitness or biology classes without any independent class. On the other hand, Chinese students receive more

<Table 5> Distribution of health status

		Unit : Person(%)		
Variables	Value	Chinese	Korean-Chinese	Korean
Illness during last 4 weeks	Yes	46 (11.5)	25 (12.5)	168 (42.5)
	No	354 (88.5)	175 (87.5)	228 (57.5)
Hospitalization during a year	Yes	7 (1.8)	3 (1.5)	17 (4.3)
	No	393 (98.2)	193 (98.5)	379 (95.7)
Self-rating health status	Very good	79 (19.8)	30 (15.0)	19 (4.8)
	Good	147 (36.7)	84 (42.0)	131 (33.1)
	Normal	133 (33.2)	55 (27.5)	159 (40.1)
	Bad	36 (9.0)	30 (15.0)	78 (19.7)
	Very bad	5 (1.3)	1 (0.5)	9 (2.3)
Health concern	Much	308 (77.5)	145 (72.2)	90 (22.7)
	Moderate	90 (22.5)	54 (26.8)	287 (72.5)
	None	2 (0.5)	1 (1.0)	19 (4.8)
Total		400 (100.0)	200 (100.0)	396 (100.0)

health education information in the specific independent health education classes. This could be the main reason that the Chinese students' health education need scores were higher than the Korean students' <Table 6>.

3. Health education needs by characteristics

Among the Chinese students, those who got illnesses during the last 4 weeks of the survey had higher health education needs than those

who remained healthy ($P < 0.05$).

Among the Korean-Chinese students, those whose economical level was upper 20% had higher health education needs than those whose economical level was in lower level <Table 7>.

For the Korean-Chinese students, the higher prevalence of drinking behavior the higher needs of health education, and the differences was statistically significant <Table 8>.

<Table 6> Health education needs by categories

Categories	Chinese		Korean-Chinese		Korean		F
	Mean \pm S.D.	Rank	Mean \pm S.D.	Rank	Mean \pm S.D.	Rank	
Health habits	3.96 \pm 0.49	1	4.28 \pm 0.45	1	3.94 \pm 0.54	2	42.63**
Sex education	2.75 \pm 0.88	7	3.26 \pm 0.76	7	3.30 \pm 0.96	6	44.60**
Disease prevention	3.83 \pm 0.77	5	3.93 \pm 0.88	5	3.35 \pm 0.56	5	12.15*
Safety education	3.98 \pm 0.56	2	4.11 \pm 0.54	3	3.80 \pm 0.55	3	30.04**
Drug abuse and addiction	3.42 \pm 0.89	6	3.54 \pm 0.96	6	3.45 \pm 0.78	4	10.21*
Mental health	3.93 \pm 0.53	4	4.07 \pm 0.55	4	4.02 \pm 0.63	1	5.34
Environmental health	3.90 \pm 0.65	3	4.20 \pm 0.45	2	3.25 \pm 0.58	7	66.38**

* $P < 0.05$ ** $P < 0.001$

<Table 7> Health Education Needs by Personal Characteristics

Characteristics	Chinese		Korean-Chinese		Korean	
	Mean \pm S.D.	t or F	Mean \pm S.D.	t or F	Mean \pm S.D.	t or F
Gender						
Boy	3.88 \pm 0.45	0.55	3.96 \pm 0.42	1.76	3.43 \pm 0.44	0.95
Girl	3.84 \pm 0.47		4.02 \pm 0.45		2.42 \pm 0.45	
Grade						
Freshman	3.65 \pm 0.49	0.81	3.87 \pm 0.39	0.99	3.59 \pm 0.40	0.63
Sophomore	3.71 \pm 0.42		3.95 \pm 0.38		3.54 \pm 0.42	
Economical level						
Upper	3.85 \pm 0.39	0.52	4.12 \pm 0.35	2.85*	3.77 \pm 0.56	2.56*
Middle	3.82 \pm 0.48		3.99 \pm 0.23		3.54 \pm 0.34	
Low	3.77 \pm 0.42		3.86 \pm 0.52		3.48 \pm 0.42	

* $P < 0.05$

For the Korean students, the higher the self-rating health status the higher the health education need scores were.

The Chinese students tended to need health education after their illness experience, but the Korean-Chinese and Korean students needed health education regardless of their illness

experience <Table 9>.

V. Conclusion

This study was administered to analyze important needs for the health education among Chinese, Korean-Chinese adolescents in Gilin,

<Table 8> Health Education Needs by health behavior

Variables	Chinese		Korean-Chinese		Korean	
	Mean ± S.D.	t or F	Mean ± S.D.	t or F	Mean ± S.D.	t or F
Smoking						
Yes	3.74 ± 0.49	0.88	4.05 ± 0.45	0.92	3.59 ± 0.31	0.80
No	3.72 ± 0.49		3.98 ± 0.47		3.56 ± 0.37	
Alcohol drinking						
Yes	3.98 ± 0.50	2.95*	4.11 ± 0.36	2.57*	3.65 ± 0.45	0.80
No	3.54 ± 0.48		3.75 ± 0.44		3.64 ± 0.44	
Drug						
Yes	3.88 ± 0.47	1.07	3.97 ± 0.46	1.87	3.78 ± 0.41	1.39
No	3.75 ± 0.48		3.87 ± 0.37		3.65 ± 0.45	

* P < 0.05

<Table 9> Health Education Needs by health related variables

Variables	Chinese		Korean-Chinese		Korean	
	Mean ± S.D.	t or F	Mean ± S.D.	t or F	Mean ± S.D.	t or F
Illness during last 4 weeks						
Yes	4.02 ± 0.45	2.67*	4.00 ± 0.35	1.65	3.53 ± 0.44	1.05
No	3.15 ± 0.47		3.96 ± 0.42		3.56 ± 0.45	
Hospitalization during a year						
Yes	3.98 ± 0.33	2.39*	4.02 ± 0.45	1.68	3.61 ± 0.48	1.85
No	3.06 ± 0.42		3.85 ± 0.43		3.55 ± 0.43	
Self-rating Health Status						
Unhealthy	3.78 ± 0.44	1.84	3.95 ± 0.43	1.87	3.55 ± 0.47	2.12*
Normal and healthy	3.85 ± 0.45		4.02 ± 0.45		3.78 ± 0.48	
Health Concern						
Much	3.88 ± 0.43	1.77	4.12 ± 0.32	1.86	3.63 ± 0.44	1.89
Moderate	3.62 ± 0.40		4.02 ± 0.38		3.58 ± 0.45	
None	3.60 ± 0.45		3.95 ± 0.42		3.57 ± 0.43	

* P < 0.05

China and Korean adolescents in Seoul, Korea. The data were collected from 400 Chinese and 200 Korean-Chinese boys and girls of 3 high schools in Gilin, China and 396 boys and girls of 3 high schools in Seoul, Korea.

The results were as follow:

1. The prevalence of smoking and drinking in Korean students was quite high among three groups. More than one third of Korean students had behaviors of smoking and drinking. Forty two point five percent of Korean students were sick during the past 4 weeks, but only 10.8% of Korean-Chinese students and 11.5% of Chinese students were sick during the past 4 weeks. More than 70% of Chinese and Korean-Chinese students had health concern, but only 22.7% of Korean students were interested in health status and education.

2. Korean-Chinese and Chinese students had higher health education needs than the Korean students. They were not interested in sex education. On the other hand, Korean students were interested in mental health and health habits.

3. Korean-Chinese students had more health education needs than Chinese or Korean adolescents and the difference was statistically significant ($p < 0.05$).

4. For the Chinese and Korean-Chinese students, the higher prevalence of drinking behavior, the higher needs of health education, and the difference was statistically significant

($p < 0.05$).

5. The Chinese students tended to need health education after their illness experience, but the Korean students, the higher the self-rating health status, the higher health education need scores were ($p < 0.05$).

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ABSTRACT

This study was administered to analyze important needs for the health education among Chinese, Korean-Chinese adolescents in Gilin, China and Korean adolescents in Seoul, Korea. The data were collected from 400 Chinese and 200 Korean-Chinese boys and girls of 3 high schools in Gilin, China and 396 boys and girls of 3 high schools in Seoul, Korea.

The results were as follow:

1. The prevalence of smoking and drinking in Korean students was quite high among three groups. More than one third of Korean students had behaviors of smoking and drinking. Forty two point five percent of Korean students were sick during the past 4 weeks, but only 10.8% of Korean-Chinese students and 11.5% of Chinese students were sick during the past 4 weeks. More than 70% of Chinese and Korean-Chinese students had health concern, but only 22.7% of Korean students were interested in health status and education.

2. Korean-Chinese and Chinese students had higher health education needs than the Korean students. They were not interested in sex education. On the other hand, Korean students were interested in mental health and health habits.

3. Korean-Chinese students had more health education needs than Chinese or Korean adolescents and the difference was statistically significant ($p < 0.05$).

4. For the Chinese and Korean-Chinese students, the higher prevalence of drinking behavior, the higher needs of health education, and the difference was statistically significant ($p < 0.05$).

5. The Chinese students tended to need health education after their illness experience, but the Korean students, the higher the self-rating health status, the higher health education need scores were ($p < 0.05$).

Key Words : Health education, Need assesment, Adolescences