

Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results

Health and Global Policy Institute

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY.....	2
2. PROJECT BACKGROUND AND PURPOSE.....	7
3. DEVELOPING A COMPREHENSIVE HEALTH EDUCATION PROGRAM FOR UNIVERSITY STUDENTS.....	7
4. EDUCATIONAL INTERVENTION FOR UNIVERSITY STUDENTS OF ALL GENDERS FROM PRACTICING MIDWIVES	10
5. OUTLINE OF QUANTITATIVE SURVEY OF PARTICIPANTS FOR MEASURING PROGRAM EFFECTIVENESS	10
6. RESULTS OF QUANTITATIVE SURVEY ON PROGRAM EFFECTIVENESS.....	13
6.1. PARTICIPANT CHARACTERISTICS	13
6.2. THE NEED FOR COMPREHENSIVE HEALTH EDUCATION AMONG UNIVERSITY STUDENTS.....	14
6.3. HEALTH LITERACY.....	21
6.4. INFORMATION SOURCES AND PEOPLE TO CONSULT ON TOPICS CONCERNING SEXUAL HEALTH	24
6.5. SEXUALLY-TRANSMITTED DISEASES (STDs)	26
6.6. SEXUAL CONSENT.....	30
6.7. UNWANTED PREGNANCY AND EMERGENCY CONTRACEPTIVES (THE MORNING-AFTER PILL)	36
6.8. FEMALE HORMONES	37
6.9. LIFE PLANNING	44
7. OPINIONS	55
7.1 OPINION 1 – COMPREHENSIVE CHILDHOOD HEALTH EDUCATION PROGRAMS MUST BE INTRODUCED OR IMPROVED AND OPPORTUNITIES FOR UNIVERSITY STUDENTS TO RECEIVE COMPREHENSIVE HEALTH EDUCATION MUST BE CREATED.....	55
7.2 OPINION 2 – COMPREHENSIVE HEALTH EDUCATION PROGRAMS AND METHODS TO DELIVER THEM MUST BE DEVELOPED AND PROFESSIONALS WHO CAN PROVIDE THEM MUST BE TRAINED	57
7.3. OPINION 3 - FRAMEWORKS THAT CONNECT STUDENTS TO COUNSELING SERVICES AND HEALTHCARE INSTITUTIONS MUST BE BUILT ...	59
8. ACKNOWLEDGEMENTS.....	62
9. PROJECT TEAM	62

1. Executive Summary

For young people in their adolescent years, acquiring correct knowledge on reproductive health and the ability to think or act autonomously is important for protecting health and independently developing life plans. This is particularly important during the period immediately after graduating high school, not only for building familiarity with reproductive health and developing an awareness of reproductive health as a topic that directly concerns oneself, but also because it is a period for planning future career development and potential life plans for after joining the workforce. However, even though sex education in Japan is provided by secondary school, it has been criticized for being too limited in scope, for not providing enough of the knowledge needed, and for not developing adequate decision-making ability.¹

To response to this situation, Health and Global Policy Institute (HGPI) designed a comprehensive health education curriculum for university students in FY2019 after referring to various guidelines such as the United Nations Educational, Scientific and Cultural Organization's (UNESCO) *International Technical Guidance on Sexuality Education*,² which is the international standard for comprehensive sex education, and after gathering the opinions of specialists in various fields. We then held an educational intervention for 230 male and female university students at three universities based on that curriculum. At the same time, we conducted a quantitative online survey to measure the effectiveness of the program. The results of that survey demonstrated the effects that comprehensive health education programs can have on reproductive health literacy and health behaviors among university students. It also revealed participants' desired course content and educational methods, gave us suggestions on how to build better support systems, and uncovered specific needs present in the environment surrounding university students. Based on its results, we believe that it is crucial to promote measures that will improve health literacy and encourage appropriate health behaviors among young people.

The comprehensive health education provided by this program was not limited to education on reproductive health. We defined our curriculum around the concepts of providing the comprehensive knowledge about sex and the body that young people need to consider and achieve life plans after learning about the various options available to them while respecting the values and lifestyles of each and every person.

Key Findings

The need for educational opportunities among university students

- ✓ Almost all (97%) of participants said they believe university students require comprehensive health education.

¹ Tashiro, M. "Institutional Foundations of Sex Education in East Asia - Korea, Taiwan, China and Japan." JASE Journal of Contemporary Sex Education, No. 36, 2014.

² UNESCO, 2018. "International technical guidance on sexuality education: An evidence-informed approach." Last retrieved June 30, 2020. <https://unesdoc.unesco.org/ark:/48223/pf0000260770>

- ✓ Around 87% of the university students said they think comprehensive health education programs should be included in university orientation and that all students should take them.

Improving literacy and changing beliefs and behaviors

Sexually-transmitted Diseases (STDs)

- ✓ Approximately 86% of respondents thought their previous knowledge about STDs was incorrect.
- ✓ Three months after the lectures, almost a third (29%) of university students said they had changed their behavior towards STD prevention as a result of the midwives' comprehensive health education program.

Sexual Violence and Sexual Consent

- ✓ About 42% of university students reported that they have encountered sexual violence or a situation in which the right to sexual consent was not respected.
- ✓ 66% of university students who encountered sexual violence or situations in which the right to sexual consent was not respected after attending the comprehensive health education program provided by midwives reported that their behavior changed compared to before attending the program.

Receiving Examinations from Obstetricians and Gynecologists

- ✓ After the program, around 62% of university students reported that they considered seeking an examination from an obstetrician-gynecologist (OB/GYN) as a result of the program.

Opinions After Reviewing Survey Results: Three Opinions and Specific Measures to Promote in the Future

Opinion 1 – Comprehensive childhood health education programs must be introduced or improved and opportunities for university students to receive comprehensive health education must be created

- ✓ **Measures to introduce or improve comprehensive childhood health education are necessary**
 - **Government:** The need for comprehensive health education starting from childhood should be recognized and addressed during the creation of guidelines and curriculums, and the Government should adopt a posture that allows for said education to be provided with consistent standards nationwide.
 - **Government:** Children and young people are the parties most affected by comprehensive health education. They should be included on Government investigation committees and in similar groups.
 - **Government/Research institutions:** Comprehensive health education programs that are based on the unique characteristics of Japanese people and Japan's culture should be created. Evaluation indicators to measure the educational effects of said programs should be developed.
 - **Educational institutions:** While respecting the facts that there are various sexual orientations and identities and that gender is not determined by anatomy, students at every level of education

should be given opportunities to learn about anatomical and psychological sexual characteristics that differ from their own.

✓ **Opportunities should be created for students at educational institutions (universities, etc.) to attend comprehensive health education programs made for students**

- **Government:** The Government should recognize the need for continuous comprehensive health education for young people who have graduated from high school or other secondary schools and should provide leadership in the effort to provide all students comprehensive health education.
- **Government:** Government investigation committees and similar groups should include the parties most affected, who are the children and young people who require comprehensive health education.
- **Government/Research institutions:** The content of reproductive health education should be improved to meet the needs of young people in Japan. This should be done while referring to valid forms of evidence including the latest research results as well as past examples and modern trends, including international trends.
- **Government/Research institutions:** Surveys among the parties most affected should be conducted regularly to track current issues so that education which meets students' needs can be introduced in a timely manner.
- **Educational institutions (universities, etc.):** Opportunities for all students to attend comprehensive health education programs should be created by adding said programs to new student orientation and other such events as well as by providing said programs online.

Opinion 2 – Comprehensive health education programs and methods to deliver them must be developed and professionals who can provide them must be trained

✓ **Use educational programs based on guidelines that meet international standards**

- **Government:** To determine the content of comprehensive health education programs for young people who have graduated high school or other secondary schools, guidelines should be provided to related academic societies, organizations, and other such groups so that said programs can be based on international guidelines such as the *International Technical Guidance on Sexuality Education*. Doing so will enable those groups to match the content of said programs to students' current circumstances and needs.

✓ **Develop external human resources that can implement comprehensive health education programs and promote cooperation between fields**

- **Educational institutions (universities, etc.):** Invite specialists in reproductive health from external organizations to provide lectures (including online lectures) and make preparations within campus operations so that those lectures can be well-planned and run smoothly.
- **Educational institutions (universities, etc.):** To ensure that course content meets educational standards, educational institutions should build frameworks that allow for the selection of educators who can provide suitable course content.

- **The Japanese Midwives Association and other related academic societies and organizations:** Training seminars to develop human resources using lectures and workshops on international guidelines like the *International Technical Guidance on Sexuality Education* should be held so specialists in reproductive health such as midwives or OB/GYNs can provide educational programs that meet certain quality standards in terms of both program content and educational method.
- **The Japanese Midwives Association and other related academic societies and organizations:** Continuous efforts that build awareness towards keeping knowledge up-to-date and towards building educational skills should be made to empower and enlighten specialists in reproductive health such as midwives or OB/GYNs.
- **The central Government and local governments:** A platform should be built that matches and unites educational institutions (universities, etc.), specialists in reproductive health, and companies and NPOs that are interested in providing health information to students.
- **The central Government and local governments:** To train specialists in reproductive health working in regional communities, grants and similar forms of financial support should be provided to cover training fees. Training programs should aim to refresh the knowledge possessed by specialists and raise knowledge standards.

Opinion 3 - Frameworks that connect students to counseling services and healthcare institutions must be built

- ✓ **Places where young people can readily access counseling should be established**
 - **Municipalities:** Youth clinics should be established at existing healthcare facilities, such as health centers. There, young people in their 10s and 20s should be able to receive free counseling from midwives or public health nurses who have received proper training on communicating in a thoughtful manner.
- ✓ **Frameworks that match students with counseling services or healthcare institutions should be built**
 - **Educational institutions (universities, etc.):** Regular opportunities for students to receive counseling from midwives or OB/GYNs from local healthcare institutions should be provided at on-campus infirmaries and other places readily accessible to students.
 - **Educational institutions (universities, etc.):** Efforts should be made to ensure that all students are informed about external counseling services or healthcare institutions in addition to counseling and other services provided on campus.
 - **Educational institutions (universities, etc.):** Counseling offices on sexual harassment have been established at university campuses in response to a circular published by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The people in charge of providing said counseling should be given training opportunities so they can respond to students in need of counseling in a quick and appropriate manner.
 - **The Japanese Midwives Association:** Efforts should be made to lower the psychological hurdles students feel towards healthcare institutions and to help make OB/GYNs feel more accessible to

students, such as by including introductions of local midwives and OB/GYNs, descriptions of which healthcare institutions provide which types of examinations, and other such information in comprehensive health education programs.

- **Healthcare institutions:** Environments that make it easier for students to receive examinations from OB/GYNs should be created.
- **Healthcare institutions:** Healthcare institutions should coordinate with infirmaries and counseling offices at educational institutions to regularly dispatch midwives or OB/GYNs to campuses to provide on-campus counseling to students. Frameworks should be built that allow them to refer students to healthcare institutions when necessary.
- **Healthcare institutions:** Online examination systems should be implemented to lower psychological hurdles felt by students towards receiving examinations from OB/GYNs and to more closely respond to the health needs of young people.
- **University students:** University students should have doctors they see regularly, such as OB/GYNs, pediatricians, or internists.
- **University students:** Students should research easily-accessible institutions and specialists in advance for when they need counseling on an issue related to sexual health.

2. Project Background and Purpose

In Japan, health and sex education is provided during primary and secondary education based on a curriculum created by the Government. In addition, systems are currently being set up in which the Government or municipalities dispatch OB/GYNs, midwives, and other professionals to schools to provide additional courses on these subjects to complement the Government curriculum. However, there are few opportunities for students to attend classes on health and sex after graduating high school or other secondary schools. The period after secondary school graduation is an important time to start life planning, which means to make specific plans concerning one's future career, marriage, or family. The lack of education in this period results in scattered opportunities for young people to learn about these topics and makes it more difficult to spread accurate knowledge among young people.

Based on the current circumstances, this project focused on university students, who are at an important age for thinking about their future careers and family plans. We aimed to provide young people crucial and accurate knowledge on health and sex with respect to the differences between men and women while enabling them to independently decide life plans including employment, pregnancy and birth, and child-rearing. This was accomplished by implementing a comprehensive health education program based on the three activities listed below. Furthermore, we demonstrated that education can improve reproductive health literacy and change awareness and behavior among young people. We also conducted a survey to determine the knowledge, education, and support systems required by university students, which can be used as evidence for policy reform and to define specific measures to contribute to promoting health for young people in Japan.

This project was mainly composed of the following three activities. Details on each activity will be given in a later section.

1. Develop a comprehensive health education program for university students.
2. Hold educational interventions for university students of all genders provided by practicing midwives and based on the content of the program described above.
3. Use quantitative research to determine the effects of the program on those who attended it.

3. Developing a comprehensive health education program for university students

The program's instructional text was created independently by HGPI and was based on the *International Technical Guidance on Sexuality Education*. The *International Technical Guidance on Sexuality Education* is often used to provide health education to students in various countries and was developed mainly by international organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2018. To ensure the program could provide comprehensive health education on the topics Japanese university students need to know about and that is in line with international trends in health education, we also referred to an initiative called the "Seed Scattering Project" started by the Japanese Midwives Foundation in 2016 for providing lectures to university students, the results of the Survey on

Working Women 2018³ conducted by HGPI in 2018, and the instructor's edition of a textbook on health education at high schools and other secondary schools.⁴ The program consists of the following items. For details on the unique characteristics, challenges, and content emphasized in each item, please see sections 3.1 to 3.3 below.

Program Content

- Reproductive health and rights (including LGBTQ rights)
- Lecture I: On Sex
 - ✓ Sexually-transmitted diseases (STDs)
 - ✓ Sexual violence and sexual consent
 - ✓ Unwanted pregnancy and emergency contraceptives (the morning after pill)
 - ✓ Female hormones and menstruation
- Lecture II: Life Planning
 - ✓ Childbirth
 - ✓ After childbirth and child-rearing
 - ✓ Life planning

3.1. Reproductive health and rights

We explained the importance of respecting the will of the person in question towards the physical, mental, or social aspects of sex and reproduction as a concept within reproductive health and rights. We also explained that each individual should be able to pursue their chosen lifestyle. These explanations were given as the first step in providing the information that modern university students in Japan need to know concerning reproductive health and rights that we identified using international guidelines and advice from specialists. We focused on three points: (1) people have the right to decide how they want to live their lives, (2) people should be able to access the information and means they need, and (3) the importance of respecting and being considerate towards one's partner. Also, out of recognition for the fact that sex education should respect people of every sexual orientation and gender, the program content also took lesbian, gay, bisexual, transgender, and queer (LGBTQ) perspectives and Sexual Orientation and Gender Identity (SOGI) into account.

3.2. Lecture I: On Sex

To determine the program content on sex, we identified issues that closely affect university students by examining existing survey results and university professors' interviews on current situations facing students. We also received advice from experts. We focused mainly on four issues: STDs, sexual violence and sexual

³ Health and Global Policy Institute, 2018. "Survey on Health Promotion and Working Women 2018." Last retrieved June 30, 2020. https://hgpi.org/en/wp-content/uploads/sites/2/Survey-on-Health-Promotion-and-Working-Women-2018_Final-Report_180810_vFinal.pdf

⁴ Suzuki K., 2019. *Modern Health and Fitness Education for Secondary Education, Revised ed. Professor Reference, 3rd ed.* TAISHUKAN Publishing Co., Ltd.

consent, unwanted pregnancy and emergency contraceptives (the morning after pill), female hormones, and menstruation. On the topic of STDs, we shared the fact that condoms do not completely prevent the transmission of all STDs and, out of consideration for the students who would like to have children in the future, that STDs may cause infertility. To address the topics of sexual consent and sexual violence, we introduced specific examples that university students would find easy to imagine. In addition to methods for responding to sexual violence or situations in which the right to sexual consent is not respected, we also taught the students what to do when sexual violence is committed towards someone else, when someone else has experienced a situation in which sexual consent was not sought, and what to say or do if your friend needs advice after encountering such a situation. In our discussion on unwanted pregnancy and emergency contraceptives (the morning after pill), we introduced methods of finding healthcare institutions where one can receive a prescription for emergency contraceptives. On the topic of female hormones and menstruation, we explained the physical and mental changes that occur during menstruation or premenstrual syndrome (PMS) and how they can affect one's performance. We also told the students that using low-dose birth control is one method for responding to said physical and mental changes. In addition to this fundamental information, we gave the students a comprehensive and specific explanation of the need for people to have adequate knowledge concerning reproductive health that takes into account their chosen future lifestyles. We also shared information sources where students could get more details.

3.3. Lecture II: Life Planning

After reminding the students that there are various life plan options and that their life plans are something they have the freedom to decide for themselves, we explained detailed aspects of life planning such as childbirth, after childbirth, and child-rearing. We also illustrated concepts related to life plans using various reference photographs and other materials to help the relate to the concepts more easily. We also explained changes in the social environment surrounding child-rearing and introduced various forms of support for those of child-rearing age.

3.4. Expert review and guidance

We received support from the following experts who are active at the frontlines of education and healthcare. They acted as advisors to ensure the overall quality of this project by helping to determine its content and to interpret the survey results.

(Titles omitted; in no particular order)

- Kunio Kitamura (President, Japan Family Planning Association)
- Kazue Yoshino (Director, Tokyo Association Obstetricians and Gynecologists; Director, Yoshino Women's Clinic)
- Tomiko Okamoto (President, Midwifery Department, Japan Midwives Association; President, Okamoto Maternity Center, UPAUPAHOUSE okamotojosanin)
- Taeko Mori (Director, Mori Midwife Center)

- Sachiko Takahashi (Assistant Professor, Saitama Medical University)

4. Educational intervention for university students of all genders from practicing midwives

This project employed midwives to educate the participating university students. Midwives are healthcare professionals who specialize in care for mothers during pregnancy, childbirth, and after childbirth and in newborn and early childhood care. Midwives are also specialists in sexual and reproductive health and their role is not only to support the health of mothers and their children but also to provide support related to reproductive health and education for women and their families. They use their medical knowledge in everyday clinical settings or in communities to work closely with and provide care for women and their families over the entire life course, including the period from early childhood to adolescence, puberty, pregnancy, childbirth, after childbirth, during child-rearing, and until menopause. It is for these reasons we believed midwives were the ideal specialists for providing health education based on scientific evidence fitted to the situations and real-world circumstances facing university students today.

The program was based on a text created by HGPI titled *Comprehensive Health Education for University Students*. Using that text, four midwives belonging to the Japanese Midwives Foundation visited three universities in Tokyo where they gave lectures that were around sixty minutes in length. The lectures were attended by a total of approximately 230 university students of all genders.⁵

(Titles omitted; in no particular order)

- Tomiko Okamoto (President, Midwifery Department, Japanese Midwives Association; President, Okamoto Maternity Center, UPAUPAHOUSE okamotojosanin)
- Ai Watanabe (Midwife, Tsumugi Birth Center)
- Keiko Ara (Midwife, Birth Center Shinwa)
- Yuko Imamura (Manager, HGPI; Midwife)

5. Outline of quantitative survey of participants for measuring program effectiveness

5.1. Participants and participant selection method

Students attending three four-year universities in the Tokyo metropolitan area were selected using a nonprobability sampling method.⁶ Subjects were students in their first through fourth years who completed lectures by collaborating professors at each university and attended every lecture in the educational

⁵ As shown in “6.1 Participant characteristics,” 228 people submitted survey responses on the days of the lectures. However, the number of participants is an estimate based on the number of surveys submitted on the days of the lectures. There were a few students who attended the lecture but did not fill out the survey, so we estimate the number of participants was more than 228 people due to the voluntary nature of the survey.

⁶ Universities specializing in medicine, dentistry, pharmaceuticals, and nursing may have already provided specialized health education, so they were excluded.

intervention program from beginning to end.⁷ Survey results from students under age 35⁸ were selected to measure changes in health literacy and health behaviors.⁹ In addition, only responses from students who agreed in advance to participate in the survey and answered all relevant questions in each questionnaire were included in the analysis. Some questions were limited to students who selected "Female" as their gender, such as "Health literacy in sexually mature women."

5.2. Method and survey period

Three online questionnaire surveys were conducted from October 16, 2019 to January 28, 2020 at each of the three universities visited. Instructors visited the three universities at specific lecture times and distributed the survey URL and request for survey cooperation to the lecture participants at each university. Survey participation was voluntary and results were only collected from consenting parties. When the request for survey cooperation was presented to program participants, a written explanation of the research purpose, our methods of handling personal information, and the voluntary nature of the survey was also provided.

The first survey was conducted immediately before the program began, the second survey was conducted on the same day immediately after the program ended, and the third survey was conducted approximately three months after the first and second surveys. The number of valid responses for each set of surveys was 228, 228, and 178, respectively. On the second and third surveys, only responses from those who attended the comprehensive health education program in its entirety were considered valid. Responses to the first and second surveys were identifiable only by randomly-distributed control numbers so that before-and-after comparisons could be conducted. To preserve anonymity, no identifying information such as student number was collected or used, so individual respondents could not be identified for any of the three surveys. The identification number 999 was assigned to response fields that were left blank, after which post-coding and logical checking was conducted.

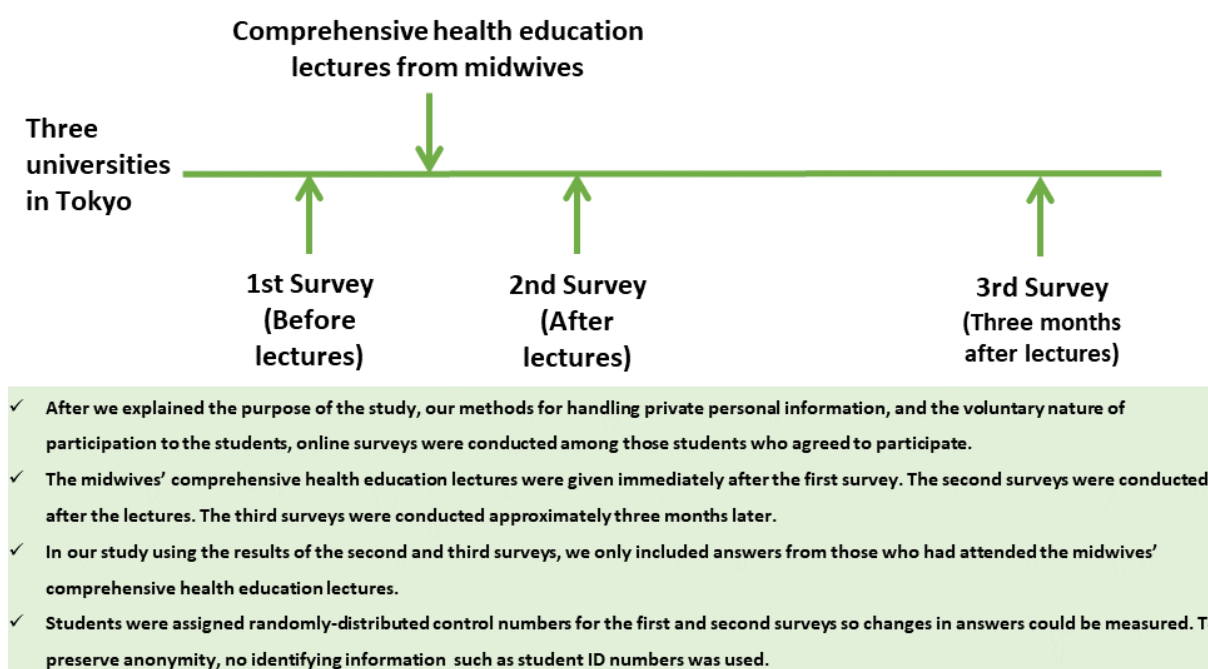
⁷ The planned sample size was 309 people, based on the lecture participant list.

⁸ Definitions for which ages constitute "youth" vary among and within Government agencies. (Science Council of Japan, *Expanding Support Policies for Young People*. Last retrieved April 27, 2020. <http://www.scj.go.jp/ja/info/kohyo/pdf/kohyo-23-t247-2.pdf>). For this program, we used the definition used by the MHLW to define the "young labor force," which is ages 15 to 35. Responses from those under age 35 were considered valid.

⁹ Out of consideration for protecting personal information, the age distribution of the participant list was not known in advance. However, the survey results showed that two people over age 50 attended the program. Their responses were removed during the data cleaning process.

Figure 1

Study Timeline/Method



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

5.3. Ethical considerations

Because this project addressed the highly private topic of sexual health, the fact that the target group might include young people or people below the age of majority as well as the fact that this educational intervention and survey included information related to sexual minorities, we worked closely with experts and the educational staff in charge to ensure privacy for survey participants. We also informed the students that they were allowed to decline to cooperate in advance or to withdraw their cooperation at any time during the survey process, that the survey results will not be used for profit, and their consent to participate includes agreeing to allowing the survey results to be made public. The content of survey questions underwent an ethical examination conducted by the Health Outcome Research Institute.

5.4. Analytical method

Results were divided into five parts: "Comprehensive education," "Past classes students took on sex and health," "Methods of gathering information about sex," "People to consult," "STDs," "Sexual consent," "Female hormones," "Health behaviors and health management," "Productivity," "Life planning," and "Health literacy." Descriptive statistics and cross tabulation were carried out on a portion of the results.

5.5. Limitations

This survey was based on a nonprobability sampling of students who attended a series of special lectures at three universities in the Tokyo Metropolitan Area. Responses were collected from the students who attended the lectures. Because a random sampling process was not used and because the population for this survey was Japanese university students ages 35 and under, its representativeness is limited.

The surveys conducted as part of the program collected longitudinal data at three points in time: immediately before, immediately after, and approximately three months after the lectures. However, to ensure anonymity, the data collected at these three times was not assigned individual identifiers. Therefore, like with panel data, it is impossible to estimate correlation. Although the data demonstrates a time series, it is merely based on repeated surveys of the same population, so our analysis has been limited to a cross-sectional approach.

6. Results of quantitative survey on program effectiveness

6.1. Participant characteristics

Table 1

Participant characteristics

		Lecture participants N=228			Participants 3 mos. later N=178		
		Male	Female	Other	Male	Female	Other
	Total	57	171	0	36	140	2
Year	Freshman	48	143	0	33	120	2
	Sophomore	4	15	0	1	12	0
	Junior	3	12	0	2	8	0
	Senior	2	1	0	0	0	0
Has Siblings	Yes	43	139	0	-	-	-
	No	14	32	0	-	-	-
Medical history*	Yes	1	9	0	2	9	0
	No	56	162	0	34	131	2
Dating experience	Yes	45	104	0	26	85	2
	No	12	67	0	10	55	0
Sexual experience	Yes	30	52	0	19	49	0
	No	27	119	0	17	91	2

*Has received treatment or counseling from a doctor for an issue related to sexual health or diseases.

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

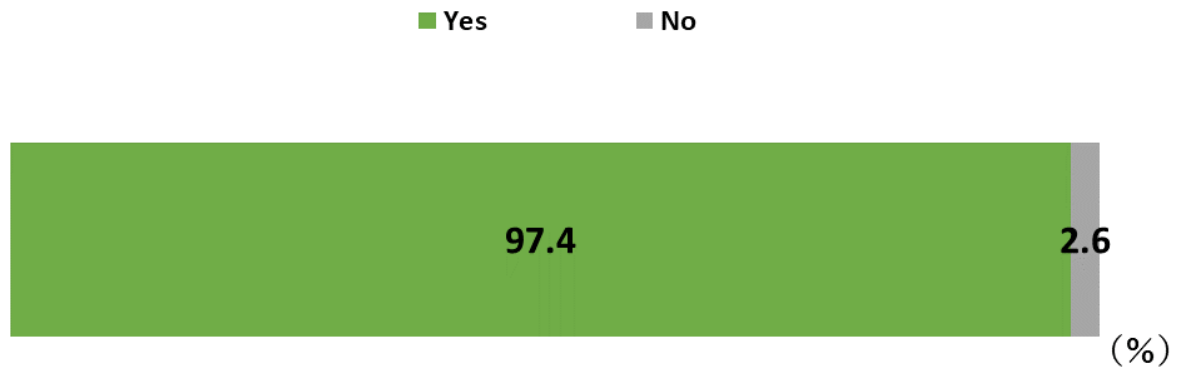
6.2. The need for comprehensive health education among university students

After lectures

Figure 2

Do you think university students need comprehensive health education programs like the one we provided?

N=228



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

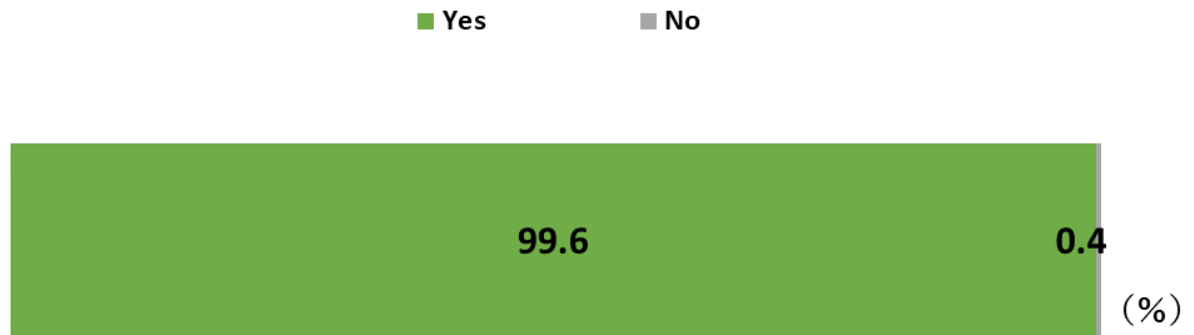
- ✓ Before the lectures, 97.4% of respondents thought that university students need comprehensive health education like this program.

After lectures

Figure 3

Do you think our comprehensive health education program will be useful to you or those around you in future times of trouble?

N=228



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

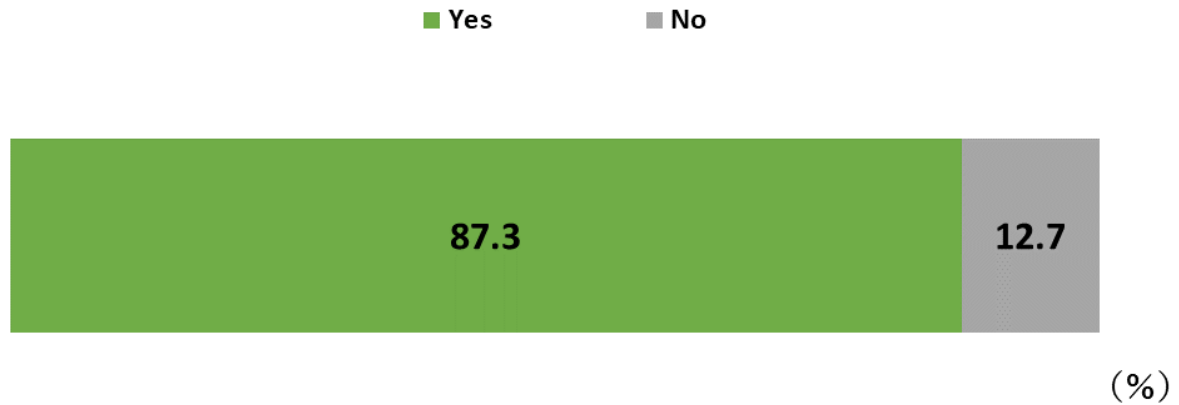
- ✓ After the lectures, 99.6% of students thought that comprehensive health education like that provided by the program will be useful in their own times of trouble or when the people around them face times of trouble.

After lectures

Figure 4

Do you think comprehensive health education programs like ours should be included in new student orientation so all students can take them?

N=228



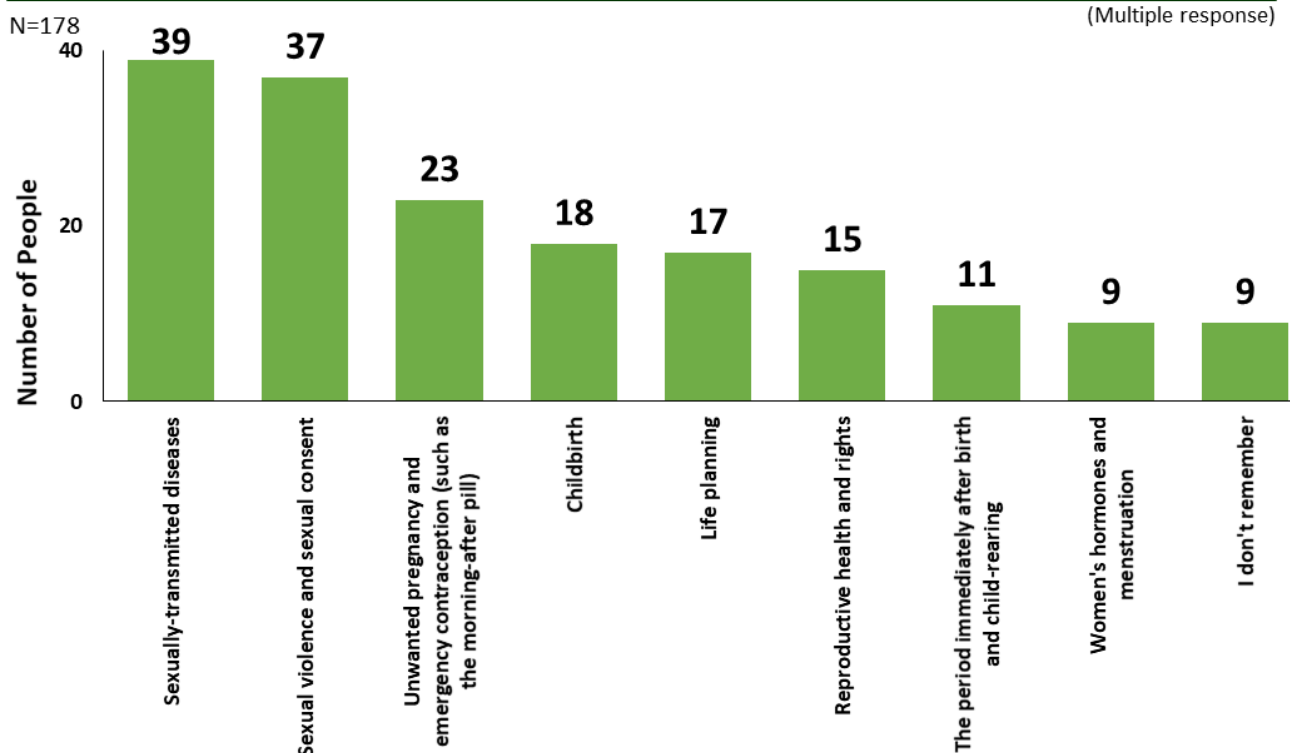
Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ After the lectures, 87.3% of students said they think the midwives' comprehensive health education program should be incorporated into university orientation so that all university students can take it.

3 mos. later

Figure 5

Which topics covered in the comprehensive health education program provided by midwives left an impression on you three months later?



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

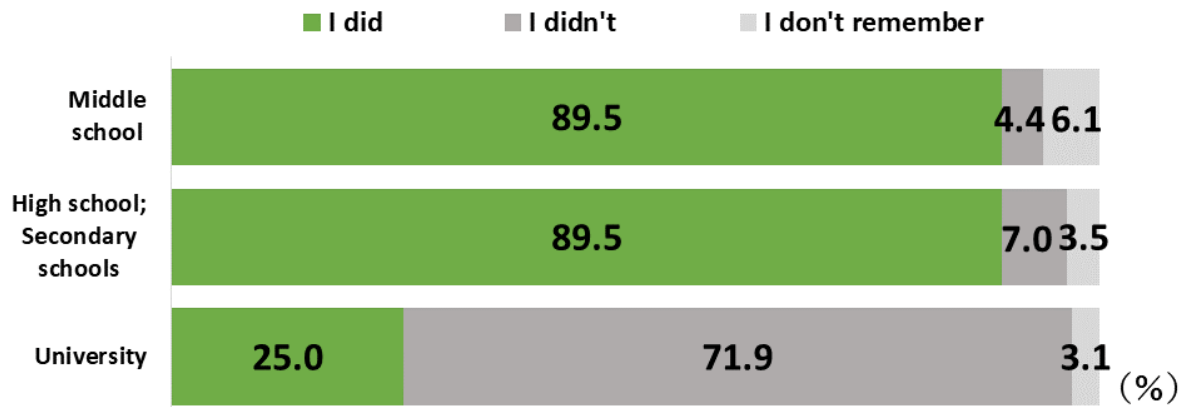
- ✓ Three months after the program, we asked participants which topics covered during the midwives' comprehensive health education program left an impression on them. Thirty-nine people selected "STDs," 37 people responded "Sexual violence and sexual consent," and 23 people selected "Unwanted pregnancy and emergency contraceptives (the morning after pill)."

Before lectures

Figure 6

Did you receive sexual health education in the past, and if so, was it at middle school, high school, or university?

N=228

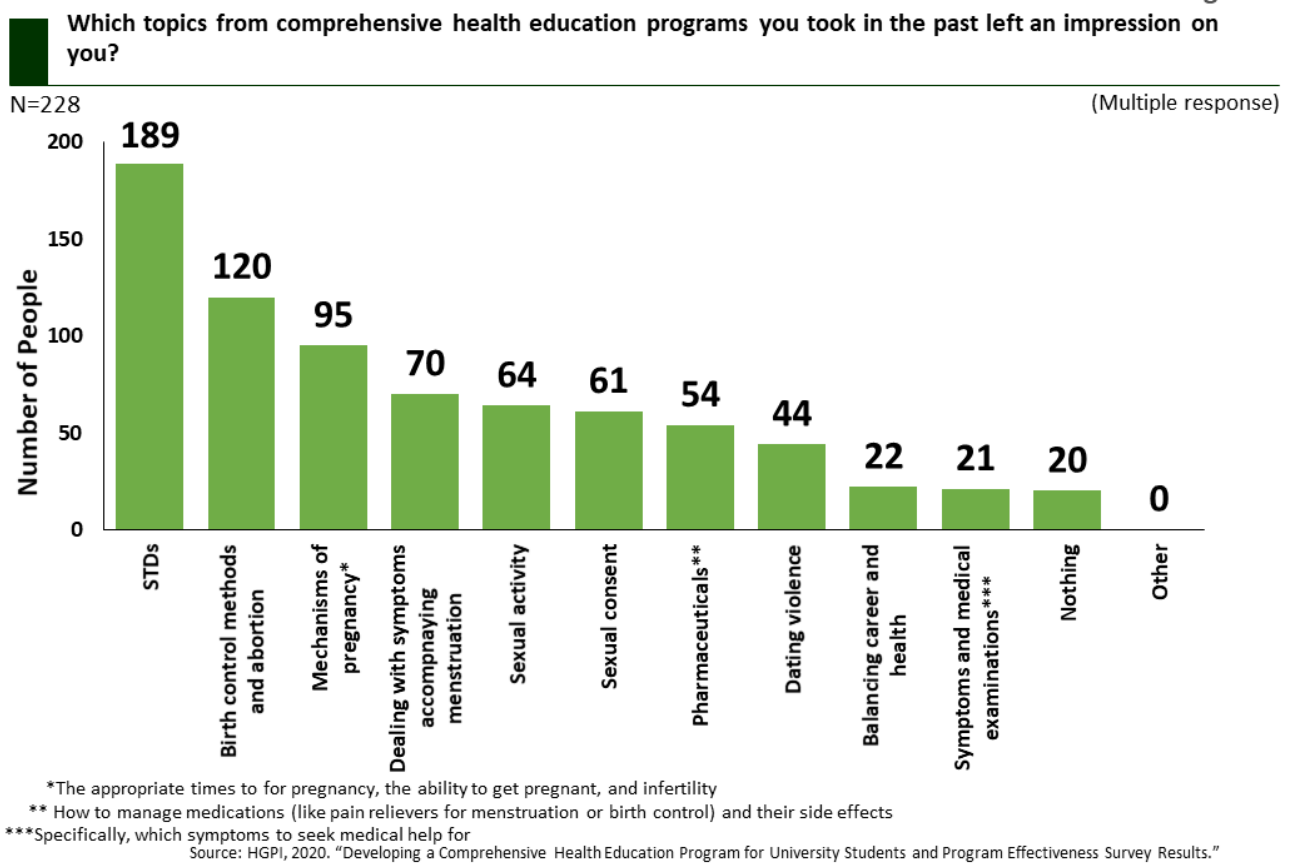


Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Before the lectures, we asked the students if they had ever taken courses or attended lectures on sexual health. Most (89.5%) of students had taken such courses in middle school and high school and a quarter (25%) had taken them at university. It must be noted that this question specified all types of education on sexual health and was not limited to comprehensive health education like that provided by our program.

Before lectures

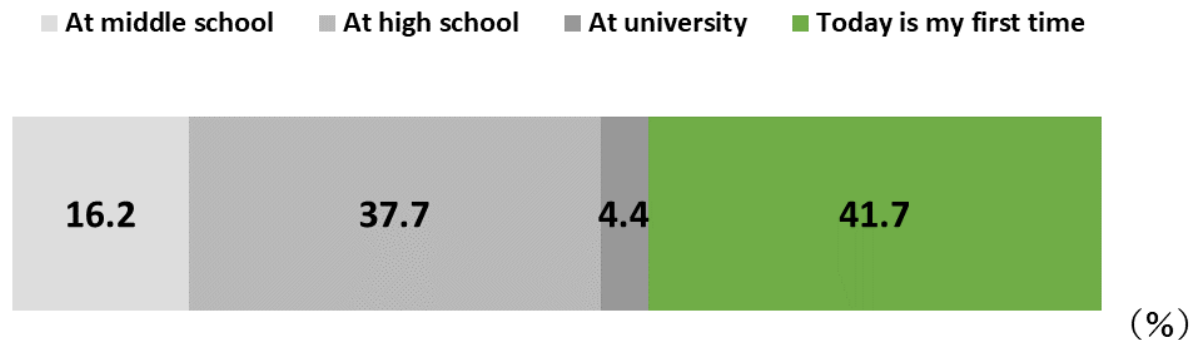
Figure 7



- ✓ Before the lectures, the students who had received sexual health education in the past were asked which course content left an impression on them. The most common response was "STDs," which was selected by 189 people. It was followed by "Birth control methods and abortion" and "Mechanisms of pregnancy," which were selected by 120 and 95 people respectively.

Have you ever taken a course like our comprehensive health education program?

N=228



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ After the lectures, we asked the students if they had ever received comprehensive health education like our program. Over a third (37.7%) said, "I received such education in high school and other secondary schools," making it the most common response among those had received comprehensive health education. Meanwhile, 41.7% of students said our program was the first time they received comprehensive health education.

Interpretations

- ✓ Most of the university students who attended the comprehensive health education program felt that it was a necessary program for university students and that it will be beneficial to them or the people around them in future times of trouble.
- ✓ Also, while almost half of the students reported that they had received comprehensive health education in high school or another secondary school, approximately 90% of them responded that lectures providing comprehensive health education should be included in university orientation so that every student can receive it. Furthermore, our survey showed that the students may have recently become more interested or more aware of STDs, sexual violence, sexual consent, unwanted pregnancy, and emergency contraceptives (the morning-after pill) as topics that may directly affect them. It may be because they are at an age when they start to perceive themselves as the parties most affected by these themes that they think comprehensive health education should be included in new student orientation at universities.

6.3. Health literacy

Measuring literacy on women's health

Students who selected "Female" as their gender were asked questions to measure their health literacy before the lectures. They were asked the same questions again three months later, at which point we compared their scores. This study defined health literacy on women's health as, "The ability for a woman to access, understand, and utilize necessary information to maintain and promote health." Levels of health literacy were measured by the "Health literacy scale for women of reproductive age"¹⁰ (hereafter referred to as the Health Literacy Scale), which was developed for the prevention and early detection of women-specific diseases among working women in Japan (Table 2). The Health Literacy Scale consists of 4 categories, namely, "Women's choices and practices related to health information," "Self-care during menstruation," "Knowledge of the female body," and "Sexual health discussions with partners." These four categories contain 21 items and cover factors related to knowledge and behavior. Respondents were asked to choose appropriate answers on a 4-point Likert scale. Respondents could select "Agree," "Somewhat agree," "Disagree," or "Strongly disagree" for each item. To measure health literacy levels, we assigned four points to "Agree," three points to "Somewhat agree," two points to "Disagree," and one point to "Strongly disagree" for a potential score range of 21 to 84 for all 21 items.

Table 2: Health literacy scale for women of reproductive age

Items

1. Women's choices and practices related to health information

- 1.1 I can seek advice from health professionals (doctors, nurses, public health nurses, midwives, etc.) when concerned about my health
 - 1.2 I can examine the validity of information related to women's health that is available on the internet or in magazines
 - 1.3 There are specific activities that I regularly do to maintain my health
 - 1.4 I can obtain information on women's health when needed
 - 1.5 I can select appropriate information for me from the wealth of information available on women's health
 - 1.6 I can ask questions of health professionals (doctors, nurses, midwives, etc.) when I do not understand his/her advice or guidance
 - 1.7 I can understand the information that I hear in my daily life
 - 1.8 I can take necessary actions after considering advice and information about my health
 - 1.9 I can explain my symptoms to health professionals (including physicians, public health nurses, nurses, and midwives) when I visit them
-

2. Self-care during menstruation

- 2.1 I know my menstrual cycle
- 2.2 I can predict my menstrual period based on the changes in my health
- 2.3 I see menstruation as a barometer (indicator/sign) of my overall health

¹⁰ Kawata, S. et al. (2014) Development of a health literacy scale for women of reproductive age: An examination of reliability and validity in a study of female workers. *Japan Journal of Public Health*, 61 (4), p.186-96

2.4 I actively take treatment for menstrual symptoms and discomforts

2.5 I recognize changes in my physical and mental status before or during menstruation

3. Knowledge of the female body

3.1 I have knowledge about menstruation

3.2 I have knowledge about the mechanisms of pregnancy

3.3 I have knowledge about uterine and ovarian cancers

3.4 I have knowledge about the prevention of sexually transmitted diseases (STDs)

3.5 I have knowledge about means of contraception

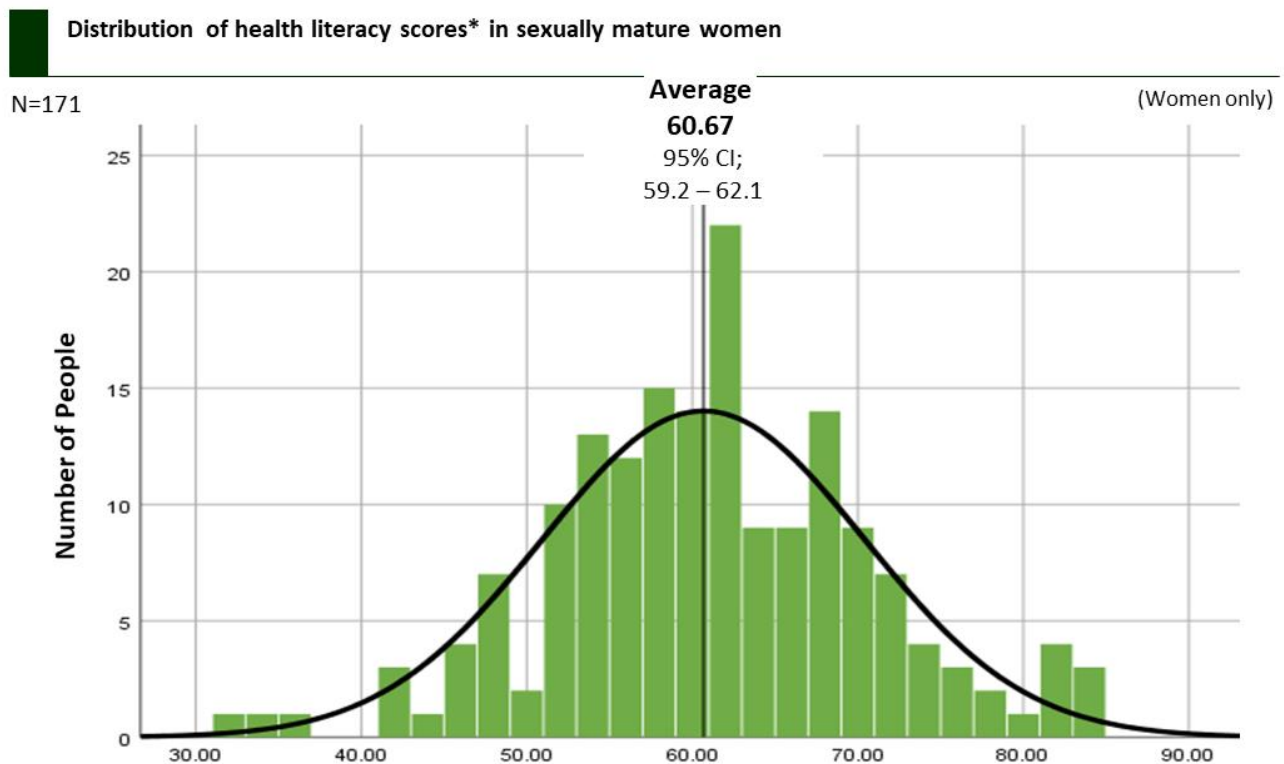
4. Sexual health discussions with partners

4.1 I can discuss contraception with my partner when necessary

4.2 I can discuss the prevention of STDs with my partner when necessary

Before lectures

Figure 9



*Uses definition from Kawata, S. et al. 2014. *Development of a health literacy scale for women of reproductive age.*

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Before the lectures, the overall distribution of health literacy scores was close to a normal distribution. The average score was 60.67 points (95% CI; 59.2-62.1), the lowest score was 32, and the highest score was 84.

Distribution of health literacy scores* in sexually mature women

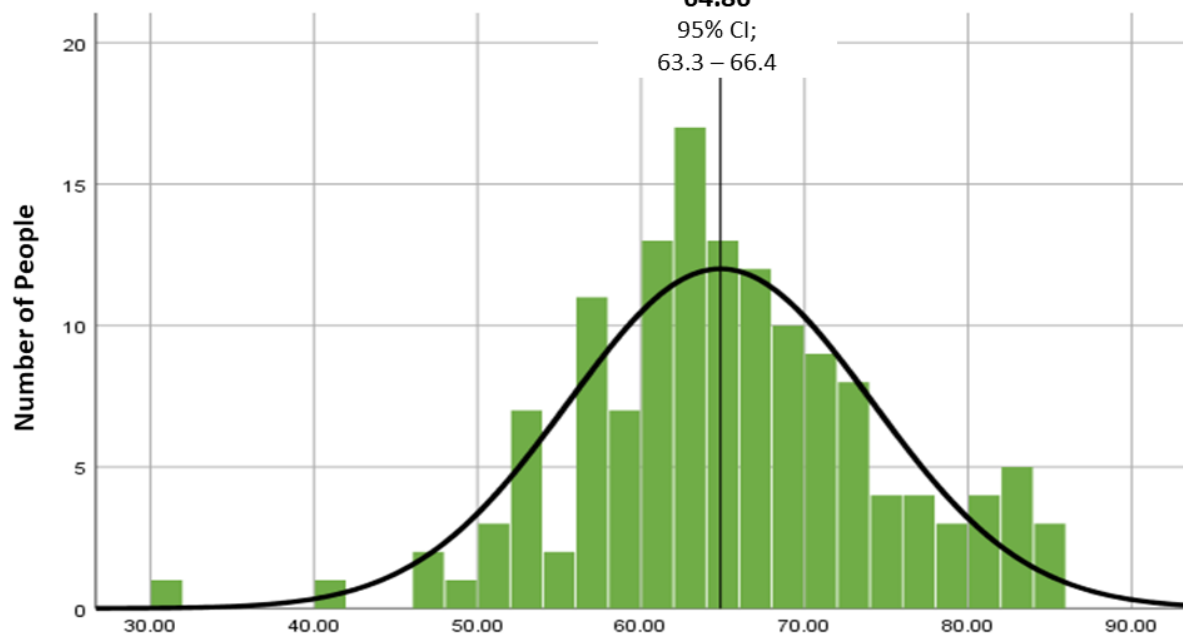
N=140

Average

64.86

95% CI;
63.3 – 66.4

(Women only)



*Uses definition from Kawata, S. et al. 2014. *Development of a health literacy scale for women of reproductive age.*

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lectures, the overall distribution of health literacy scores was close to a normal distribution. The average score was 64.86 points (95% CI; 63.3-66.4), the lowest score was 31, and the highest score was 84.

Interpretations

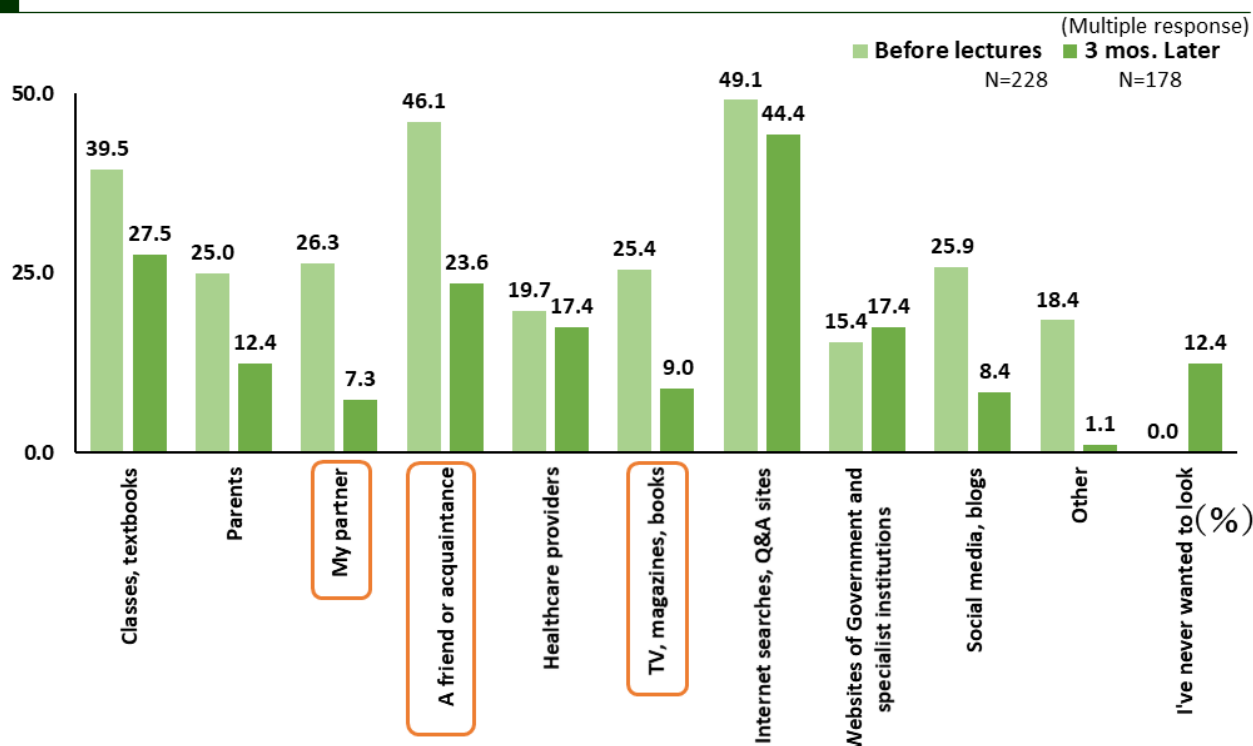
- ✓ Comparing the average health literacy scores before the comprehensive health education intervention and three months later, the average health literacy score increased. However, factors other than the education intervention in this project may have increased health literacy because there was a three-month period between when the course was held and when the last survey was conducted. A more detailed investigation is necessary.

6.4. Information sources and people to consult on topics concerning sexual health

Before lectures and 3 mos. Later

Figure 11

Where do you get information about sex and health?



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

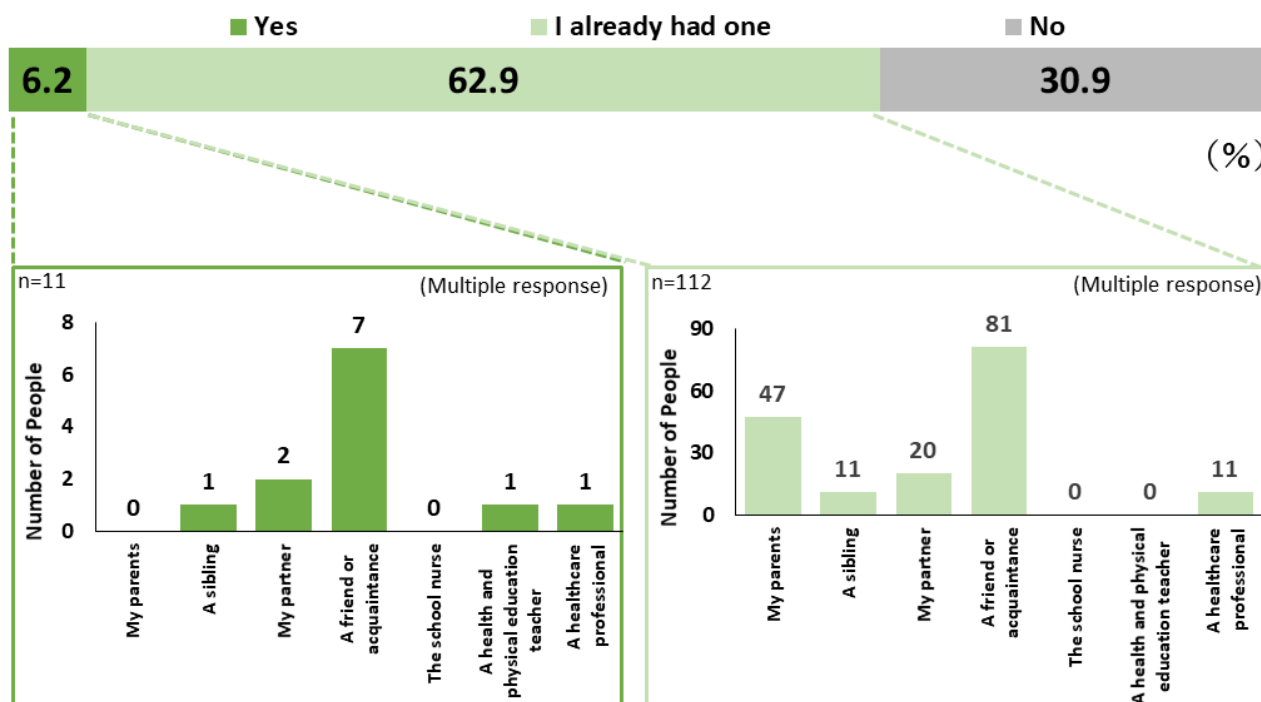
- ✓ Before the lectures, we asked participants which sources of information they use to research topics related to sexual health. The most common response was "Internet searches and question and answer sites" (49.1%), followed by "A friend or acquaintance" (46.1%) and "Classes and textbooks" (39.5%). Other relatively commonly-referenced sources of information were "My partner" (26.3%) and "TV, magazines, and books" (25.4%).
- ✓ Three months after the lectures, the most commonly-referenced sources of information about sexual health among university students surveyed were "Internet searches and question and answer sites" (44.4%) and "Classes and textbooks" (27.5%). Compared to before the lectures, fewer people chose to obtain information on sexual health from "A friend or acquaintance" (23.6%), "TV, magazines, and books" (9.0), and "My partner" (7.3%).

3 mos. later

Figure 12

Did you find someone you can consult on topics related to sex and health as a result of the comprehensive health education program provided by midwives you attended three months ago?

N=178



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lectures, 6.2% of participants reported that, as a result of attending the midwives' comprehensive health education lectures, they found new people to consult on topics related to sexual health if they had a problem or concern. The most frequently-selected responses for people to consult were "A friend or acquaintance" (7) and "My partner" (2). Almost two-thirds (62.9%) of participants said they already had someone to consult at such times. Among them, 81 people selected "Friends and acquaintances," 47 people responded "My parents," and 20 people chose "My partner."

Interpretations

- ✓ Comparing survey results from before the lectures to those collected three months later, fewer students chose "My partner," "A friends or acquaintance," and "TV, magazines, and books" as sources of information for topics related to sexual health. In addition to the fact that the internet is currently the most accessible information source, one possible reason for that decrease may be that the comprehensive health education program promoted the use of trustworthy websites such as those provided by the Government or specialist organizations, taught methods of obtaining accurate information, and shared specific sources of information. However, because three months passed between the completion of the program and the final survey, other factors may have influenced the changes in preferred information sources that occurred. This subject requires a more detailed investigation.

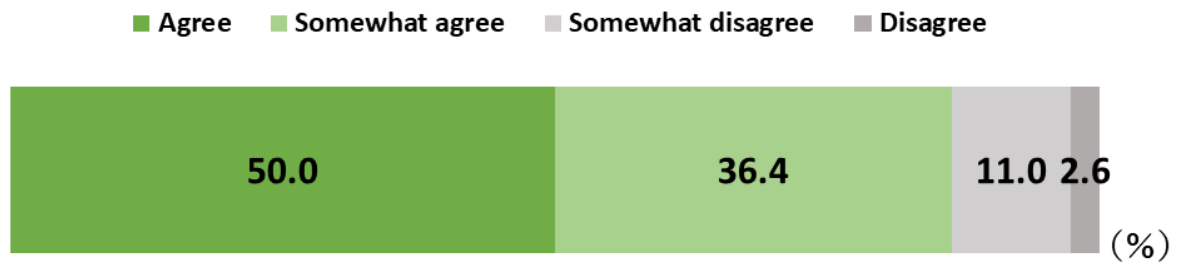
6.5. Sexually-transmitted diseases (STDs)

After lectures

Figure 13

Looking back on the midwives' comprehensive health education lectures, do you feel you previously possessed inadequate or inaccurate knowledge concerning sexually-transmitted diseases (STDs)?

N=228

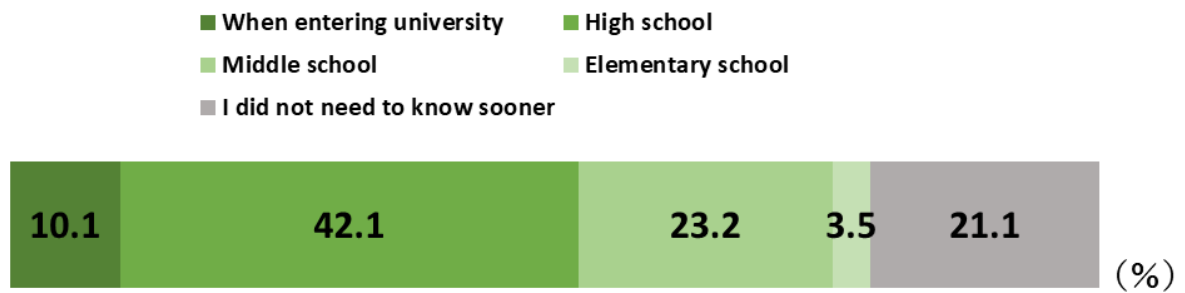


Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Before the lectures, most (86.4%) students felt that their previous knowledge on STDs was inadequate. Half (50.0%) thought their knowledge had been insufficient while 36.4% said they felt their knowledge had been somewhat insufficient.

When do you wish you had learned about STDs?

N=228



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ After the lectures, we asked participants if they wish they had been given earlier opportunities to learn about STDs and, if so, when they wish it had been provided. The most popular response was "High school" (42.1%), followed by "Middle school" (23.2%) and "University orientation" (10.1%). However, 21.1% of students did not feel they needed earlier opportunities to learn about STDs.

3 mos. later

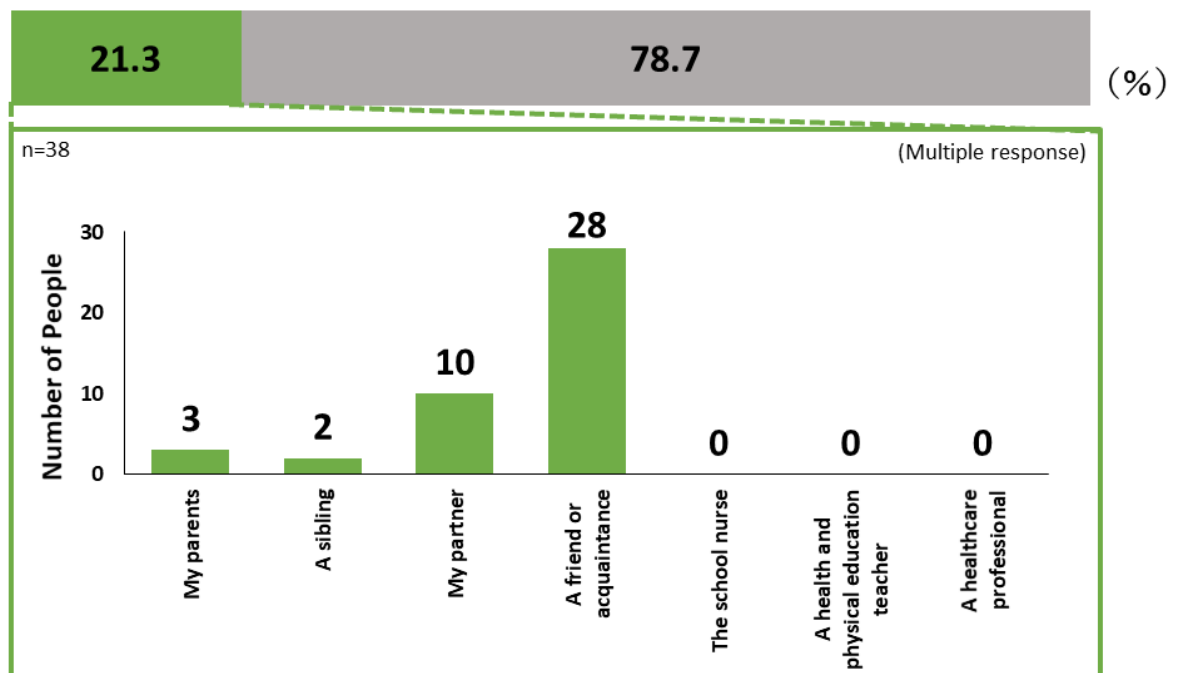
Figure 15

Did you talk to anyone about STDs as a result of the comprehensive health education program provided by midwives you attended three months ago?

N=178

I did

I did not



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

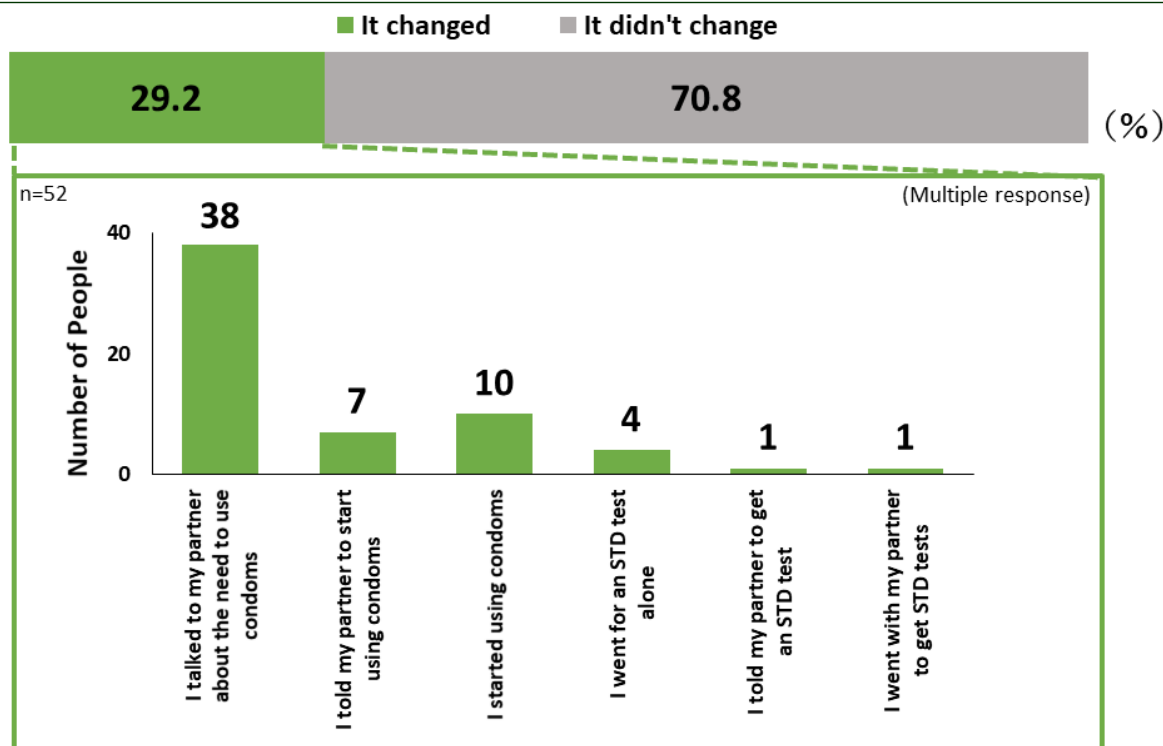
- ✓ Three months after the lectures, 21.3% of students had talked to someone about STDs as a result of the midwives' comprehensive health education program. When asked who they talked to, the most common answer was "A friend or acquaintances," which was selected by 28 people. Following it was "My partner," which was selected by 10 people, and "My parents," which was selected by 3 people.

3 mos. later

Figure 16

Did your behavior towards STD prevention change as a result of the comprehensive health education program provided by midwives you attended three months ago?

N=178



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lectures, 29.2% of students reported that they changed their behavior towards STD prevention as a result of the lectures. When asked about which measures they took, 38 people said they talked to their partner about the need to use condoms, making it the most popular response. Ten people said they started using condoms and seven said they told their partner to start using condoms.

Interpretations

- ✓ While the textbooks used in health education courses in middle and high schools cover STDs, over 80% of the students surveyed in this study reported their previous knowledge concerning STDs was insufficient or inaccurate. We believe that the inclusion of specific information on STD infection routes, symptoms of each disease, and the effects STDs can have on life planning in this project's curriculum may have helped many of the students feel like they acquired new knowledge by attending the lectures.
- ✓ Some students reported that they talked to somebody about STDs or altered their STD prevention behavior as a result of attending the program. This suggests that the education program successfully communicated the concepts we considered to be important – namely, that we wanted people to be able to help themselves by finding someone to talk to or to be able to help their friends and loved ones.

6.6. Sexual consent

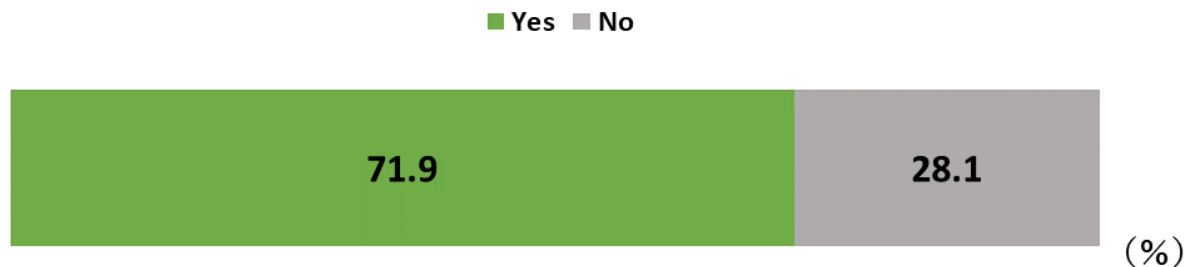
Sexual consent refers to consent that should be sought and given in a clear manner before all sexual encounters. It is considered important that the consenting party outwardly expresses a positive response. Other requirements for consent to be formed are that no party may be coerced, the choice to have sex is made under conditions of equality, and that consent, once given, is not continuous.¹¹

Before lectures

Figure 17

Do you know the term “sexual consent”?

N=228



Source: HGPI, 2020. “Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results.”

- ✓ Before the lectures, most (71.9%) of the students reported that they knew of the term “Sexual consent.”

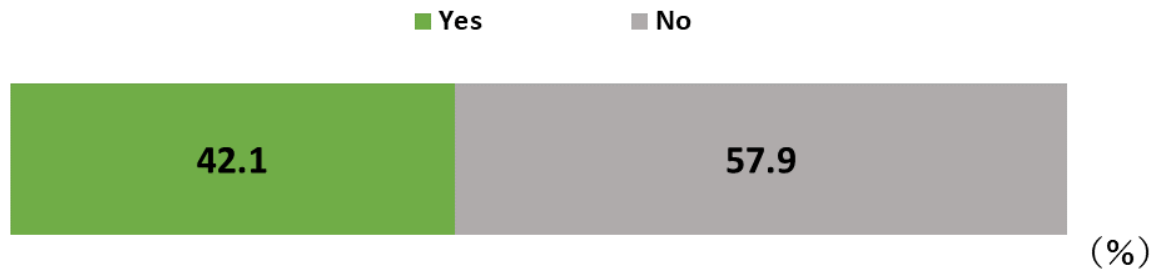
¹¹ According to the *Sexual Consent Handbook* published by NPO Chabujo (Director: Yuko Takashi, Saitama University Obstetrician), non-coercive sexual activity requires an environment in which the individual in question feels they can refuse without putting themselves in danger. Equality means that the decision to consent is unaffected by social standing or that the consenting party is not influenced by power possessed by the other party. Non-continuity means that consenting to one sexual act does not mean consenting to other sexual acts and that consent is not granted in perpetuity.

After lectures

Figure 18

Looking back on the midwives' comprehensive health education lectures, have you or someone you know ever encountered sexual violence or a situation in which consent was not sought or given?

N=228

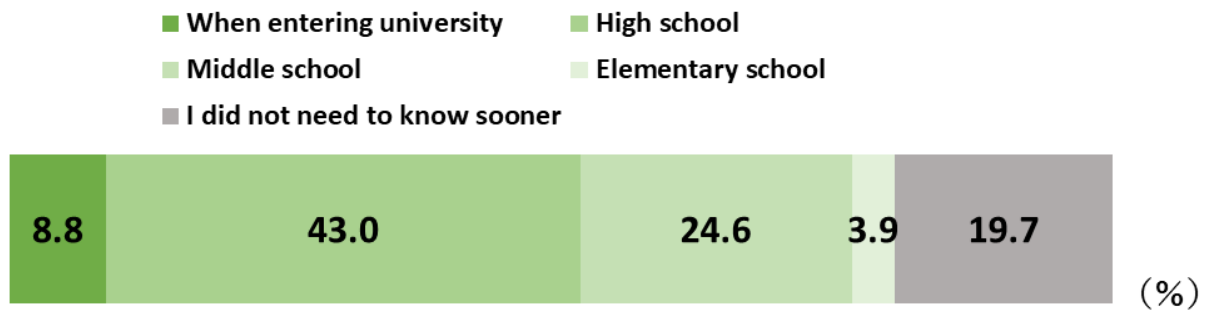


Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Immediately after the lectures, 42.1% of students said they have encountered sexual violence or a situation in which consent was not sought or given, based on what they had learned at the midwives' comprehensive health education program.

When do you wish you had learned about sexual violence and sexual consent?

N=228



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

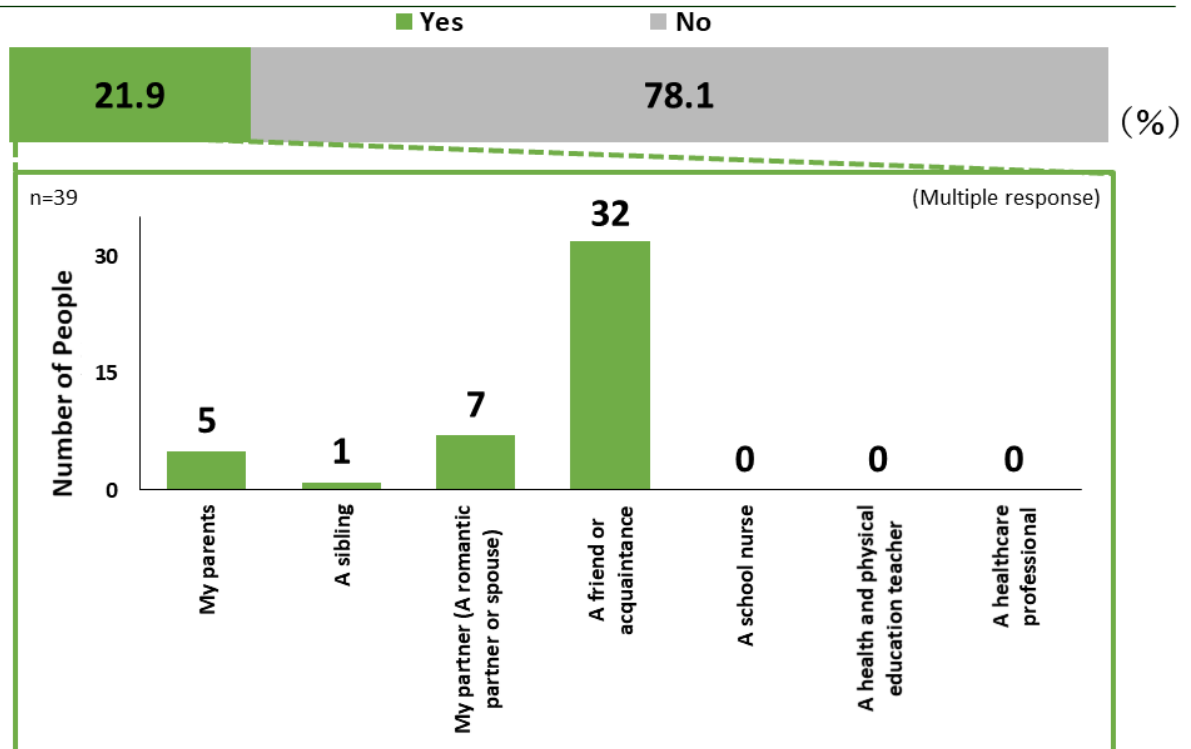
- ✓ Immediately after the lectures, students were asked if they wish they had been taught about sexual violence and sexual consent sooner, and if so, when. Among those who wanted to learn sooner, the most popular answer as to when was "High school" (43.0%), followed by "Middle school" (24.6%) and "When entering university" (8.8%). Almost one in five students (19.7%) said they did not wish they had been taught about sexual violence and sexual consent sooner.

3 mos. later

Figure 20

Did you talk to anybody about sexual violence or sexual consent as a result of the comprehensive health education program provided by midwives you attended three months ago?

N=178



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

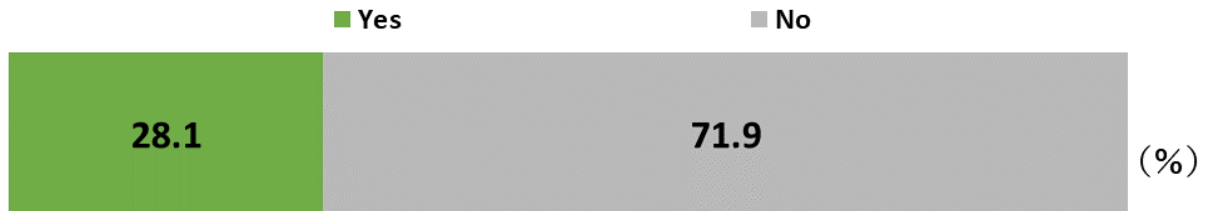
- ✓ Three months later, 21.9% of students reported that they had spoken to someone about sexual violence or sexual consent as a result of attending the program. As for the people they chose to talk to, 32 selected "A friend or acquaintance," seven chose "My partner," and five picked "My parents."

3 mos. later

Figure 21

In the three months since the lecture, did you or someone close to you encounter sexual violence or a situation in which sexual consent was not properly sought?

n=178

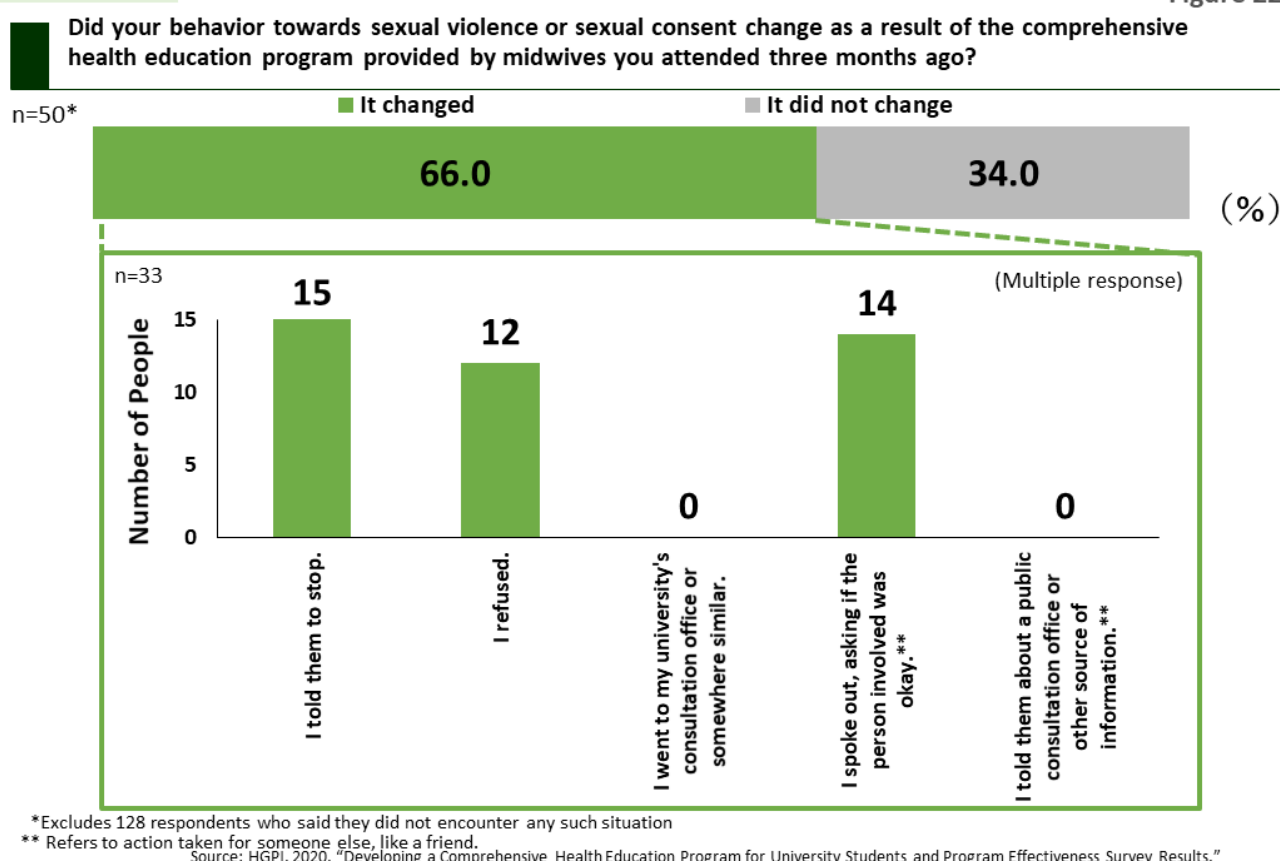


Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ More than a quarter (28.1%) of students said they or someone they knew encountered sexual violence or situation where consent was not obtained during the three months between the program and the final survey.

3 mos. later

Figure 22



- ✓ Three months after the lectures, we asked students if there were changes in their actions when faced with situations involving sexual violence or lacking sexual consent. Two-thirds (66%) said that they had changed their behavior.
- ✓ When asked about what actions they took, 15 people gave a verbal warning, making it the most popular option. Fourteen people said they called out to the person in trouble, referring to situations when someone else was facing such a situation. Twelve people said they denied the other party's advances.

Interpretations

- ✓ Although the ratio of students who were aware of the words "sexual consent" was high, at around 70%, our study showed that, after reviewing their past experiences in terms of the information that was shared in the program, approximately 40% of students realized that they or someone they knew had encountered a situation that involved sexual violence or in which there was a lack of sexual consent. This shows that educational interventions like ours that provide explanations alongside specific examples in addition to defining concepts can help students obtain a correct understanding of information related to sex and health. Also, about 80% of students said they wish they had been given information concerning sexual violence and sexual consent sooner, such as during university entrance procedures or before entering university. This will be an important finding when planning sex education course content at each level of education in the future.

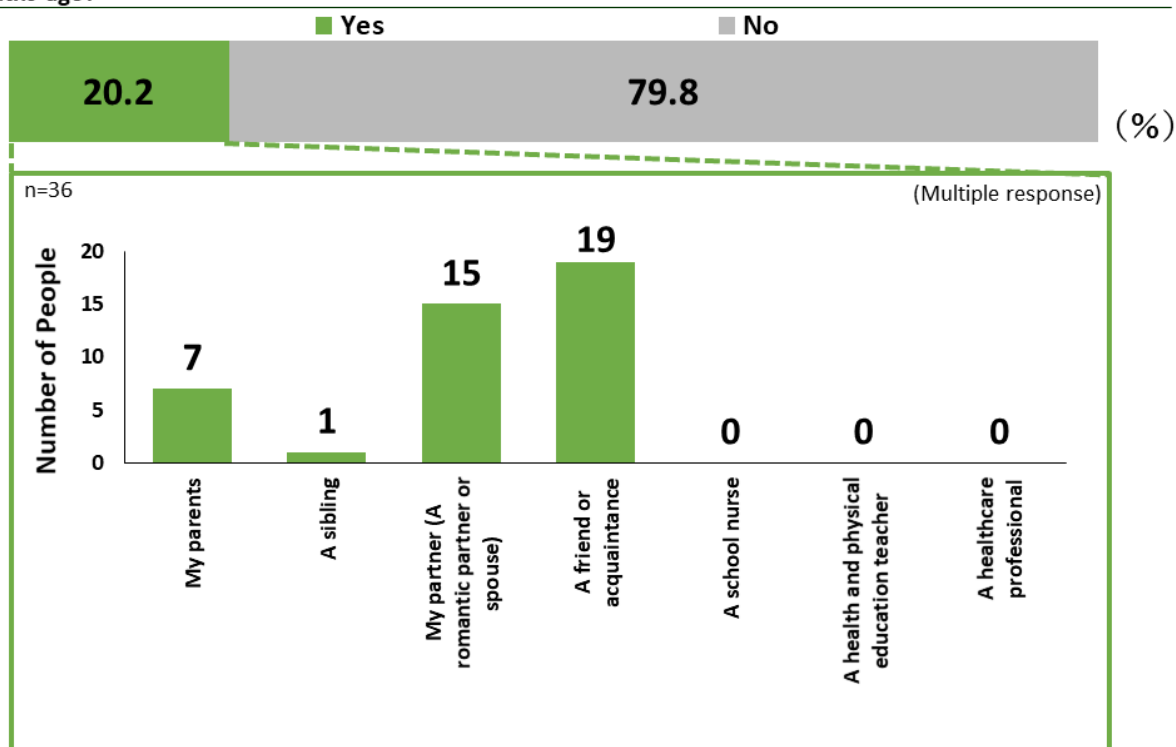
6.7. Unwanted pregnancy and emergency contraceptives (the morning-after pill)

3 mos. later

Figure 23

Did you talk to anybody about unwanted pregnancy or emergency contraception (such as the morning-after pill) as a result of the comprehensive health education program provided by midwives you attended three months ago?

N=178



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lecture, 20.2% of students reported that they spoke to somebody about unwanted pregnancy or the morning after pill as a result of the midwives' comprehensive health education program. Among them, students most frequently elected to talk to friends or acquaintances, which was selected 19 times. It was followed by "My partner" and "My parents," which were chosen by 15 and 7 people, respectively.

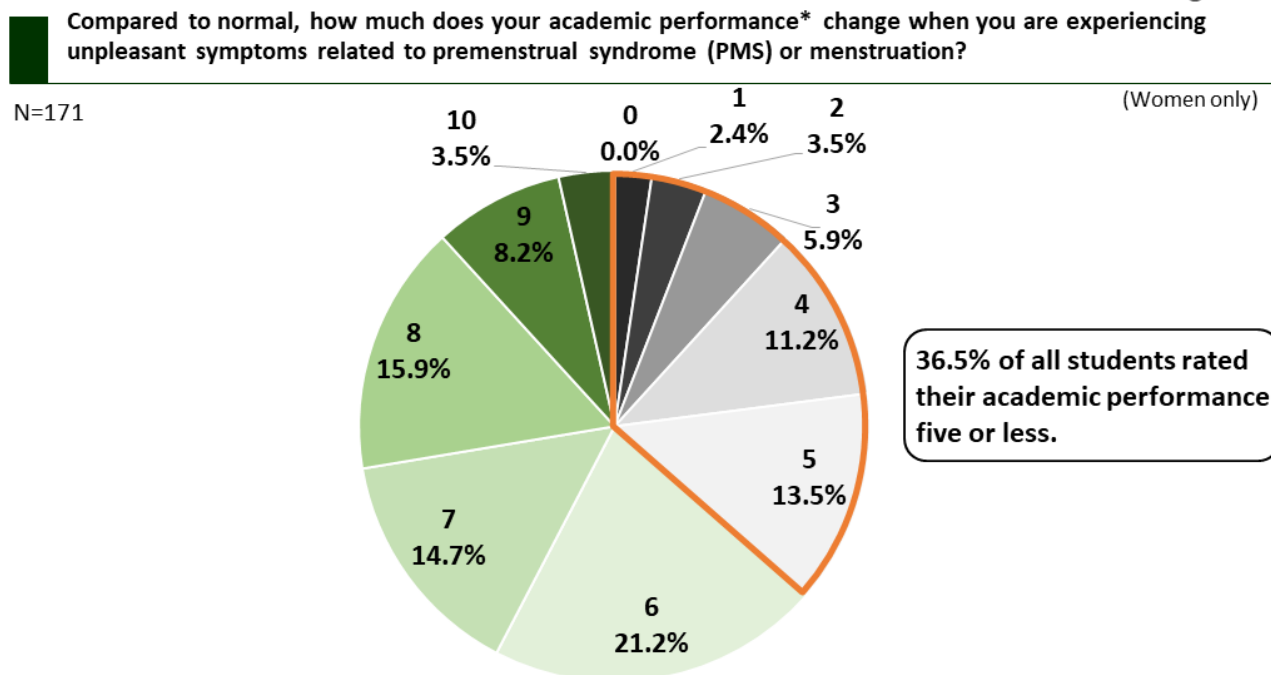
Interpretations

- ✓ The surveys revealed that the program encouraged 20.2% of students to take action and talk to someone about unwanted pregnancy and emergency contraceptives. The lectures not only provided information on unwanted pregnancy, they also gave the students specific explanations for gathering information or finding OB/GYNs who can provide them with emergency contraceptives (such as the morning-after pill). This result suggests that the program was able to provide information that the students wanted to know and share with the people around them.

6.8. Female hormones

Before lectures

Figure 24



Performance when experiencing unpleasant symptoms due to menstruation or PMS compared to normal (with 10 representing normal performance)

*Ability to concentrate in class, perform on tests, etc.

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Before the lecture, the women were asked to rate their classroom performance¹² when they have premenstrual syndrome (PMS) or are menstruating compared to when they are not with a score of ten assigned to the latter. With that as a baseline, we then asked them what score they would assign themselves while experiencing the unpleasant symptoms encountered during menstruation or PMS. More than a third of all women (36.5%) scored their physical state during PMS or menstruation five or less.

¹² Such as ability to concentrate in class, take tests, etc.

After lectures

Figure 25

Did you think to start recording your menstrual cycles as a result of the lecture content in the comprehensive health education program provided by midwives?

N=171

(Women only)

■ I thought to start after the program

■ I already was before the program

■ I did not think about starting



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ After the lectures, more than one third (34.7%) of women said they thought they should start recording their cycles based on what they heard at the midwives' comprehensive health education program.

3 mos. later

Figure 26

Did you start recording your menstrual cycles as a result of the comprehensive health education program provided by midwives you attended three months ago?

N=140

(Women only)

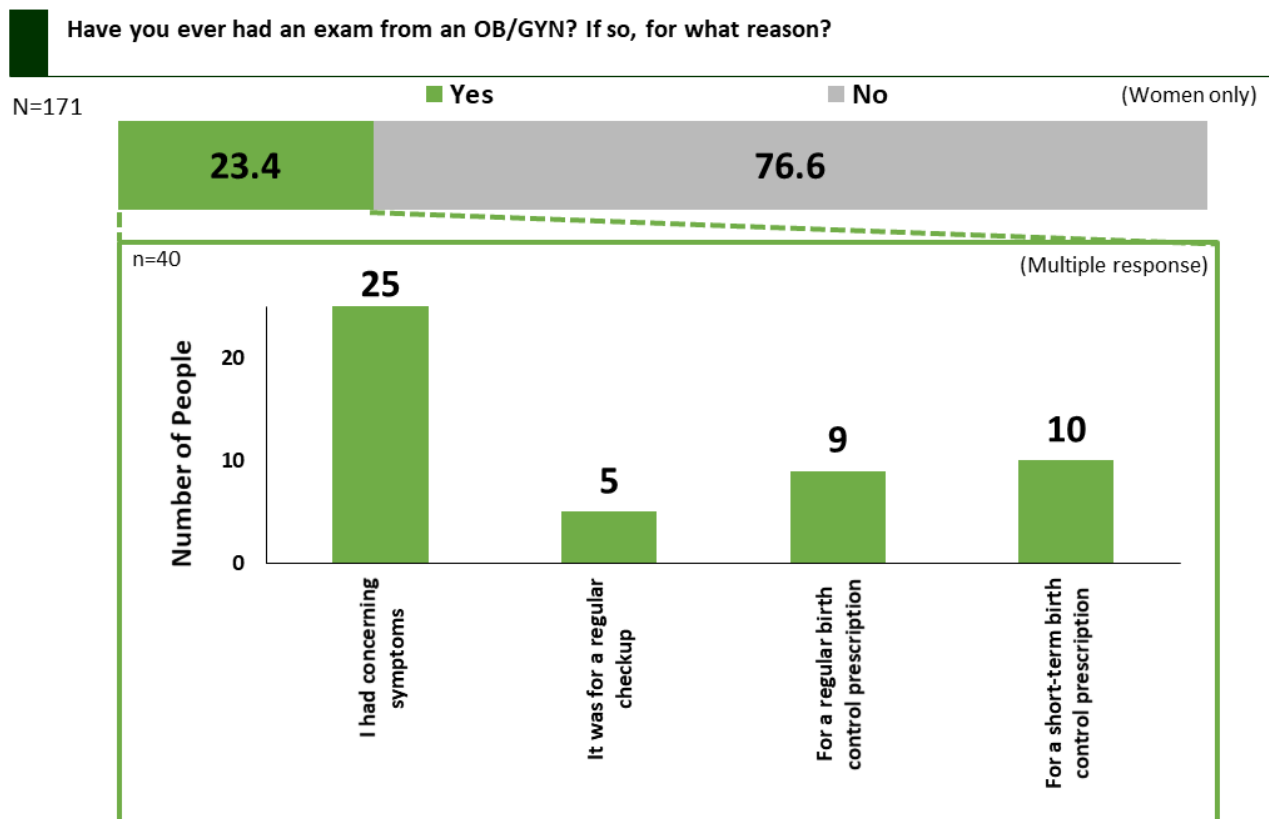
- I thought to start after the program
- I already was before the program
- I did not think about starting



- It's a bother
- I already know my cycle
- My cycles are too irregular
- I forget to write it down and lose track
- I manage it with the pill

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lectures, 7.9% of women said they had started recording their cycles as a result of attending the midwives' comprehensive health education lectures in October. On the other hand, 35.7% of women responded that they are not recording their cycles for reasons including "It is a bother," "I already know my cycle," and "My cycles are too irregular."



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Before the lectures, 23.4% of women reported that they have received an exam from an OB/GYN in the past. When asked their reason for doing so, the most common response was "I had concerning symptoms," which was selected by 25 women. The next most common responses were "I wanted a short-term prescription for birth control" and "I wanted a regular prescription for birth control," which received ten and nine responses respectively.

After lectures

Figure 28

Did you think of getting an exam from an OB/GYN as a result of the comprehensive health education program provided by midwives you attended?

N=171

(Women only)



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ After the lectures, 62.0% of women responded that they thought of seeking an exam from an OB/GYN as a result of the comprehensive health education lectures provided by midwives.

3 mos. later

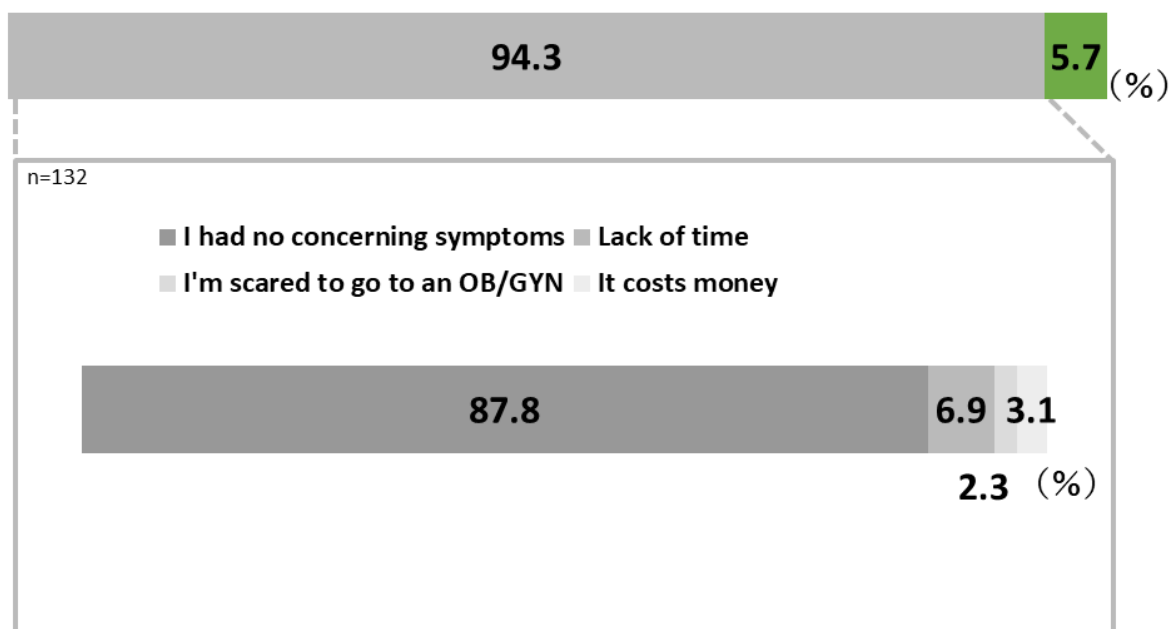
Figure 29

Did you get an exam from an OB/GYN as a result of the comprehensive health education program provided by midwives you attended three months ago? If not, for what reason?

N=140

■ No ■ Yes

(Women only)



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lectures, most (94.3%) women reported that they had not received an examination from an OB/GYN after attending the midwives' program. When asked their reason for not seeing one, most (87.8%) selected "I had no concerning symptoms," followed by "I don't have time" (6.9%) and "I am scared to go to an OB/GYN" (2.3%).

Interpretations

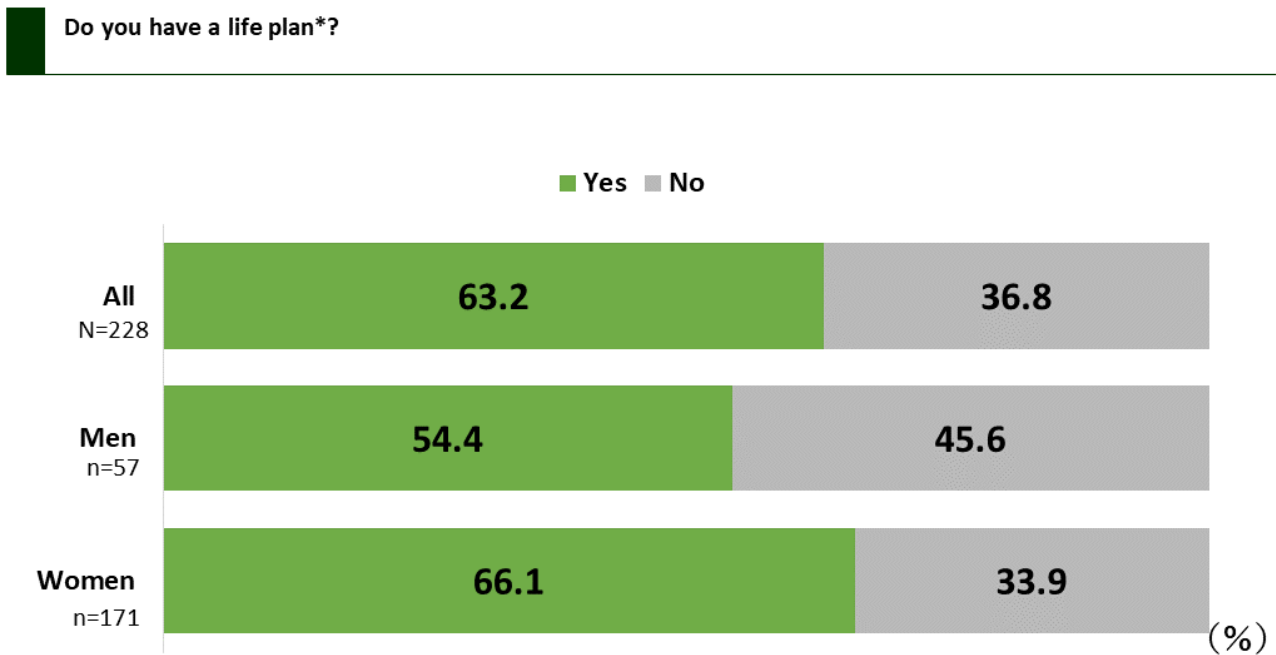
- ✓ The survey results showed that 36.5% of women rate their academic performance as half or less when affected by the unpleasant symptoms accompanying menstruation and PMS compared to when they are not. Creating a written record of one's menstrual cycle is one method of grasping the physical and mental changes that one experiences at different points in the cycle. Around 35% of women demonstrated a change of awareness towards recording their cycles, suggesting that this program was successful at promoting awareness towards the creation of such records. However, only about 8% of the students said they started tracking their cycles after attending the lectures. This result highlights the difficulty of changing people's behavior through a single educational intervention.
- ✓ The survey also showed that around 23% of women had visited an OB/GYN for an exam in the past while about 62% said they thought about seeking an examination as a result of the program. On the other hand, aside from the women who selected "I had no concerning symptoms" in the follow-up survey three months

later, some of the reasons given for not seeking an examination included “I don’t have time,” and “I’m scared to see an OB/GYN.” This suggests that it might be necessary to review how the subject is addressed in the program or that systems which make it easier for women to see OB/GYNs should be built.

6.9. Life planning

Before lectures

Figure 30



*Refers to a plan for future life events including marriage; having children; maintaining employment in the event of marriage, pregnancy, or childbirth; and which actions one wishes one's partner to take in such events.

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

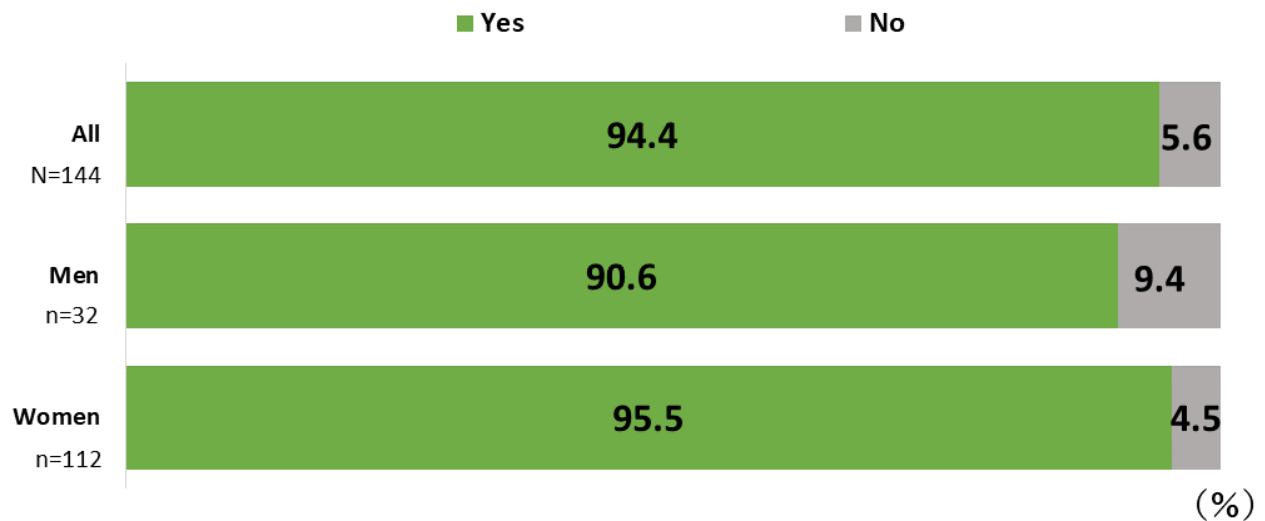
- ✓ Before the lectures, 63.2% of all students (men, 54.4%; women, 66.1%) reported that they had thought about their life plan (such as plans to get married or have children, what type of employment to pursue, intent to continue working after life events such as marriage, pregnancy, and childbirth, and expectations for their future partners in such situations).

After lectures

Figure 31

Did you think of making a life plan based on the lecture content in the comprehensive health education program provided by midwives?

(Excludes students who said they already have life plans)



*Refers to a plan for future life events including marriage; having children; maintaining employment in the event of marriage, pregnancy, or childbirth; and which actions one wishes one's partner to take in such events.

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

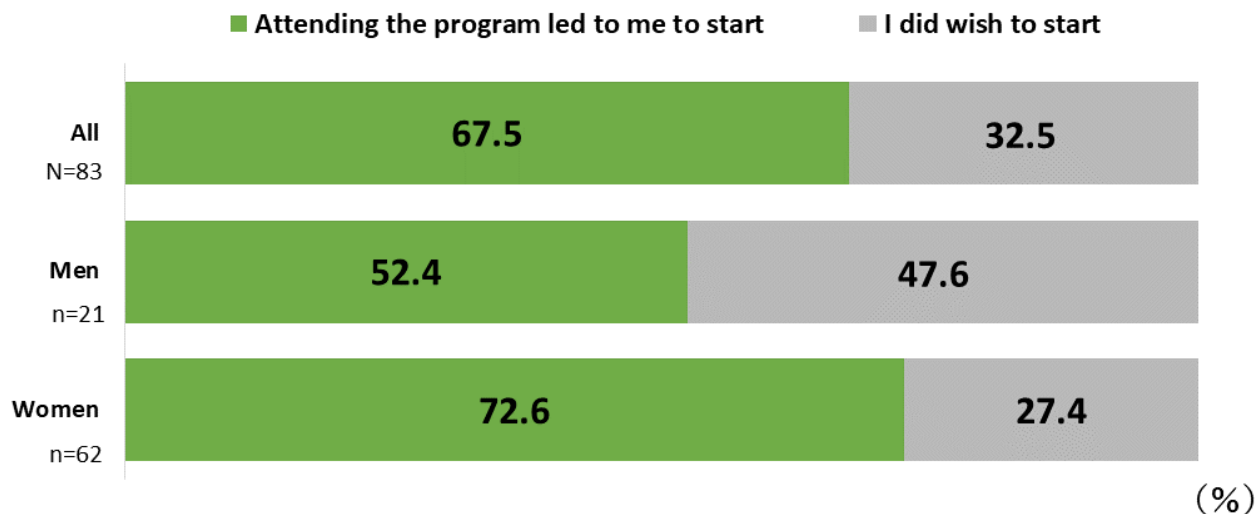
- ✓ After the lectures, 94.4% of all students (men, 90.6%; women, 95.5%) reported that they wanted to start thinking about their life plan as a result of attending the comprehensive lectures on health education provided by midwives.

3 mos. later

Figure 32

Did you start thinking of your life plan* after taking the midwives' comprehensive health education program you attended three months ago?

(Excludes students who said they already have life plans)



*Refers to a plan for future life events including marriage; having children; maintaining employment in the event of marriage, pregnancy, or childbirth; and which actions one wishes one's partner to take in such events.

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

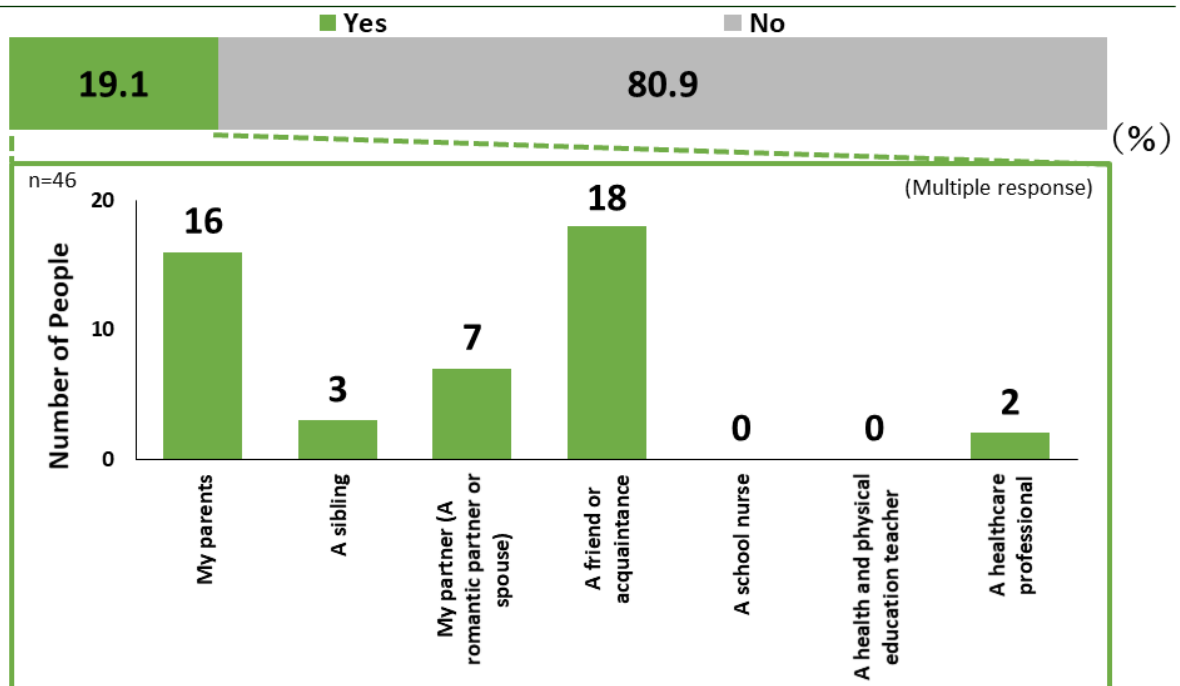
- ✓ Three months after the lectures, 67.5% of all students (men, 52.4%; women, 72.6%) responded that they started thinking about their life plan as a result of attending the program.

3 mos. later

Figure 33

Did you talk to anyone about your life plan* as a result of taking the midwives' comprehensive health education program in October?

N=178

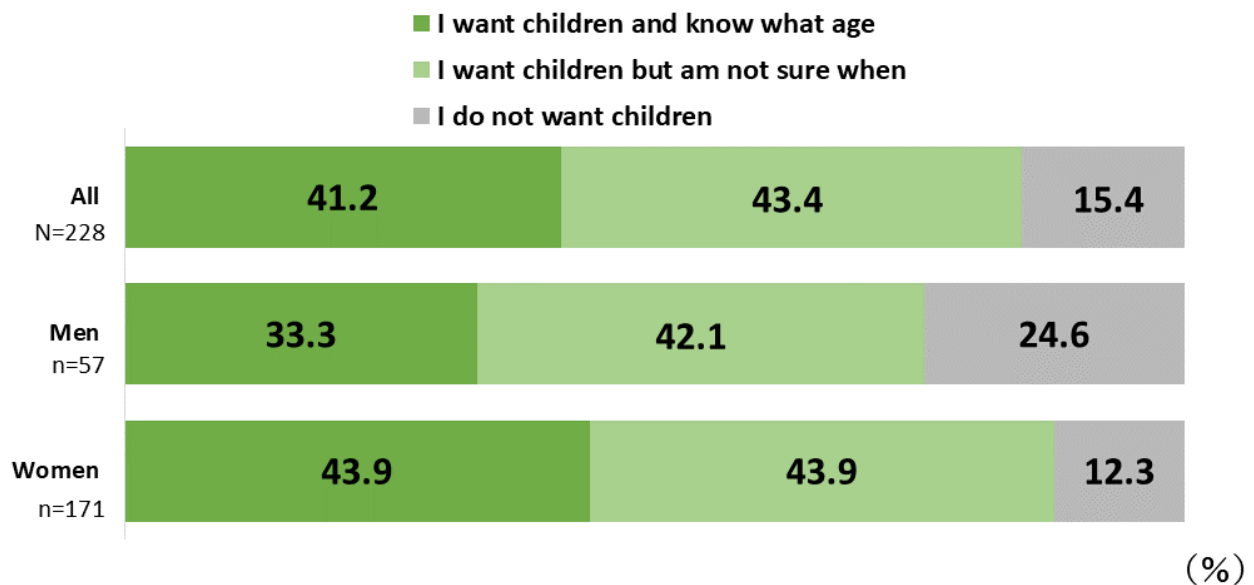


*Refers to a plan for future life events including marriage; having children; maintaining employment in the event of marriage, pregnancy, or childbirth; and which actions one wishes one's partner to take in such events.

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lectures, 19.1% of students reported that they had spoken to someone about their life plan as a result of attending the midwives' comprehensive health education program. When asked who they spoke to, 18 people said "A friends or acquaintance," 16 chose "My parents," and 7 picked "My partner."

Do you want children, and if so, do you know at what age you want to have them?



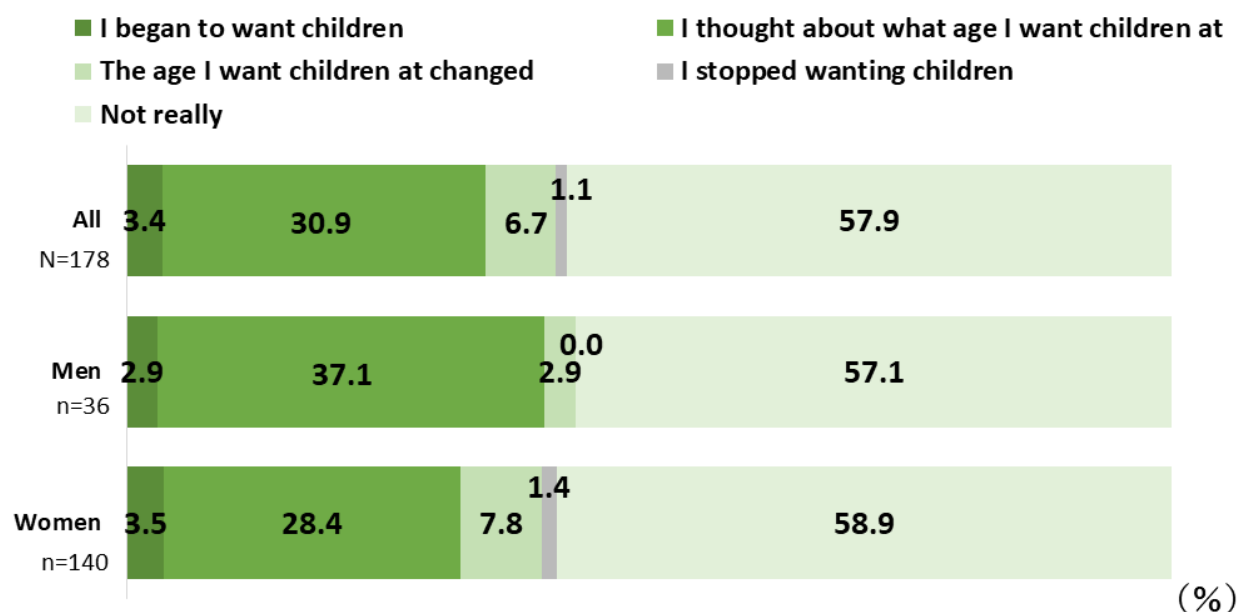
Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Before the lectures, 41.2% of all students (men, 33.3%; women, 43.9%) said that they want to have children someday and have thought about what age they want to have children at. Meanwhile 43.4% of all students (men, 42.1%; women, 43.9%) wanted children but had not thought about what age they wanted them at. The ratio of students who said they did not want children was 15.4% (24.6% of men and 12.3% of women).

3 mos. later

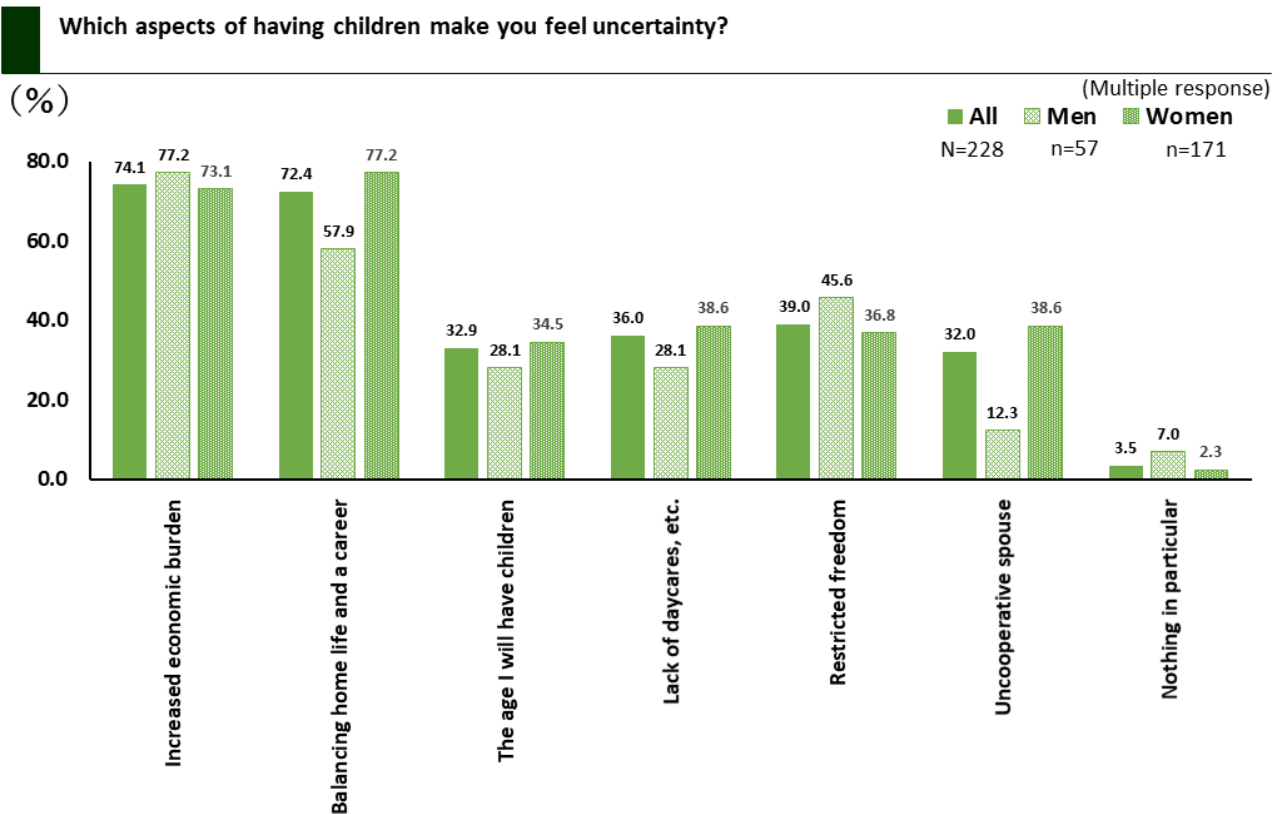
Figure 35

Did your thoughts towards having children change after attending the midwives' comprehensive health education program?



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

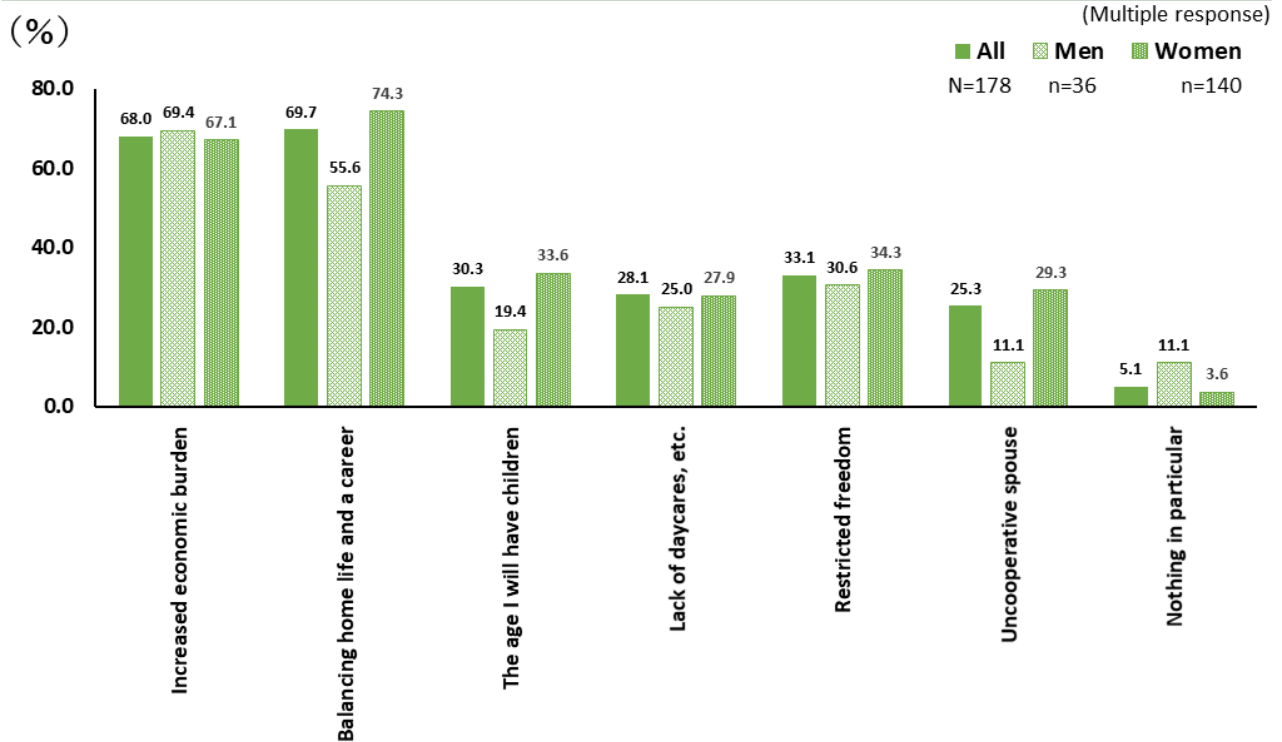
- ✓ Three months after the lectures, 3.4% of all students (men, 2.9%; women, 3.5%) said that they started to think they wanted to have children after attending the comprehensive lectures on health education provided by midwives. Meanwhile, 30.9% of all participants (men, 37.1%; women, 28.4%) said they started thinking about what age they wanted children at; 6.7% (men, 2.9%; women, 7.8%) reported a change in the age they wanted children at; and 1.1% (men, 0.0%; women, 1.4%) said they no longer wanted children. More than half (men, 57.1%; women, 58.9%; and 57.9% overall) said that their feelings were mostly unchanged.



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Before the lectures, we presented the students with various sources of uncertainty people often feel towards having children and asked them to select which ones they felt. Most (74.1%) selected, "Increase in economic burden," followed by "Balancing home life and a career" (72.4%) and "Restricted freedom" (39.0%). The three most commonly selected responses among male students were "Increase in economic burden" (77.2%), "Balancing home life and a career" (57.9%), and "Restricted freedom" (45.6%). The most common answers among female students were "Balancing home life and a career" (77.2%), "Increase in economic burden" (73.1%), and "Lack of daycare and other facilities" and "Uncooperative spouse" (38.6% each).

Which aspects of having children make you feel uncertainty?



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lectures, we asked the students to once again select sources of uncertainty they felt towards having children. The most commonly-selected responses were "Balancing home life and a career" (69.7%), "Increase in economic burden" (68.0%), and "Restricted freedom" (33.1%). The most common responses among men were "Increase in economic burden" (69.4%), "Balancing home life and a career" (55.6%), and "Restricted freedom" (30.6%). The most common responses among women were "Balancing home life and a career" (74.3%), "Increase in economic burden" (67.1%), and "Restricted freedom" (34.3%).

After lectures

Figure 38

Based on what you heard at the midwives' comprehensive health education program, were you able to get a positive image towards balancing child-rearing and work?



Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

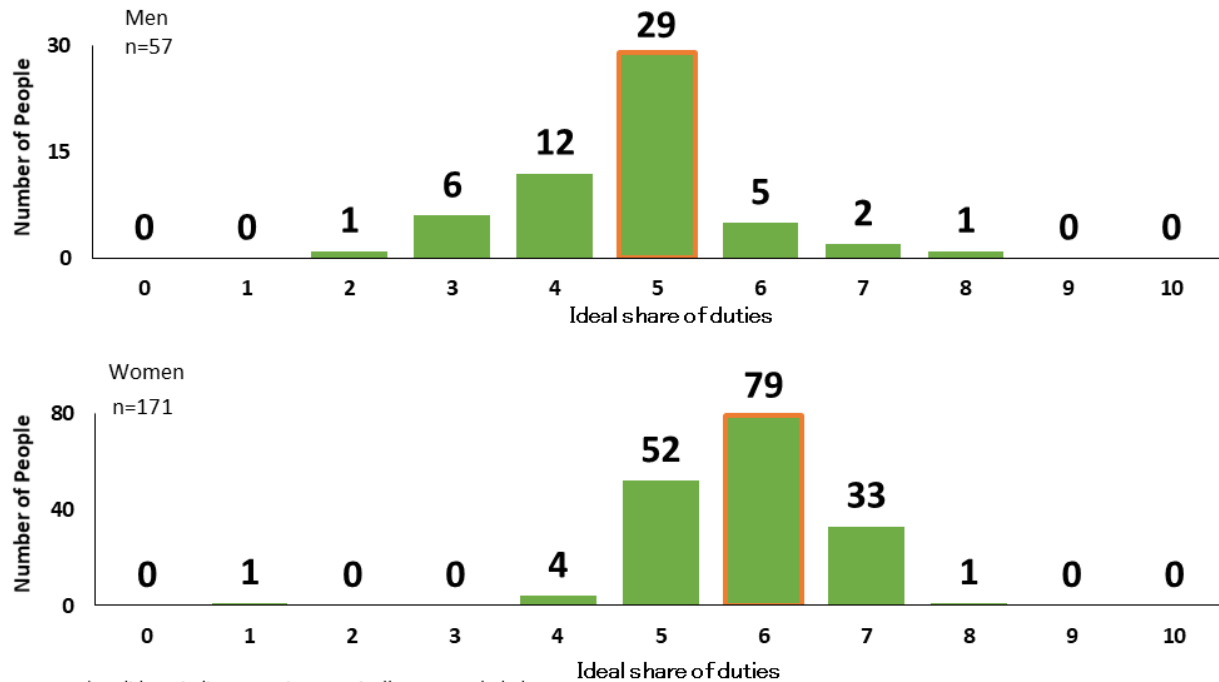
- ✓ After the lectures, we asked participants if they had acquired a positive image towards balancing work and home life as a result of attending the midwives' comprehensive health education program. In response, 11.4% of students responded "Yes," 61.8% said "Somewhat," 25.0% said "Not very much," and 1.8% said, "No." By gender, 21.1% of men said "Yes," 52.6% said "Somewhat," 22.8% said "Not very much," and 3.5% selected "No;" while 8.2% of women said "Yes," 64.9% replied "Somewhat," 25.7% said "Not very much," and 1.2% answered "No."

Before lectures

Figure 39

If you and your partner had children in the future, what would be your ideal share of household and child-rearing duties?

Score indicates the respondent's ideal share of household and child-rearing duties, with a score of ten meaning the respondent thought it would be ideal if they were responsible for all household and child-rearing duties.



*Responses that did not indicate a ratio numerically were excluded.

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

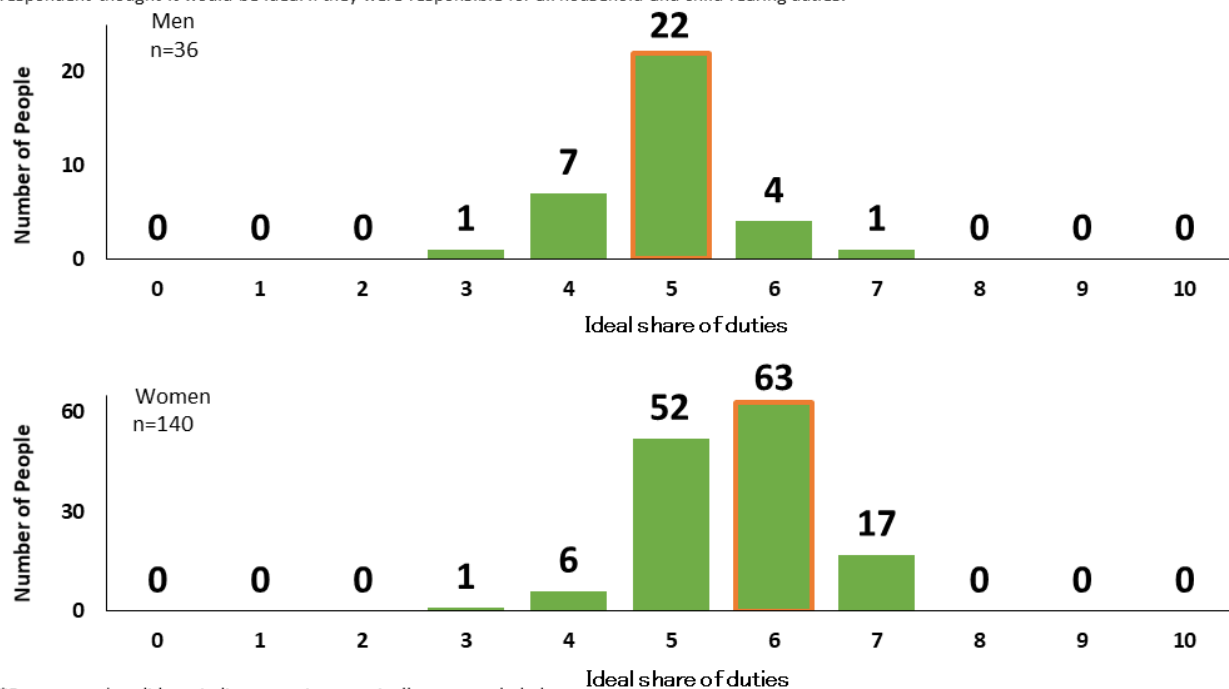
- ✓ Before the lectures, we asked students to rate their ideal share of household and child-rearing duties on a scale from one to ten. We asked students who did not want children to answer based on the assumption that they did. Scores of less than five indicate that the respondent thought it would be ideal if they were responsible for fewer household and child-rearing duties, while scores of more than five indicate they thought they should handle more. Among men, the most common response was five, which was selected 29 times. Nineteen men said it would be ideal they had fewer duties, while eight said it would be ideal if they had more. Among women, the most popular answer was six, which was selected 79 times. Five women selected one through four, indicating they thought it would be ideal if they had fewer duties. Meanwhile, 113 women selected six through ten, indicating they thought it would be ideal if they were responsible for the bulk of household and child-rearing duties.

3 mos. later

Figure 40

If you and your partner had children in the future, what would be your ideal share of household and child-rearing duties?

Score indicates the respondent's ideal share of household and child-rearing duties, with a score of ten meaning the respondent thought it would be ideal if they were responsible for all household and child-rearing duties.



*Responses that did not indicate a ratio numerically were excluded.

Source: HGPI, 2020. "Developing a Comprehensive Health Education Program for University Students and Program Effectiveness Survey Results."

- ✓ Three months after the lectures, we once again asked students to rate their ideal share of household and child-rearing duties on a scale from one to ten. The most popular choice among men was five, which was selected by 22 people. Eight men replied that it would be ideal they had fewer duties while five said it would be ideal if they had more. The most popular response from women was six, which was selected 63 times. Seven replied that it would be ideal if they had fewer duties and 80 thought it would be ideal if they were responsible for more household and child-rearing duties than their partner.

Interpretations

- ✓ The comprehensive health education program provided by midwives conveyed the need to respect all lifestyles and, for those who wish to have children, the importance of thinking about balancing child-rearing with other aspects of life, such as career, aspirations, and age. The program provided information on pregnancy, childbirth, after childbirth, and childrearing, which are crucial elements for life planning. We believe that doing so encouraged the students to think about their life plans and helped them build positive attitudes towards balancing child-rearing and employment.

7. Opinions

The results of the survey showed that university students who attended the comprehensive health education program provided by midwives have various pressing needs and suggested that such programs can cause changes in awareness or behavior towards reproductive health among university students. At the same time, it highlighted various hurdles faced by university students, such as a lack of knowledge concerning reproductive health, the occurrence of sexual violence or non-consensual sexual situations, a lack of people to consult on reproductive health, and the difficulty of seeking examinations from OB/GYNs. Based on these results, the survey team has compiled the opinions and recommendations for future measures described below. To determine methods for engaging all of society in achieving each recommendation while complementing efforts made by the Government and those directly involved in healthcare and education, we held hearings with the project's advisors, experts from government, industry, academia, and civil society, and those most affected.

7.1 Opinion 1 – Comprehensive childhood health education programs must be introduced or improved and opportunities for university students to receive comprehensive health education must be created

In Japan, health and sex education is provided during primary and secondary education based on a curriculum created by the Government. In recent years, the central Government and local governments have begun creating dispatch systems in which OB/GYNs, midwives, and other professionals are sent to schools to provide additional courses on reproductive health that supplement the Government curriculum. According to our survey, however, in contrast to the fact that approximately 90% of participants took courses or attended lectures on reproductive health in middle school or in secondary school, about 40% of them said they had never received comprehensive health education in the past. UNESCO's *International Technical Guidance on Sexuality Education*, discussed above, recommends providing comprehensive health education starting from the age of five. Many other OECD countries have implemented educational programs based on UNESCO's guidelines and Japan is lagging far behind, so measures to implement or improve comprehensive childhood health education programs are urgently required.

Furthermore, recent graduates of high schools and other secondary schools are at an age when people grow more aware of sex as a topic close to them and when they start to consider specific future careers and life plans, so they require education on reproductive health and rights that addresses their specific issues and that meets their specific needs. According to the results of our survey, about 97% of university students who underwent our comprehensive health education program said they felt such programs are necessary, highlighting the need to create opportunities for all students who attend universities, junior colleges, trade schools, and all other educational institutions (hereinafter referred to as "Educational institutions (universities, etc.)") to receive comprehensive health education. Measures to implement comprehensive childhood health education and efforts to provide continuous educational opportunities until adulthood must be promoted and advanced simultaneously to reform education on reproductive health.

7.1.1 Relevant survey results

- ✓ About 97% of university students responded, “I think that university students need comprehensive health education.”
- ✓ Around 87% of university students said, “I think comprehensive health education should be a part of new student orientation at universities and that everyone should receive it.”
- ✓ About 90% of students said that they had taken classes or lectures on sexual health in middle school or high school.
- ✓ Approximately 42% of students said they had never received comprehensive health education in the past.

7.1.2 Recommendations

- **Measures to introduce or improve comprehensive childhood health education are necessary**
 - **Government:** The need for comprehensive health education starting from childhood should be recognized and addressed during the creation of guidelines and curriculums, and the Government should adopt a posture that allows for said education to be provided with consistent standards nationwide.
 - **Government:** Children and young people are the parties most affected by comprehensive health education. They should be included on Government investigation committees and in similar groups.
 - **Government/Research institutions:** Comprehensive health education programs that are based on the unique characteristics of Japanese people and Japan’s culture should be created. Evaluation indicators to measure the educational effects of said programs should be developed.
 - **Educational institutions:** While respecting the facts that there are various sexual orientations and identities and that gender is not determined by anatomy, students at every level of education should be given opportunities to learn about anatomical and psychological sexual characteristics that differ from their own.
- **Opportunities should be created for students at educational institutions (universities, etc.) to attend comprehensive health education programs made for students**
 - **Government:** The Government should recognize the need for continuous comprehensive health education for young people who have graduated from high school or other secondary schools and should provide leadership in the effort to provide all students comprehensive health education.
 - **Government:** Government investigation committees and similar groups should include the parties most affected, who are the children and young people who require comprehensive health education.
 - **Government/Research institutions:** The content of reproductive health education should be improved to meet the needs of young people in Japan. This should be done while referring to valid forms of evidence including the latest research results as well as past examples and modern trends, including international trends.

- **Government/Research institutions:** Surveys among the parties most affected should be conducted regularly to track current issues so that education which meets students' needs can be introduced in a timely manner.
- **Educational institutions (universities, etc.):** Opportunities for all students to attend comprehensive health education programs should be created by adding said programs to new student orientation and other such events as well as by providing said programs online.

7.1.3 Points that will be crucial to the implementation of these recommendations

- ✓ While taking regular measures to maintain up-to-date information on students' situations, issues, and educational needs concerning reproductive health, the Government and educational institutions should cooperate to develop educational program content and to establish systems to provide said education so that it can be provided in a timely manner at educational institutions (universities, etc.).

7.2 Opinion 2 – Comprehensive health education programs and methods to deliver them must be developed and professionals who can provide them must be trained

According to the results of the survey conducted after our program, many students said that their previous knowledge had been lacking, even among those who had taken courses on reproductive health in middle school and in secondary schools. Furthermore, in the hearings we conducted with specialists, we heard multiple times that many of the classes provided at secondary schools only go so far as to introduce terminology related to reproductive health. Considering these circumstances, we can conclude that there is room to improve the content of education on reproductive health to be provided at primary and secondary schools in the future.

Meanwhile, comparing survey results before and after the educational intervention allowed us to conclude that the content of the comprehensive health education program developed for this project and that having midwives provide the lectures improved health literacy and changed awareness and behaviors to a certain degree. The specialists we consulted on this project evaluated the use of midwives as lecturers in this program highly because they possess medical knowledge based on scientific evidence, because they provide care to women of all generations and their families daily at healthcare facilities and in communities, and because they have the capacity to speak to specific circumstances and situations facing young people today. Based on this, the content of this program and the methods used to provide it should be adopted on a wider scale. On the other hand, because the project only conducted a quantitative survey, qualitative follow-up surveys are needed to identify the project's success factors, such as which content or education methods were particularly effective, as well as to identify which elements require improvement. Doing so may allow future iterations of the program to promote even greater changes in awareness or behavior.

Furthermore, there is a need to provide knowledge about reproductive health to educators involved in providing early childhood education as well as a need to provide them appropriate and necessary support from outside experts and other specialists when educating students. These needs were mentioned during our hearings with

specialists. In addition to providing comprehensive health education to students at all levels of education, we think educational opportunities should be created for teachers as well. Although this survey was focused on university students, we should also consider conducting effectiveness surveys on educational interventions provided to teachers or comparative surveys on educational interventions using peer training.

7.2.1 Relevant results from the survey

STDs

- ✓ Approximately 86% of respondents thought their previous knowledge about STDs was incorrect.
- ✓ Approximately 29% of university students reported that they changed their behavior towards STD prevention as a result of the lectures.

Sexual Consent

- ✓ About 42% of university students reported that they have encountered sexual violence or a situation in which the right to consent was not respected.
- ✓ Around 19% of university students said they changed in their behavior when facing sexual violence or situations in which sexual consent is not respected.

Examinations from OB/GYNs

- ✓ Approximately 62% of students said they thought about seeking an examination from an OB/GYN as a result of the comprehensive health education program.

Life Planning

- ✓ Around 95% of university students reported that they considered thinking about their life plan after attending the program.
- ✓ Approximately 68% of university students said that they thought about their life plan as a result of the comprehensive health education program.

7.2.2 Recommendations

- **Use educational programs based on guidelines that meet international standards**
 - **Government:** To determine the content of comprehensive health education programs for young people who have graduated high school or other secondary schools, guidelines should be provided to related academic societies, organizations, and other such groups so that said programs can be based on international guidelines such as the *International Technical Guidance on Sexuality Education*. Doing so will enable those groups to match the content of said programs to students' current circumstances and needs.
- **Develop external human resources that can implement comprehensive health education programs and promote cooperation between fields**
 - **Educational institutions (universities, etc.):** Invite specialists in reproductive health from external organizations to provide lectures (including online lectures) and make preparations within campus operations so that those lectures can be well-planned and run smoothly.

- **Educational institutions (universities, etc.):** To ensure that course content meets educational standards, educational institutions should build frameworks that allow for the selection of educators who can provide suitable course content.
- **The Japanese Midwives Association and other related academic societies and organizations:** Training seminars to develop human resources using lectures and workshops on international guidelines like the *International Technical Guidance on Sexuality Education* should be held so specialists in reproductive health such as midwives or OB/GYNs can provide educational programs that meet certain quality standards in terms of both program content and educational method.
- **The Japanese Midwives Association and other related academic societies and organizations:** Continuous efforts that build awareness towards keeping knowledge up-to-date and towards building educational skills should be made to empower and enlighten specialists in reproductive health such as midwives or OB/GYNs.
- **The central Government and local governments:** A platform should be built that matches and unites educational institutions (universities, etc.), specialists in reproductive health, and companies and NPOs that are interested in providing health information to students.
- **The central Government and local governments:** To train specialists in reproductive health working in regional communities, grants and similar forms of financial support should be provided to cover training fees. Training programs should aim to refresh the knowledge possessed by specialists and raise knowledge standards.

7.2.3 Points that will be crucial to the implementation of these recommendations

- ✓ Midwives and OB/GYNs are active in healthcare institutions and in communities and possess specialist medical knowledge on reproductive health. Having them serve as lecturers has the potential to provide accurate knowledge and information to university students while successfully creating courses that fit the current circumstances facing them. The Japanese Midwives Association has branches in every major city and prefecture, so their help can make it possible to provide comprehensive health education to students nationwide.
- ✓ Selecting experts who can provide training courses for lecturers will be crucial to ensuring that course content which meets students' current circumstances and real-world needs can be implemented.
- ✓ Social networks and influencers can have significant impacts on young people. Making proactive use of online tools, media, and personalities without relying on traditional information transmission measures such as lectures or paper media can serve as the key to providing information concerning comprehensive health education or accurate information concerning sex and health to many young people in familiar formats.

7.3. Opinion 3 - Frameworks that connect students to counseling services and healthcare institutions must be built

This survey showed that some of the university students polled did not have anyone to talk to about issues related to sex, that approximately 37% of women estimated that their academic performance drops by half or

more during menstruation or when experiencing PMS compared to when they are not, and that the ratio of women who had ever received examinations from OB/GYNs was low. Examinations from OB/GYNs are important for helping women understand their own health. However, the results of the survey showed that there are high psychological hurdles preventing women from seeking examinations from OB/GYNs. Women should be encouraged to track their cycles so they can obtain a better understanding of their own health, which will allow them to benefit more from examinations from OB/GYNs. Frameworks should be built to better communicate the importance of seeing OB/GYNs and to promote visits to them.

7.3.1 Relevant results from the survey

- ✓ Approximately 37% of female students reported that the unpleasant symptoms they experience during menstruation or PMS make their academic performance drop by half or more compared to when they are not experiencing those symptoms.
- ✓ About 31% of students said that they do not have someone to talk to about issues related to sex.
- ✓ The reasons that students did not seek examinations from OB/GYNs included “I have no concerning symptoms,” “I don’t have time,” “I’m scared to go to an OB/GYN,” and “It costs money.”

7.3.2 Recommendations

- ✓ **Places where young people can readily access counseling should be established**
 - **Municipalities:** Youth clinics should be established at existing healthcare facilities, such as health centers. There, young people in their 10s and 20s should be able to receive free counseling from midwives or public health nurses who have received proper training on communicating in a thoughtful manner.
- ✓ **Frameworks that match students with counseling services or healthcare institutions should be built**
 - **Educational institutions (universities, etc.):** Regular opportunities for students to receive counseling from midwives or OB/GYNs from local healthcare institutions should be provided at on-campus infirmaries and other places readily accessible to students.
 - **Educational institutions (universities, etc.):** Efforts should be made to ensure that all students are informed about external counseling services or healthcare institutions in addition to counseling and other services provided on campus.
 - **Educational institutions (universities, etc.):** Counseling offices on sexual harassment have been established at university campuses in response to a circular published by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The people in charge of providing said counseling should be given training opportunities so they can respond to students in need of counseling in a quick and appropriate manner.
 - **The Japanese Midwives Association:** Efforts should be made to lower the psychological hurdles students feel towards healthcare institutions and to help make OB/GYNs feel more accessible to students, such as by including introductions of local midwives and OB/GYNs, descriptions of which

healthcare institutions provide which types of examinations, and other such information in comprehensive health education programs.

- **Healthcare institutions:** Environments that make it easier for students to receive examinations from OB/GYNs should be created.
- **Healthcare institutions:** Healthcare institutions should coordinate with infirmaries and counseling offices at educational institutions to regularly dispatch midwives or OB/GYNs to campuses to provide on-campus counseling to students. Frameworks should be built that allow them to refer students to healthcare institutions when necessary.
- **Healthcare institutions:** Online examination systems should be implemented to lower psychological hurdles felt by students towards receiving examinations from OB/GYNs and to more closely respond to the health needs of young people.
- **University students:** University students should have doctors they see regularly, such as OB/GYNs, pediatricians, or internists.
- **University students:** Students should research easily-accessible institutions and specialists in advance for when they need counseling on an issue related to sexual health.

7.3.3 Points that will be crucial to the implementation of these recommendations

- ✓ The interior environments of youth clinics established at each health center should be designed in a way that is familiar or appealing to young people, such as by making them look like cafes. In addition to the interior design, they must also be set up in a way that enables the young people who visit and the midwives or public health nurses providing the counseling to interact from positions of equality. For example, the women's health support center in Itabashi City in Tokyo schedules specific times when women in their 10s and 20s can receive free counseling services. Each municipality should make efforts to implement similar services specifically for young people within existing services.
- ✓ On-campus counseling offices should be established at universities and other educational institutions. After doing so, they must collaborate with outside healthcare institutions so that students with inquiries can be introduced to specialists as quickly as possible.
- ✓ Concentrated efforts must be made to improve communication methods so that information concerning counseling services or healthcare institutions can be provided to students in an effective manner.
- ✓ Healthcare institutions must make efforts to facilitate collaboration with counseling offices at educational institutions and local governments to make it easier for women to receive examinations from OB/GYNs by removing the psychological and physical barriers that prevent them from doing so. We believe regularly holding programs provided by midwives or OB/GYNs like in our project will have the potential to decrease feelings of uncertainty among students and can create opportunities to build familiarity towards healthcare institutions.
- ✓ It is also necessary for students of all genders to stay informed about accessible institutions and specialists to consult for issues related to sexual health.

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Advisors

(Titles omitted; in no particular order)

Kunio Kitamura (President, Japan Family Planning Association)

Kazue Yoshino (Director, Tokyo Association Obstetricians and Gynecologists; Director, Yoshino Women's Clinic)

Tomiko Okamoto (President, Midwifery Department, Japan Midwives Association; President, Okamoto Maternity Center, UPAUPAHOUSE okamotojosanin)

Taeko Mori (Director, Mori Midwife Center)

Sachiko Takahashi (Assistant Professor, Saitama Medical University)

Specialists and interview subjects

(Titles omitted; in no particular order)

Kyoko Tanebe (Member, Toyama Prefectural Assembly)

Emiko Nishioka (Professor of Maternal Nursing, Department of Nursing, National Defense Medical College)

Kazuaki Okuda (Manager, General Health Management Department, Japan Airlines Corporation)

Masako Tanaka (Professor, Faculty of Global Studies, Sophia University)

Mizuki Shinohara (Student, Sophia University)

Sophia Anna Kitano (Student, Sophia University)

Ruri Ishida (Student, Sophia University)

9. Project Team

(Titles omitted; in no particular order)

Yuko Imamura (Manager, HGPI)

Eri Yoshimura (Senior Manager, HGPI)

Kenji Kawabata (Adjunct Lecturer, Tokyo University of Science)

Hiromi Iwai (Intern, HGPI)

Shiori Arima (Associate, HGPI)

Akane Koyama (Intern, HGPI)

Yukiko Kawata (Intern, HGPI)

Yui Kohno (Associate, HGPI)

Ryoji Noritake (CEO, Board Member, HGPI)

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For questions concerning this project, please email:

Health and Global Policy Institute Women's Health Team

Mail: info@hgpi.org

Tel: 03-4243-7156