

한국 청소년의 건강행위에 대한 내용분석

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Health Behaviors among Korean Adolescents: A Content Analysis

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Background: Adolescence is the starting period for health behaviors that will affect their lives throughout adulthood. Unhealthy behaviors in Korean adolescents have increased compared to previous generations. To promote health behaviors in this group, a comprehensive measurement of Korean adolescents' health behaviors is necessary. Most previous studies have used revised instruments, which were developed in other cultures, but not tools developed to measure health behaviors based on the perspectives of Korean adolescents. Identifying the perception of health behavior among Korean adolescents is important for the future of health promotion. Therefore, this study was conducted to investigate Korean adolescents' perceptions of their health behaviors.

Methods: A qualitative study was conducted to attain a condensed and broad description of the health behaviors that adolescents perceived as health-promoting behaviors or risk behaviors. From October to December 2008, 61 Korean middle and high school students were interviewed on their perceptions of health behaviors. Data were analyzed using inductive qualitative content analysis.

Results: Korean adolescents reported health behaviors related to stress, mental health, sleep habits, dietary habits, weight control, physical activity, hygiene habits, safety, computer use, substance use, health screening and others.

Conclusions: The results provide socio-cultural characteristics about the perception of health behaviors among Korean adolescents and should contribute to guiding assessment of health behaviors in Korean adolescents and provide a reference for developing valuable health-promoting interventions based on these characteristics.

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INTRODUCTION

Adolescents are extremely open to new behaviors that might positively or negatively affect their health and are often inclined to engage in detrimental health behaviors affecting their lives throughout adulthood.¹⁾ Detrimental

health behaviors of Korean adolescents have tended to follow a pattern of unhealthy behaviors compared to previous generations and similar to those in Western countries.²⁾ These trends in health behaviors among adolescents increase the risk of non-communicable diseases in the Korean population. Moreover, smoking and alcohol consumption is prevalent among Korean adolescents due to the severe stress associated with entrance exams.³⁾ Poor eating habits such as irregular meals and frequent consumption of fast-foods, physical inactivity due to frequent afterschool classes, and viewing pornography are also com-

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mon detrimental health behaviors among Korean adolescents.³⁾

These trends are problematic given that adolescent health is crucial to our future society. Over the last decade, public health institutions around the world have increasingly emphasized the importance of healthy lifestyles. Furthermore, there is abundant literature demonstrating that healthy behaviors decrease the occurrence of disease and lower mortality rates.⁴⁾ Nurses are in a position to encourage health promotion by assessing lifestyle patterns of adolescents and intervening to change behaviors. In particular, school and community health nurses are considered key professionals in facilitating the promotion of healthy behaviors among adolescents. Schools provide an ideal setting for this, as most adolescents attend school and students make up 20.6% of the Korean population.⁵⁾

Data on the prevalence of health risk behaviors among adolescents are critical for program planning and assessment. Program directors use this data to establish policies, set program goals, plan interventions, identify target populations, seek funding, advocate for support, and assess the effectiveness of policies and programs. High-quality data can contribute to the efficient and appropriate use of limited resources and the eventual reduction of health risk behaviors.⁶⁾ Therefore, an instrument is needed for comprehensive identification of adolescent health behaviors and to enable evaluation of the effects of health promotion programs for adolescents.

In Korea, many studies have been done to promote adolescent health behaviors since the enactment of the National Health Promotion Law in 1995. The focus of many adolescent health behavior studies has been on risk-taking, such as drug abuse and decreased use of protection against sexually transmitted diseases or pregnancy. However, in previous nursing studies little attention has been paid to the influence of culture and modern society on health-promoting behaviors.⁷⁾ In most studies, measurements have been made using revised instruments developed in other cultures, such as the Youth Risk Behavior Survey (YRBS) of the United States Centers for Disease Control and Prevention or the Health-Promoting Lifestyle Profile (HPLP),⁸⁾ but none of these tools were developed to measure health behaviors from the perspective of Korean adolescents.⁹⁻¹²⁾

To comprehensively measure the health behaviors of adolescents as the main health care receivers, it is necessary

to view health issues from their perspective.¹³⁾ A qualitative study is particularly useful as a first step, as it asks “how” questions that elicit patterns of behaviors from the specific population themselves. As the study is inductive, there is no hypothesis to test.¹⁴⁾ However, the results can provide the basic information and the basis for hypotheses, which can be tested via epidemiologic surveys. Given this usefulness of qualitative studies, as well as the importance of adolescents’ lifestyles and the impact of risky behaviors on their health, this qualitative research was conducted to investigate Korean adolescents’ perceptions of health behaviors. The results of this research will facilitate the identification of health behaviors identified by Korean adolescents through interviews and will help to develop a culturally appropriate scale representing their thoughts. The purpose of this study was to explore Korean adolescents’ perceptions of health promoting and risk behaviors.

METHODS

1. Design

A qualitative descriptive study was conducted to attain a condensed and broad description of the health behaviors perceived by Korean adolescents as health-promoting and risk behaviors. The study was also conducted without a priori theoretical assumption about adolescents’ health behaviors and was based on a definition of health behavior, which includes health promoting behaviors, health protecting behaviors, and health risk behaviors according to the perspective of behaviorism.¹⁵⁾

2. Participants

Participants were recruited from 12 out of 13 provinces throughout Korea. The number of participants from each province was based on the population density of each province. Using convenience sampling, the researchers interviewed 61 Korean adolescents until various conceptions of health behaviors were saturated. Participants included 26 (42.6%) middle school students and 35 (57.4%) high school students, of which 25 (41.0%) were boys and 36 (59.0%) were girls. Mean age of participants was 15.97 (SD=1.55) years and the range of age was 14 to 18 years old.

3. Ethical considerations

Ethical issues (anonymity, informed consent, study withdrawal) in this study were approved by the Research Ethics Committee of the university. Prior to the study, the students and their parents were informed verbally about the aims of the study and were asked to volunteer. All participants were informed that if at any point during the interview they wanted to quit the interview, they were free to do so. Consent forms were obtained from all participants and their parents.

4. Data collection

In this study a qualitative data collection method with in-depth interviews was used. This technique allowed for the systematic collection of insights and in-depth information about Korean adolescents' perceptions of their health behaviors. Data collection took place from October to December, 2008.

In-depth interviews were completed using a semi-structured, open-ended questionnaire. All interviews were recorded with permission from both the participants and their parents. Research assistants summarized the major findings at the end of each interview. Research assistants were trained in the content of the research questions and interview skills and were allocated according to Korean administrative districts. The interviews were conducted in a private and comfortable place, which facilitated the dialogue and lasted between 30 and 50 minutes. There were four questions aimed at identifying adolescents' opinions about health behaviors:

1. What do you think are healthy behaviors to your health in general?
2. What do you think are concrete health maintaining and promoting behaviors?
3. What do you think are risk behaviors to your health in general?
4. What do you think are concrete obstacle behaviors in maintaining and promoting your health?

After sixty-one in-depth interviews, data saturation was reached and very little new information was obtained. Therefore the interviews were stopped. A part of data collection was described in Shin's study.¹⁶⁾

5. Data analysis

Data were analyzed using inductive qualitative content

analysis. Content analysis is a research method for making replicable and valid inferences from data to their context, with the purpose of providing knowledge, new insights, a representation of facts, and a practical guide to action.¹⁷⁾ The aim is to attain a condensed and broad description of the phenomenon, and the outcome of the analysis is a description of the concepts or categories describing the phenomenon.¹⁸⁾ The researchers and two master degree students participated in the content analysis. The written records and memos from interviews with the students were reviewed and analyzed using the content analysis process outlined by Elo and Kyngäs.¹⁸⁾ The content analysis process is comprised of three phases: preparation, organizing, and reporting. The preparation stage starts with the selection of the unit of analysis, which can be a word or a theme. The next step involves making sense of the data as a whole, followed by organization of the qualitative data. This process includes open coding, category creation, and abstraction. After open coding, the lists of categories are grouped under a higher order heading.¹⁸⁾ The purpose of creating categories is to provide a means of describing the phenomenon, to increase understanding, and to generate knowledge.¹⁹⁾ At this time, the researchers make decisions on categorization. Qualitative content analysis is interpretive because the researchers make an effort to understand and grasp the latent content of the data.²⁰⁾ The researchers reviewed the list of categories and abstracted similar categories, and each category is named using content-characteristic words. The final phase involves reporting the analysis process and results.¹⁸⁾

In the present study, the content analysis revealed the properties of health behaviors perceived by sixty-one middle and high school students. The properties derived from this content analysis were confirmed by an expert group from three nursing faculties, two middle school teachers, and two high school teachers, who compared the summary of findings with original statements made by the participants. Also, researchers continuously discussed the placement and meaning of each sub-category under each main category to ensure no category was misplaced and the essence of the content fully captured. Finally, 10 categories were referred to as the perceptions of health behaviors among Korean adolescents. The final confirmation of the categories was established by four middle school and high school students.

RESULTS

To reduce the original raw data, written responses (the unit of analysis) were read and the researchers and two master degree students independently compiled and summarized the data. These investigators then met to discuss the condensed summaries and ascertain that the core of the

responses was retained. Summaries were then analyzed using both manifest and latent content analysis techniques to search for similarities and differences among responses. The summarized final results of this study are shown in Table 1. The concrete results of each category are explained as follows.

Table 1. Content analysis of health behaviors among Korean adolescents

Significant statements	Sub-category	Category
· Not feeling stressed, feeling stressed	· Feeling stress	· Stress
· Being less stressed, releasing stress rapidly, releasing stress well, getting it out one's mind, enduring stress, feeling stability, coping with stress effectively, not being able to cope with stress, not coping with stress, not holding it in	· Managing stress	
· Thinking positively, having a positive state of mind, living happily, living pleasantly, thinking negatively	· Thinking positively	· Mental health
· Becoming depressed, getting angry easily, falling into despair, complaining excessively, not enduring being defeated, suppressing one's feelings	· Controlling one's emotion	
· Loving oneself, considering oneself as a good person, knowing one's strength and weakness, not belittling oneself, acting confidently in everything	· Establishing self-identity	· Sleep habits
· Getting enough sleep, not being easily awakened, sleeping well, sleep deficiency, not sleeping well, being tired due to sleep deficiency	· Maintaining good quality of sleep	
· Having irregular sleep hours, sleeping late, waking up late, taking stimulants in order to be awake, taking sleep-inducing drugs	· Regular sleeping pattern	· Dietary habits
· Not having an unbalanced diet, having a balanced diet, eating vegetables and fruits, drinking enough water, having an unbalance diet, eating high caloric food, eating too much meat, having substandard food, eating fast-food, eating a lot of spicy/salty/sweet food, drinking soda, drinking beverage with caffeine	· Having nutritional balance	
· Having regular meals, not eating between meals, having breakfast every day without skipping, having irregular meals, skipping meals, having a late snack	· Keeping regular meal times	· Weight control
· Eating the same amount and calories at each meal, having a suitable amount of food, not overeating, not being intemperate in eating	· Having proper amount of food	
· Not being on a serious weight control, fasting all day, excessive weight loss, serious weight control, excessive exercise, drinking water only, without having any meals, wish to have a slim body like a model	· Making an effort to watch one's weight	· Physical activity
· Doing exercise regularly, keeping up exercise in gym class, not exercising	· Exercising regularly	
· Engaging in too much physical activity, exercising excessively, exercising over one's fitness level	· Well-fitted exercises	· Hygiene habits
· Going to school by foot instead of bus or taxi, not having a sedentary lifestyle	· Doing lifestyle exercises	
· Taking showers, keeping oneself clean, washing after coming home, brushing teeth, not keeping oneself clean, unclean sanitary condition	· Keeping oneself clean	· Safety
· Riding a motorcycle, not using pedestrian crossings, not wearing a seat belt, not wearing a helmet		
· Not using a computer for a long time, using a computer a lot, playing computer games, using a computer a lot, being addicted to computer games, using a computer all night		· Computer use
· Smoking tobacco	· Smoking and drinking	· Substance use
· Drinking alcohol		
· Taking narcotics, excessive drug use	· Using drug and noxious substance	· Health screening and others
· Inhaling butane gas, inhaling bond		
· Regular dental checkups, having periodic medical checkups, receiving scheduled vaccination	· Having regular checkups	
· Receiving medical attention when feeling sick, not visiting the hospital when sick	· Early hospital visits	
· Taking a five or ten-minute break every hour while studying, maintaining correct posture, studying while lying face-down, not straightening oneself up, sitting all day, sitting cross-legged	· Having good posture	

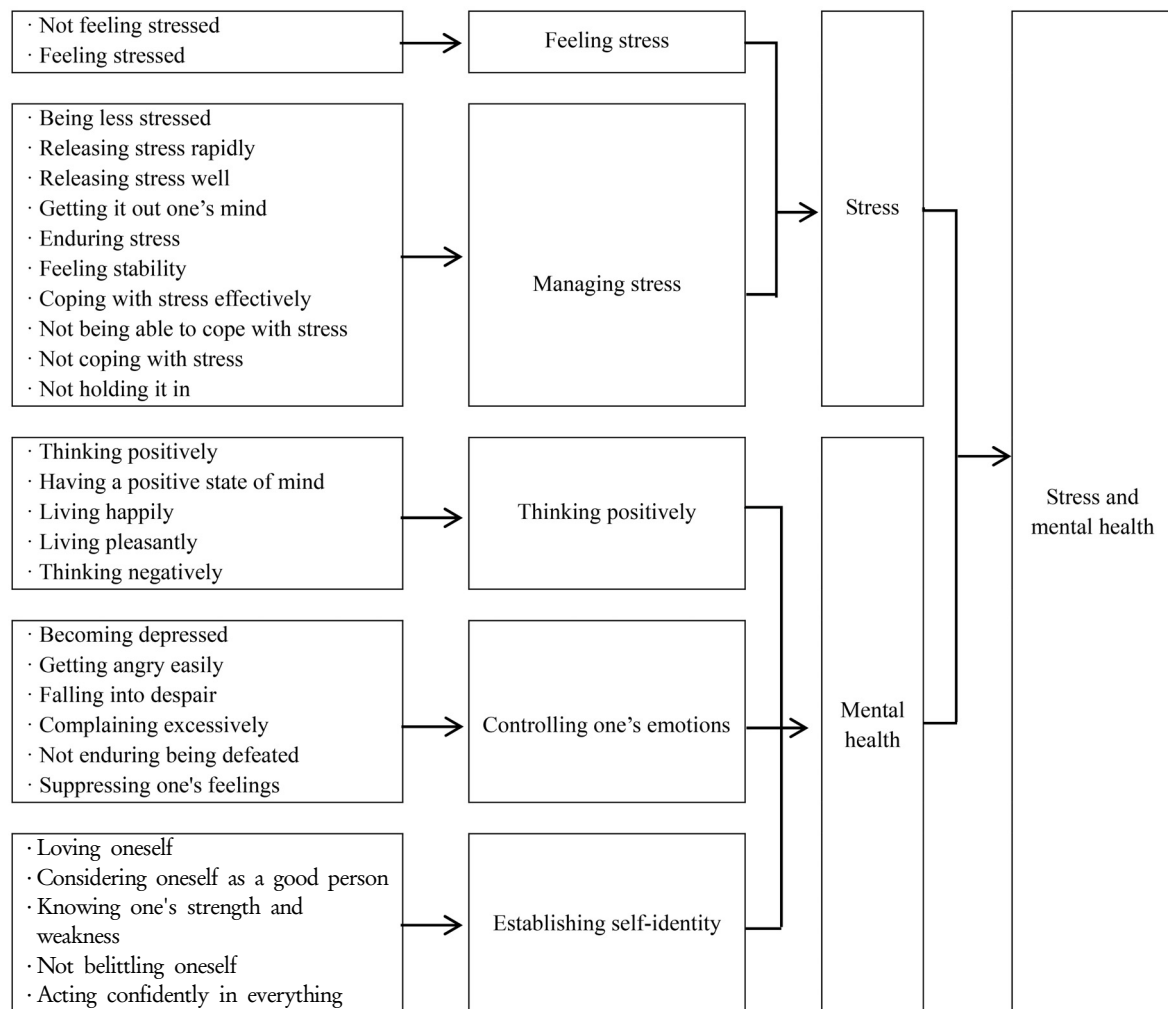
1. Stress and mental health

In our analysis, many participants described the content of 'stress and mental health' as a health behavior with two sub-categories in stress and three sub-categories in mental health. The sub-categories for stress were (1) feeling stress and (2) managing stress. Korean students stated that 'not feeling stressed' is a health behavior and 'feeling stressed' is a health risk behavior. The investigators preserved 'feeling stress' because both responses contained the same meaning. The participants also reported that 'being less stressed and releasing stress rapidly (or well)', 'getting it out of one's mind', 'enduring stress', 'feeling stability', and 'coping with stress effectively' were health maintaining and promoting behaviors. Further, they reported that 'not being able to cope with stress' and 'not coping with stress and holding it in' were obstacles to maintaining and pro-

moting their health. As those statements contained similar meaning, 'managing stress' was retained.

The sub-categories of mental health were (1) thinking positively, (2) controlling one's emotion, and (3) establishing self-identity. The participants reported that 'thinking positively', 'having a positive state of mind', and 'living a happy and pleasant life' were health behaviors or health maintaining and promoting behaviors. The adolescents also reported that 'thinking negatively' is a risk behavior or an obstacle in maintaining and promoting their health. As these items have the same meaning, 'thinking positively' was retained. Further, they stated that 'becoming depressed', 'getting angry easily', 'falling into despair', 'complaining excessively', 'not able to endure being defeated', and 'suppressing one's feelings' are risk behaviors or obstacles in promoting their health. From these items,

Figure 1. Category: stress and mental health



the investigators preserved ‘controlling one’s emotion’. Additionally, ‘loving oneself’, ‘considering oneself as a good person’, ‘knowing one’s strengths and weaknesses’, ‘not belittling oneself’, and ‘acting in everything confidently’ were reported as health behaviors or health maintaining and promoting behaviors. These items were retained as ‘establishing self-identity’. Through this content analysis process, the category ‘stress and mental health’ was created (Figure 1).

2. Sleep habits

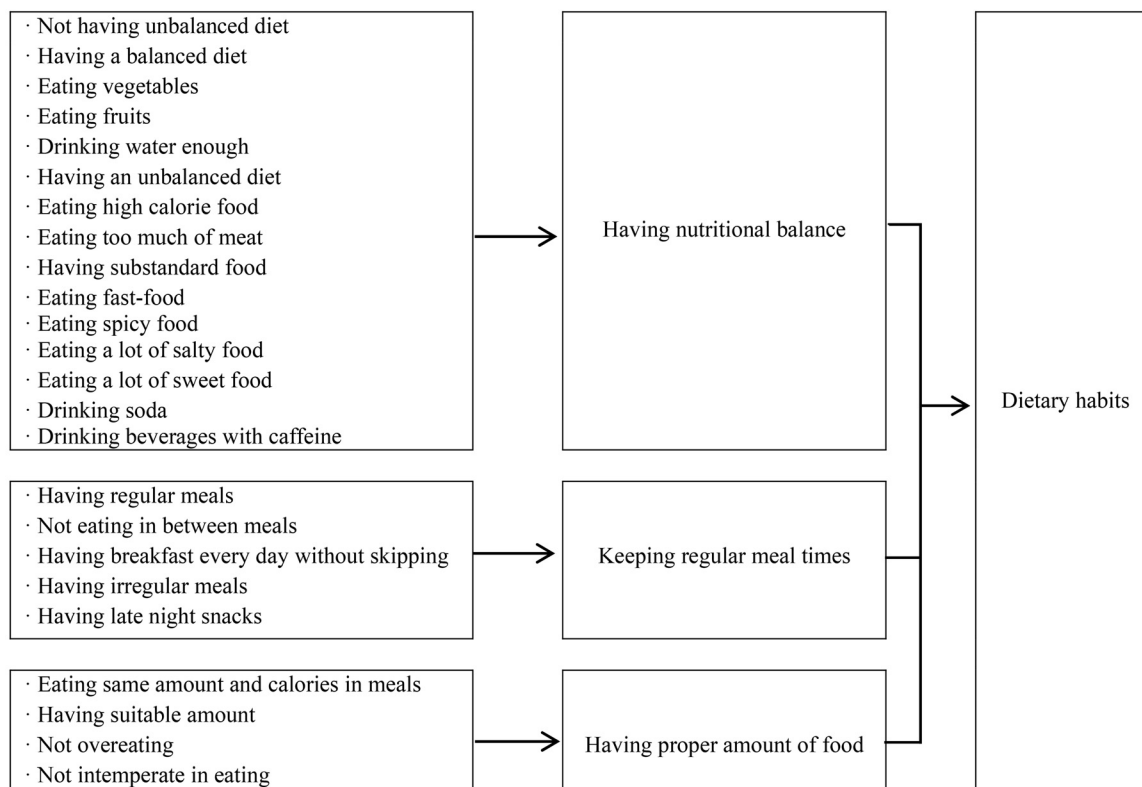
Korean students described the content of ‘sleep habits’ as a health behavior with two sub-categories: (1) maintaining good quality of sleep and (2) regular sleeping pattern. Participants reported that ‘getting enough sleep’, ‘not being easily awakened and sleeping well’ were health behaviors or health maintaining and promoting behaviors. They reported that ‘sleep deficiency’, ‘not sleeping well’, and ‘being tired due to sleep deficiency’ were risk behaviors or obstacles to maintaining and promoting their health. The term ‘maintaining good quality of sleep’ was condensed from these statements. They also responded that ‘having

irregular sleep hours’, and ‘sleeping late and waking up late’ were risk behaviors or obstacles to maintaining and promoting their health. Also, ‘taking stimulants in order to be awake’ and ‘taking sleep-inducing drugs’ were described as risk behaviors or obstacles. Both statements were isolated opinions, but we judged them as meaningful and retained them in ‘regular sleeping pattern’. From these sub-categories, the themes were placed in the category, ‘sleep habits’.

3. Dietary habits

Many participants reported that keeping ideal dietary habits is a very important health behavior. From the content of ‘dietary habits’, three sub-categories were retained: (1) having nutritional balance, (2) keeping regular meal times, and (3) having proper amount of food. Korean students described ‘not having an unbalanced diet’, ‘having a balanced diet’, ‘eating vegetables and fruits’, and ‘drinking enough water’ as health behaviors or health maintaining and promoting behaviors. Also, ‘having an unbalanced diet’, ‘eating high caloric food’, ‘eating too much meat’, ‘having substandard food’, ‘eating fast-food’, ‘eating a lot

Figure 2. Category: dietary habits



of spicy/salty/sweet food', and 'drinking soda or beverages with caffeine' were described as risk behaviors or obstacles. Therefore, 'having nutritional balance' was retained. Also, most of students reported that 'having regular meals', 'not eating between meals', and 'having breakfast every day without skipping' were health behaviors or health maintaining and promoting behaviors, and that 'having irregular meals', 'skipping meals', and 'having late snacks' were risk behavior or obstacles. These statements have a meaning similar to 'keeping regular meal time'. Additionally, they reported that 'eating the same amount and calories at each meal', 'having a suitable amount of food', 'not overeating', and 'not being intemperate in eating' were health-promoting behaviors. 'Having the proper amount of food' was retained. The category, 'dietary habits', was created through this content analysis process (Figure 2).

4. Weight control

Some students reported 'not being on a serious weight control, such as fasting all day' as a health behavior and 'excessive weight loss' and 'serious weight control' as risk behaviors. They also reported 'excessive exercise and drinking water only, without having any meals' or 'wish to have a slim body like a model' as risk behavior. We condensed this to 'making an effort to watch one's weight'. Those statements were different from the concept of 'having a balanced diet'. Therefore, we placed them in the category, 'weight control'.

5. Physical activity

Almost all of the students mentioned that 'physical activity' was a health behavior. It was retained with three sub-categories: (1) exercising regularly, (2) well-fitted exercises, and (3) doing lifestyle exercises. Korean students reported that 'doing exercise regularly' and 'keeping up exercise in gym class' as important health behaviors or health maintaining and promoting behaviors, and 'not exercising' as a health risk behavior or obstacle to maintaining and promoting their health. As those statements contained similar meaning, 'exercising regularly' was retained. They also mentioned 'engaging in too much physical activity', 'exercising excessively', and 'exercising beyond one's fitness level' as obstacles to health or health risk behaviors. These statements preserved the meaning of

'well-fitted exercising'. 'Going to school by foot instead of bus or taxi' and 'not having a sedentary lifestyle' were retaining with the meaning of 'doing lifestyle exercises'. From these sub-categories, 'physical activity' was named.

6. Hygiene habits

Participants reported 'taking showers', 'keeping oneself clean', 'washing after coming home', and 'brushing teeth' as health behaviors or health maintaining and promoting behaviors. They also reported 'not keeping oneself clean' or 'unclean sanitary condition' as health risk behaviors or obstacles. Although we considered a statement with a comprehensive meaning such as 'keeping oneself clean', the statements with independent meanings such as 'taking showers', 'washing hands', and 'brushing teeth' were retained. This category was named 'hygiene habits'.

7. Safety

Some participants reported 'riding a motorcycle', 'not using pedestrian crossings', 'not wearing a seat belt', and 'not wearing a helmet' as health risk behaviors. Since each statement has an independent meaning and the reverse is a health behavior, all the statements were included in a category named 'safety'.

8. Computer use

Computer and internet use is currently widespread among adolescents, and many participants reported 'not using a computer for a long time' as a health maintaining and promoting behavior, and 'using a computer a lot' or 'playing computer games' as health risk behaviors or obstacles in maintaining and promoting their health. From these statements, 'using a computer a lot', 'being addicted to computer games', and 'using a computer all night' were preserved and the statements were included in the category 'computer use'.

9. Substance use

Korean students described the content of 'substance use' as a health risk behavior with two sub-categories: (1) smoking and drinking, (2) using drugs and noxious substance. Almost all of the students reported 'smoking tobacco' and 'drinking alcohol' as the most dangerous health behaviors or obstacles in maintaining and promoting their health. Each statement was placed in the sub-cat-

egory of 'smoking and drinking'. Also, some adolescents reported 'taking narcotics' and 'excessive drug use' as health risk behaviors. And, they perceived 'inhaling butane gas or bond' as serious health risk behaviors or obstacles in maintaining and promoting their health. Especially, they classified these health risk behaviors separately from tobacco use and alcohol consumption. We judged that the statements belonged to another sub-category. Therefore, 'using drugs and noxious substance' were retained. From these sub-categories, 'substance use' was named.

10. Health screening and others

In addition to the above categories, the adolescents reported 'regular dental checkups', 'having periodic medical checkups' and 'receiving scheduled vaccination' as health maintaining and promoting behaviors. These statements were retained as 'having regular checkups'. Also, they reported 'receiving medical attention when feeling sick' and 'not visiting the hospital when sick' as health promoting behavior and risk behavior, respectively. These statements have the same meaning, and 'early hospital visits' was retained. Additionally, 'taking a five or ten-minute break every hour while studying', and 'maintaining correct posture' were included as health behaviors or health maintaining and promoting behaviors. They also stated that 'studying while lying face-down', 'not straightening oneself up', 'sitting all day', and 'sitting cross-legged' are health risk behaviors or obstacles. These statements preserved the meaning of 'having good posture'. From these sub-categories, the category 'health screening and others' was created.

DISCUSSION

Health behaviors are defined as patterns of behavior, actions, and habits linked to health maintenance, health recovery, and health promotion.²¹⁾ The term includes health promoting behaviors, health protecting behaviors, and health risk behaviors according to the perspective of behaviorism.¹⁶⁾ Adolescence is physically the healthiest period in a life due to relatively low mortality and morbidity from chronic diseases compared to other age groups. However, it is the starting point for health risk behaviors that can be regarded as negative health behaviors.²²⁾

Therefore, verifying the concepts of health behaviors in adolescents, especially based on an understanding of their specific socio-cultural background, is crucial for the future of health promotion.

Among typical measurement instruments used for confirming health behaviors in adolescents, the HPLP examines health promoting behaviors in terms of nutrition, social support, health responsibility, life appreciation, exercise, and stress management.⁸⁾ The YRBS examines health behaviors in terms of violence, unintentional injuries, tobacco use, alcohol use, drug use, and sexual behaviors.²³⁾ According to the results of this study, Korean adolescents perceived health behaviors as stress and mental health, sleep habits, dietary habits, weight control, physical activity, hygiene habits, safety, computer use, substance use, and regular health screening behavior.

In particular, YRBS treats concepts relevant to sexual behavior as meaningful health risk behaviors in adolescents. However, no participants in the present study mentioned sex or sexual behaviors as health behaviors. This is maybe a reflection of Korean culture, which is based on Confucianism with conservative ideas about sex. Using closed questions, Ko et al.²⁴⁾ measured exposure to pornography and the number of sexual contacts in a sample of Korean middle school students and found that sex-related behaviors were influencing factors among health risk behaviors. Due to conservative cultural characteristics, Korean adolescents may be discouraged from replying to open questions about sex-related health and health risk behaviors. This also indicates that adolescents may not consider sex-related behaviors to be relevant to their health or health behaviors. Further study is needed to confirm the concepts of health as related to sexual behaviors in Korean adolescents. In addition, substance use was identified as a health risk behavior in this study, similar to the YRBS. However, Korean adolescents reported use of substances such as narcotics, butane gas, or bond but not marijuana or heroin, which are the most prevalent illegal substance in other countries. Moreover, in the present study violence-related concepts of possession of guns, knives, or other weapons; fighting; or suicide were not identified. Robinson²⁵⁾ reported that violence and injuries influence adolescent health behaviors. DuRant et al.²⁶⁾ and MacKenzie et al.²⁷⁾ confirmed adolescent health risk behaviors in association with carrying weapons, suicidal ideation, and suicide attempts. The fact

that in the present study these behaviors were not identified may reflect the social and legal cultures in Korea. Stress and mental health were identified as health risk and promoting behaviors. This finding was similar to the subcategory of HPLP and Robinson's²⁵⁾ research which found that stress management was the major factor affecting health behavior for youth. In particular, most of participants in this study strongly emphasized stress and mental health concepts over other concepts. This finding may reflect educational policies in Korea. Ko et al.²⁴⁾ reported that Korean middle and high school students are under great pressure with regard to academic performance and the entrance examination system. Moreover, academic performance may have an effect on adolescents' delinquency behavior, which is a health risk behavior.²⁸⁾ This suggests that stress management programs or mental health-promoting programs are needed to promote the health of adolescents.

Prolonged internet use and addiction to computer games were mentioned as health risk behaviors. Very few previous studies examined computer use in detail with regard to adolescent health behavior. In this study, however, computer use was found to be an important aspect of health behaviors. This may be a result of changes in adolescent perception due to the current rapid changes occurring in Korea such as the development of the Korean electronic industry, popularization of computer and internet use, and the development of educational media on the internet. Future research is needed for the frequently mentioned problems of vision deterioration caused by prolonged computer use,²⁹⁾ the onset of physical health problems associated with improper posture,³⁰⁾ and mental health problems resulting from reckless disclosure of information on the internet.³¹⁾

Finally, concepts associated with health responsibility or life appreciation, such as on the HPLP, were not derived from the content analysis in this study. This may be due to Korean adolescents' perceptions of health maintaining, promoting, and risk behaviors. Cultural differences may exist in that Korean adolescents may not perceive health responsibility or life appreciation as health behaviors. These results provide some guidance on the development of measurement tools to assess the health behaviors of Korean adolescents and will help guide further investigations of targeted and culturally-specific concepts

among Korean adolescents.

The present study was conducted as a qualitative descriptive study to explore the perceptions of health behaviors in Korean adolescents with regard to health promoting behaviors and health risk behaviors. As a result of the content analysis of interviews, 10 concepts were identified as health behavior concepts of Korean adolescents: stress, mental health, sleep habits, dietary habits, weight control, physical activity, hygiene habits, safety, computer use, substance use, health screening and others. In particular, in this study, the concept of computer use instead of concepts linked to sexual behavior and issues of weapons and violence was identified as an important adolescent health concern. These concepts reflect important adolescent socio-cultural characteristics in Korea.

요 약

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REFERENCES

- Gramkowski B, Kools S, Paul S, Boyer CB, Monasterio E, Robbins N. Health risk behavior of youth in foster care. *J Child Adolesc Psychiatr Nurs* 2009;22(2):77-85.
- Kim YH. Korean adolescents' health risk behaviors and their relationships with the selected psychological constructs. *J Adolesc Health* 2001;29(4):298-306.
- Shin YH. Development and psychometric evaluation of a scale to measure health behaviors of adolescents. *J Korean Acad Nurs* 2010;40(6):820-30.
- Wainwright P, Thomas J, Jones M. Health promotion and the role of the school nurse: a systematic review. *J Adv Nurs* 2000;32(5):1083-91.
- Statistics Korea. Summary of census population. Seoul: Statistics Korea; 2005. [Accessed April 22, 2010]. http://kosis.kr/statisticsList/statisticsList_01List.jsp?vcd=MT_ZTITLE&parmTabId=M_01_01#SubCont
- Kann L, Brener ND, Warren CW, Collins JL, Giovino GA. An assessment of the effect of data collection setting on the prevalence of health risk behaviors among adolescents. *J Adolesc Health* 2002;31(4):327-35.
- Chen MY, James K, Wang EK. Comparison of health-promoting behavior between Taiwanese and American adolescents: a cross-sectional questionnaire survey. *Int J Nurs Stud* 2007;44(1):59-69.
- Walker SN, Sechrist KR, Pender NJ. The Health-Promoting Lifestyle Profile: development and psychometric characteristics. *Nurs Res* 1987;36(2):76-81.
- An JY, Tak YR. Health-risk behaviors and self-efficacy in elderly adolescents. *J Korean Acad Community Health Nurs* 2006;17(3):387-96.
- Byun YS, Lee HY. A study on health risk behaviors in adolescents. *J Korean Acad Fundam Nurs* 2005;12(3):413-20.
- Kim HS. A Study on the Relations of Health Promoting Behavior and Perceptions of Body-image in Middle School Students [Dissertation]. Seoul: Seoul National University; 2006. Korean.
- Seol YH. Comparison of Stress and Health Behavior between Children in the Broken Family and Those in the Normal Family [Dissertation]. Gwangju: Chonnam National University; 2007. Korean.
- Parvizy S, Nikbahkt A, Pournaghash Tehrani S, Shahrokhi S. Adolescents' perspectives on addiction: qualitative study. *Nurs Health Sci* 2005;7(3):192-8.
- Marshall C, Rossman GB. Designing Qualitative Research. 5th ed. Thousand Oaks, CA: Sage Publications; 2010.
- Millstein SG, Petersen AC, Nightingale EO. Promoting the Health of Adolescents : New Directions for the Twenty-First Century. New York, NY: Oxford University Press; 1993.
- Shin YH. Development and psychometric evaluation of a scale to measure health behaviors of adolescents. *J Korean Acad Nurs* 2010;40(6):820-30.
- Krippendorff K. Content Analysis: An Introduction to Its Methodology. 2nd ed. Thousand Oaks, CA: Sage Publications; 2004.
- Elo S, Kyngäs H. The qualitative content analysis process. *J Adv Nurs* 2008;62(1):107-15.
- Cavanagh S. Content analysis: concepts, methods and applications. *Nurse Res* 1997;4(3):5-16.
- Sandelowski M. Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Res Nurs Health* 2000;23(3):246-55.
- Gochman DS. Handbook of Health Behavior Research. New York, NY: Plenum Press; 1997.
- Kim SY. Human Growth and Development and Nursing of Adolescents. Paju: Soomoonsa; 2004.
- Eaton DK, Kann L, Kinchen S, Shanklin S, Flint KH, Hawkins J, et al; Centers for Disease Control and Prevention (CDC). Youth risk behavior surveillance - United States, 2011. *MMWR Surveill Summ* 2012;61(4):1-162.
- Ko YK, Yoo IY, Kang KH, Lim JY, Kim MJ, Yoo HJ. Factors related to high-risk health behavior in middle school adolescents. *J Korean Acad Child Health Nurs* 2006;12(3):341-50.
- Robinson JA. The health behavior selection process of young adolescents. *J Sch Nurs* 2001;17(3):148-56.
- DuRant RH, Smith JA, Kreiter SR, Krowchuk DP. The relationship between early age of onset of initial substance use and engaging in multiple health risk behaviors among young adolescents. *Arch Pediatr Adolesc Med* 1999;153(3):286-91.
- MacKenzie TD, Steiner JF, Davidson AJ, Marine WM, Judson FN. Tobacco use and other risk behaviors among adolescents in an STD clinic. *Prev Med* 1998;27(6):792-7.
- Yang JK, Kim CK. Relationships among delinquent risk factors, protective factors and recidivism of juvenile delinquency. *Korean J Youth Couns* 2002;10(2):101-21.
- Rosenfield M. Computer vision syndrome: a review of ocular causes and potential treatments. *Ophthalmic Physiol Opt* 2011;31(5):502-15.
- Madeleine P. Dynamics of seated computer work before and after prolonged constrained sitting. *J Appl Biomech* 2012;28(3):297-303.
- Huesmann LR. The impact of electronic media violence: scientific theory and research. *J Adolesc Health* 2007;41(6 Suppl 1):S6-13.