

Survey on Health Promotion and Working Women 2018

Health and Global Policy Institute

March 22, 2018

I. Executive Summary

Health is an essential element for women to take charge of their own life plans, including when they become pregnant, when they raise children, where and how they work, and how they make contributions to society. However, social support for the improvement of knowledge and behaviors related to women's health, and the promotion of women's health in general, is still insufficient.

Health and Global Policy Institute (HGPI) conducted a survey targeting 2,000 working women, to examine associations between levels of health literacy and health behaviors, work productivity, and access to necessary healthcare. This study defined health literacy as the "ability for a woman to access, understand and utilize necessary information to maintain and promote health." In other words, knowledge of body mechanisms or diseases along is not sufficient for true health literacy. Such knowledge should be accompanied by behaviors, including the ability to discern the accuracy of health information, consultations with health professionals, and coping actions for the management of symptoms.

The results showed that levels of health literacy were associated with work performance, planned pregnancies and health seeking behaviors, implicating the importance of strengthening efforts to improve levels of health literacy among women.

Key Findings

- High health literacy was associated with high work performance
- High health literacy was associated with being able to plan pregnancies and the use of infertility treatment
- Women with high levels of health literacy were more likely to seek treatment for health symptoms that are specific to women
- There is high need for education on the mechanisms, prevention, screening, and treatment of diseases that are common among women, as well as when to consult a doctor about these diseases
- Health check-ups organized by workplaces encourage women to make regular visits to obstetricians/gynecologists

Policy Recommendations

Provide the information women need to enable them to take action against women's health risks	Government	The Government should take leadership on the creation of school curriculums focusing on the specific areas that women need to know about
	Schools/ academic institutions	Focus on the subjects related to lifelong health management and self-care for women
	Companies	Offer training or seminars to provide employees with necessary information according to their life stages

Strengthen health promotional activities to improve health literacy in workplaces	Government	Include efforts to improve women’s health literacy as a selection criteria for the Government’s Health & Productivity Stock Selection portfolio
	Research institutes	Develop an evaluation method to assess the health promotional activities being implemented by companies
	Companies	Develop a consultation system to improve health literacy levels among women
Improve access to obstetrics & gynecology departments	Companies	Incorporate women-specific diseases into regular check-ups
	Healthcare providers	Communicate to women the necessity of making regular visits to health professionals
	Health facilities	Develop healthcare delivery systems based on client needs
Create environments that ensure women can plan pregnancies and receive infertility treatment as necessary	Companies	Develop a flexible paid leave system that can be used to take time off of work for as little as a few hours at a time Ensure friendly work atmospheres where women can utilize the opportunities and systems available to them

II. Overview of the study

A) Study design:

This was a cross-sectional study.

B) Participants:

The study targeted 2,000 women between the ages of 18 and 49 who were registered with the survey company that assisted HGPI with the data collection process. Women were included in this study if they worked full-time (regardless of their status as both regular and temporary workers).

This study excluded women who either were or had family members who were health professionals.¹ The age and regional profile of the survey cohort matched Japan’s national demographic structure (Figure 1).

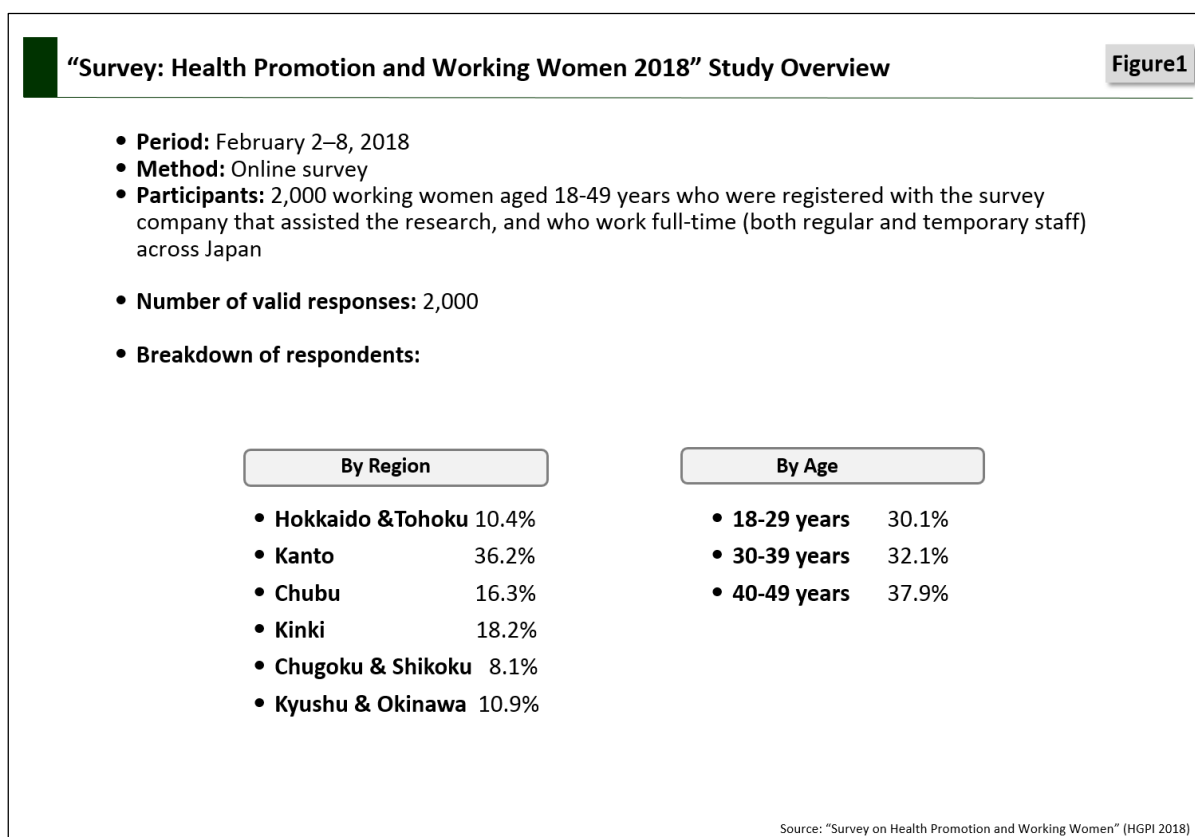
C) Methods:

This survey was conducted over the internet between February 2 and February 8, 2018 (Figure 1). The survey was conducted with the approval of the Ethics Review Committee of the Health Outcome Research Institute.

¹ This survey defined “healthcare professionals” as follows:

Medical doctors, dentists, veterinarians, pharmacists, public health nurses, midwives, nurses (including associate nurses), medical radiology technicians, clinical laboratory technicians, physiotherapists, occupational therapists, vision trainers, speech-language-hearing therapist, dental hygienists, dental technicians, nutritionists, massage shiatsu therapists, acupuncturists, moxibutionists, Judo bonesetters

Participants were provided with a written form explaining the purpose of the study and their right to opt out of it. The survey was administered only to those who provided informed consent. Each respondent was identified on questionnaire forms only with a serial number to ensure anonymity.



D) Scales used for this survey:

1. Health literacy around women’s health

Levels of health literacy were measured by the “Health literacy scale for women of reproductive age”² (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 1). 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, covering knowledge and behavioral factors. 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.

² 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

Table 1: 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 (doctor, nurse, midwife, 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 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
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

2. Work performance

Work performance/productivity was measured by the validated Japanese version of the World Health Organization Health and Work Performance Questionnaire (WHO-HPQ)³. The WHO-HPQ is a scale which can measure both loss due to absence ("absenteeism") and loss of work performance (one's ability to perform their job) due to poor physical or mental functionality even though the person continues to report for work ("presenteeism." This can occur, for example, when someone continues to show up for work even though they are sick). The questionnaire accomplishes this by asking questions regarding work performance over the previous four weeks. In this study, absolute absenteeism and presenteeism were calculated based on WHO-HPQ scores.

³ Kessler RC, Barber C, Beck A, et al. (2003) The World Health Organization Health and Work Performance Questionnaire (HPQ). *J Occup Environ Med*, 45, p.156-74.

WHO Health and Work Performance Questionnaire (WHO-HPQ) <https://www.hcp.med.harvard.edu/hpq/info.php> [Accessed on March 7, 2018]

We developed similar questions about work performance when experiencing Premenstrual Syndrome (PMS)⁴ and menopausal symptoms or disorder⁵ by referring to the presenteeism items on the WHO-HPQ.

3. Quality of Life (QOL)⁶

Although there are disease-specific scales to measure QOL, such scales are difficult to convert to a single dimension QOL score (0 as death and 1 as perfect health). QOL measurement can also take a long period of time to investigate, creating extra work for both participants and investigators. For these reasons, the EQ-5D-5L⁷ scale was selected for this survey.

The EQ-5D-5L is a questionnaire developed by the EuroQOL Group, consisting of 5 items, namely, "Degree of mobility," "Management of personal belongings," "Daily activities," "Pains and discomforts," and "Anxiety and depression." Respondents were asked to rate their abilities related to these items on a 5-point Likert scale ranging from "No problem" to "Totally unable." The EQ-5D-5L is an update to the EQ-5D-3L intended to address a "ceiling effect" whereby results from the old scale tended to skew toward 1 (Perfect health), particularly for people living with only mild cases of diseases. Furthermore, it was difficult to capture small changes in health status using the old scale. The EQ-5D-5L was developed to address the "ceiling effect" issue and sensitivity while maintaining convenience, using a 5-point scale. The Japanese version of EQ-5D-5L was developed in 2012, with a conversion table (tariff) developed in 2014, which was used in this survey.

E) Analytical methods

Results are divided into five parts: "Health literacy and work performance," "Health literacy and planned pregnancies," "Health literacy and coping behaviors related to women-specific symptoms," "Health literacy and regular visits to obstetrics/gynecology departments," and "Health literacy and unwanted pregnancy." Descriptive statistics and covariance analyses (ANCOVA tests) were carried out. Statistical tests were run to assess correlation among variables. Logistic regression analyses were also conducted, with health literacy as an independent variable and other indicators as dependent variables.

This study grouped respondents into one of two groups depending on their level of health literacy. Respondents reporting health literacy scores at or above the median score were considered to have "High health literacy," while patients with scores lower than the median score had "Low health literacy" (Figure 2).

⁴ Premenstrual Syndrome (PMS): physical or mental discomforts before menstruation

⁵ "Menopausal symptoms" refers to various symptoms that may appear during menopause (including the five years before and after menopause) such as hot flashes, sweating, and so on. These symptoms are not accompanied by other diseases. If the symptoms are so severe that they impact the woman's daily life, she may be considered to have a menopausal disorder.

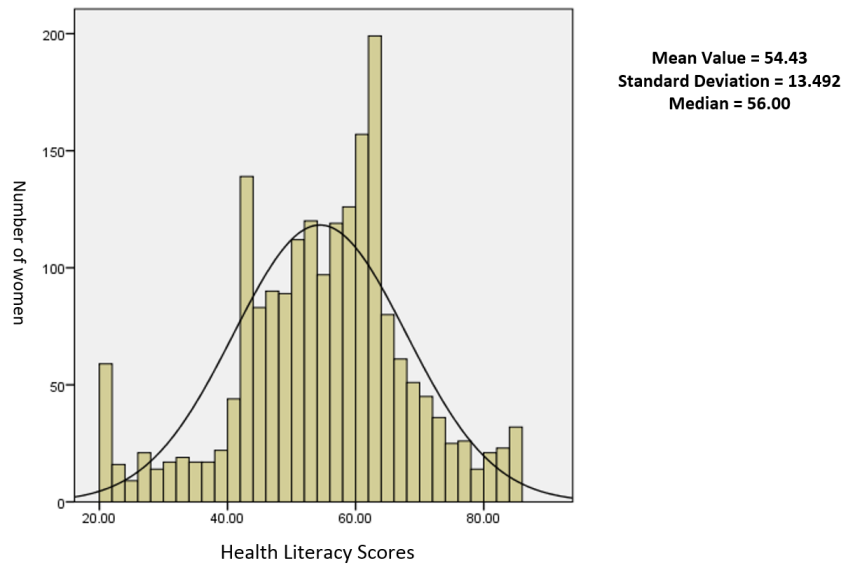
⁶ A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

⁷ Ikeda, T. et al. (2015) Developing a Japanese version of the EQ-5D-5L value set. *J.Natl. Inst. Public Health*, 64 (1), p.47-55.

• EuroQol Group Website <http://www.euroqol.org/> [Accessed on March 7, 2018]

Distribution of Health Literacy Scores

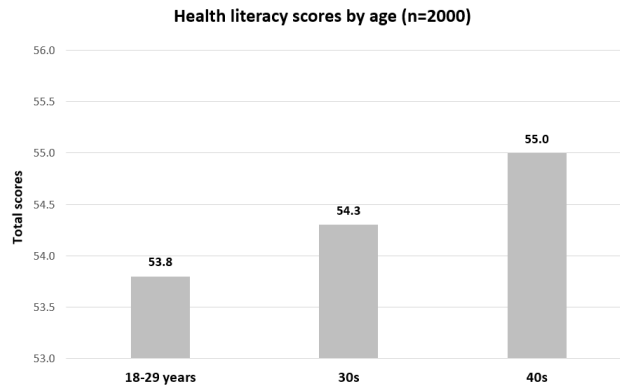
Figure 2



Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Health literacy scores by age

Figure 2-A



1. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014).

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Mean scores for health literacy categories by age

Figure 2-B

	Total Score	1. Women's choices and practices related to health information	2. Self-care during menstruation	3. Knowledge of the female body	4. Sexual health discussions with partners
18-29 years	53.80	22.55	13.42	12.68	5.03
30s	54.33	22.72	13.71	12.89	4.88
40s	55.02	23.30	13.62	13.30	4.72
Total	54.43	22.89	13.59	12.98	4.87

1. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014).
 2. Score range for each category: Respondents answered each question with a 4-point Likert scale. There were 9 questions for "1. Women's choices and practices related to health information" (score 9-36); 5 questions for "2. Self-care during menstruation" (score 5-20); 5 questions for "3. Knowledge of the female body" (score 5-20); and 2 questions for "4. Sexual health discussions with partners" (score 2-8). Total score = 21-84.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

F) Adjustments:

- Tests for association were adjusted by education level, number of children, and the presence of underlying diseases⁸, as a correlation was found between health literacy and each of these items among this sample (see comments in the result sections for details). Tests were also adjusted by age, although no significant association was found between age and health literacy (Figure 3).
- No adjustment was made for job level and income as there was no association found between health literacy and these variables (Figure 3).

⁸ In this survey, the following 12 diseases were regarded as underlying gynecological diseases:

1. Sexually transmitted diseases (STDs; HIV, syphilis, chlamydia, etc.)
2. Cervical cancer
3. Uterine cancer
4. Ovarian cancer
5. Breast cancer
6. Endometriosis
7. Uterine myoma
8. Polycystic ovary syndrome
9. Premenstrual syndrome/PMS (Physical and mental discomforts before menstruation)
10. Menstrual symptoms (Pain or discomfort during menstruation, or other related symptoms such as abnormal bleeding)
11. Menopausal disorders
12. Osteoporosis

Adjustments

Figure 3

- Tests for association were adjusted by education level, number of children, and the presence of underlying diseases, as correlation was found between health literacy and each of these items in this sample (see comments in the result section for details).

Category	Total	High health literacy	Low health literacy	p-value (High vs. Low literacy group)
Number of respondents	2000	1015	985	–
Education level (College or higher)	1002 (50.1%)	561 (55.3%)	441 (44.8%)	p < 0.01
History of gynaecological diseases	481 (24.1%)	312 (30.7%)	169 (17.2%)	p < 0.01
Number of children	1.374 ± 0.7592	1.442 ± 0.8046	1.304 ± 0.7030	p < 0.01
Age	35.822 ± 8.0652	35.888 ± 7.8860	35.754 ± 8.2492	p < 0.01

- No adjustment was made for the following items as there was no association found with health literacy.

Category	Total	High health literacy	Low health literacy	p-value (High vs. Low literacy group)
Women in a managerial position	112 (5.8%)	65 (6.6%)	47 (5.0%)	p=0.763
Individual annual income over JPY3 million	650 (32.5%)	342 (33.7%)	308 (31.3%)	p=0.521

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

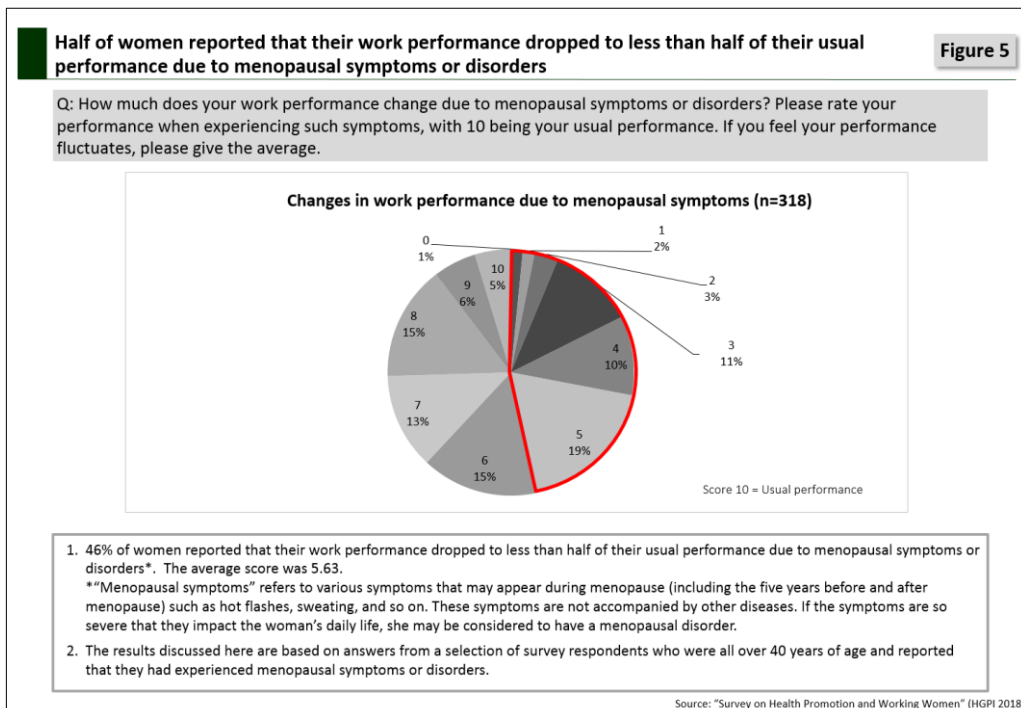
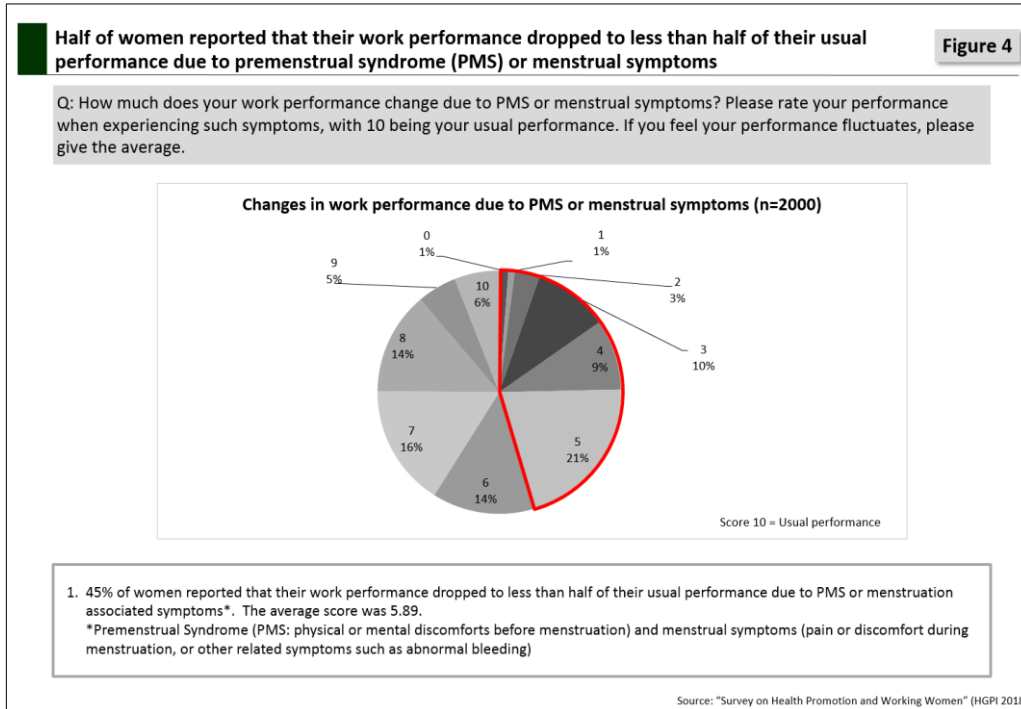
G) Limitations:

- Internet surveys have an inherent sampling bias, as respondents are limited to those who can access to and use the internet. It is important to take caution when interpreting results, as internet literacy is associated with level of education.
- Since this survey was a cross-sectional study, causal relationships could not be estimated.

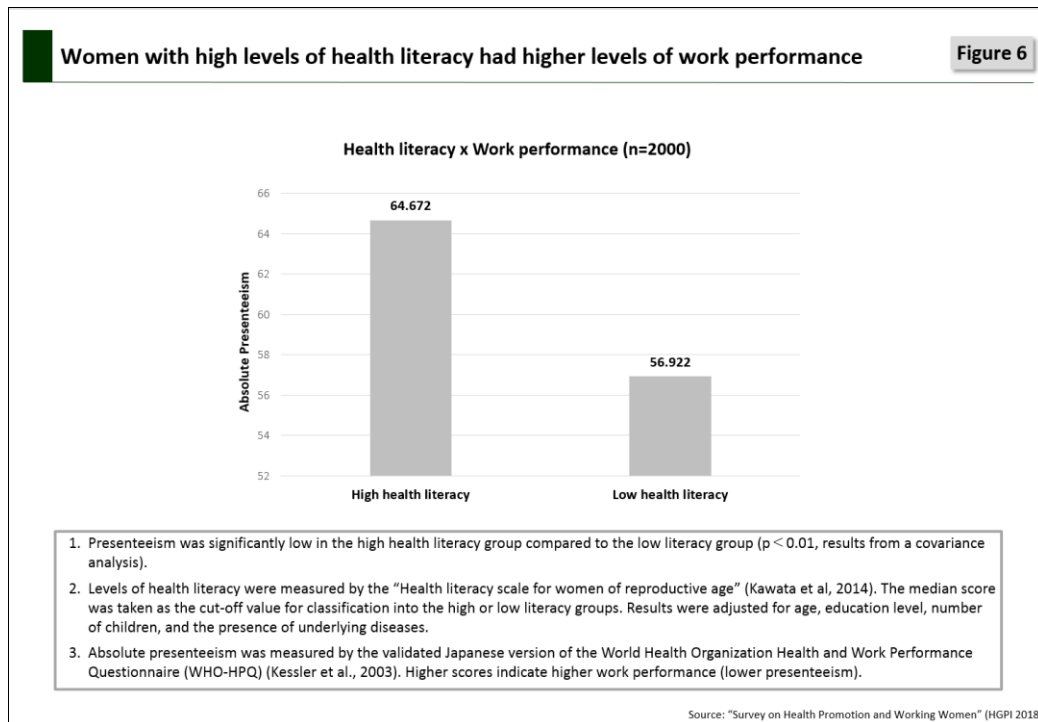
III. Results

A) High health literacy was associated with high work performance

- Nearly half (45%) of women reported that their work performance dropped to less than half of their usual performance due to premenstrual syndrome (PMS) or menstruation associated symptoms (Figure 4). Similarly, about half (46%) of women reported that their work performance dropped to less than half of their usual performance due to menopausal symptoms or disorders (Figure 5).

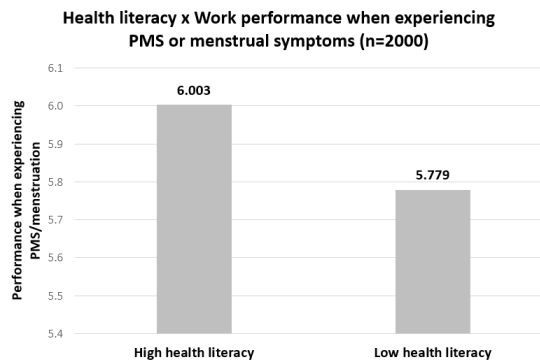


- Survey respondents were classified into two groups based on whether they were judged to have high or low health literacy. Work performance was significantly higher among women with high levels of health literacy compared to those with low literacy (when comparing self-reported performance over the previous month) (Figure 6). Furthermore, the high literacy group was also less likely to experience decreased work performance during times of PMS or menstruation, or due to menopausal symptoms or disorders (Figure 7 & 8). Work performance while experiencing PMS/menstruation or menopausal symptoms had a significant correlation with the scale item "knowledge of the female body" on the health literacy scale (Figure 9 & 10).



Women with high levels of health literacy were more likely to maintain their work performance during times of PMS or menstrual symptoms

Figure 7

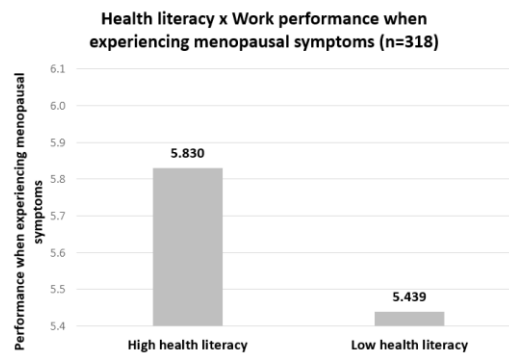


1. Presenteeism when experiencing PMS or menstrual symptoms* was significantly low among women with high levels of health literacy compared to those with low levels of health literacy ($p < 0.01$, results from a covariance analysis).
* Premenstrual Syndrome (PMS) and menstrual symptoms (pain or discomfort during menstruation, or other related symptoms such as abnormal bleeding).
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups. Results were adjusted for age, education level, number of children, and the presence of underlying diseases.
3. Work performance was self rated between 0-10, with 10 being usual performance.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Women with high levels of health literacy were more likely to maintain their work performance during times of menopausal symptoms or disorders

Figure 8



1. Presenteeism when experiencing menopausal symptoms or disorders* was significantly low among women with high levels of health literacy compared to those with low levels of health literacy ($p < 0.01$, results from a covariance analysis).
* "Menopausal symptoms" refers to various the symptoms that may appear during menopause (including the five years before and after menopause) such as hot flashes, sweating, and so on. These symptoms are not accompanied by other diseases. If the symptoms are so severe that they impact the woman's daily life, she may be considered to have a menopausal disorder.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups. Results were adjusted for age, education level, number of children, and the presence of underlying diseases.
3. Work performance was self rated between 0-10, with 10 being usual performance.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

“Knowledge of the female body” was significantly associated with work performance when experiencing PMS or menstrual symptoms

Figure 9

Analysis by health literacy scale category

Dependent variable: Work performance when experiencing PMS or menstruation

	Difference in average value	Standard error (SE)	p-Value	95% Confidence Interval	
				Lower limit	Upper limit
1. Women’s choices and practices related to health information	.038	.145	.792	-.246	.322
2. Self-care during menstruation	-.112	.144	.437	-.395	.171
3. Knowledge of the female body	.388*	.145	.008	.102	.673
4. Sexual health discussions with partners	.192	.145	.186	-.093	.478

1. Work performance during PMS or menstrual symptoms* was significantly high among women with higher scores for “Knowledge of the female body” on the health literacy scale for women of reproductive age (Kawata et al, 2014), compared to those with lower scores (p < 0.01, results from a covariance analysis).
*Premenstrual Syndrome (PMS) and menstrual symptoms (pain or discomfort during menstruation, or other related symptoms such as abnormal bleeding)
2. Results are adjusted for age, education level, number of children, and presence of underlying diseases.

Source: “Survey on Health Promotion and Working Women” (HGPI 2018)

“Knowledge of the female body” was significantly associated with work performance when experiencing menopausal symptoms or disorders

Figure 10

Analysis by health literacy scale category

Dependent variable: Work performance during menopausal symptoms

	Difference in average value	Standard error (SE)	p-Value	95% Confidence Interval	
				Lower limit	Upper limit
1. Women’s choices and practices related to health information	-.274	.280	.329	-.824	.277
2. Self-care during menstruation	.054	.281	.847	-.498	.606
3. Knowledge of the female body	.879*	.283	.002	.322	1.435
4. Sexual health discussions with partners	.192	.283	.498	-.364	.747

1. Work performance during menopausal symptoms or disorders* was significantly high among women with higher scores of “Knowledge of the female body” on the Health literacy scale for women of reproductive age (Kawata et al, 2014), compared to those with lower scores (p < 0.01, results from a covariance analysis).
**“Menopausal symptoms” refers to various the symptoms that may appear during menopause (including the five years before and after menopause) such as hot flashes, sweating, and so on. These symptoms are not accompanied by other diseases. If the symptoms are so severe that they impact the woman’s daily life, she may be considered to have a menopausal disorder.
2. The results discussed here are based on answers from a selection of survey respondents who were all over 40 years of age and reported that they had experienced menopausal symptoms or disorders.
3. Results were adjusted for age, education level, number of children, and presence of underlying diseases.

Source: “Survey on Health Promotion and Working Women” (HGPI 2018)

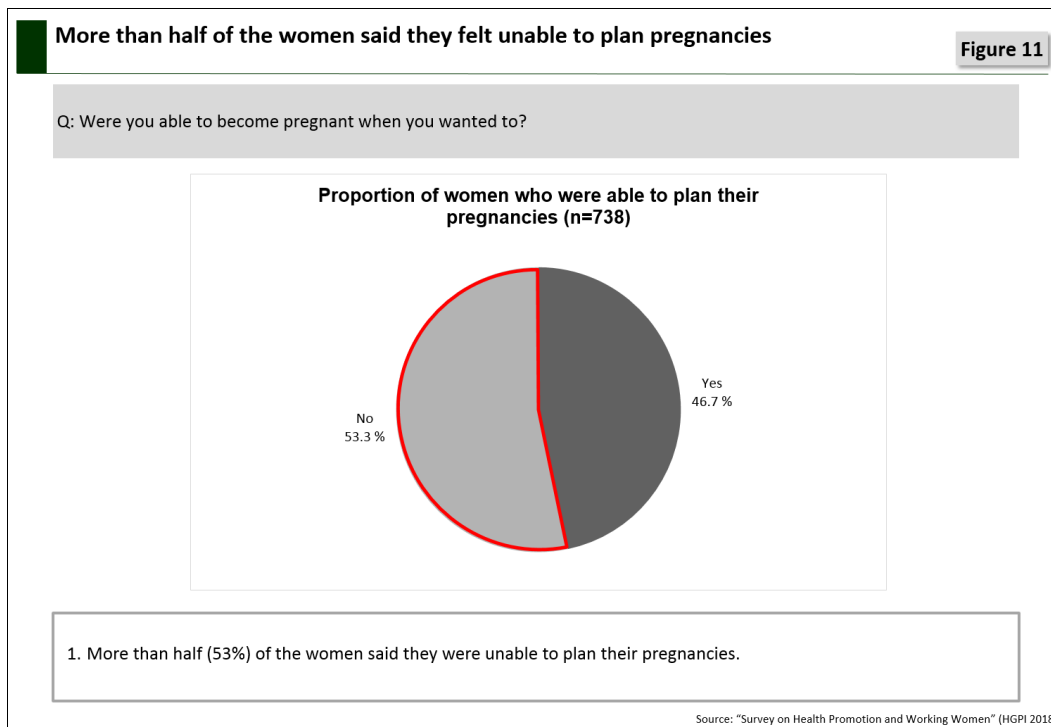
Interpretations

- ✓ It revealed that many women feel that their work performance is affected by PMS/menstrual symptoms or menopausal symptoms/disorders. Results showing that women with high health literacy are more likely to maintain work performance levels while experiencing PMS or menstrual/menopausal symptoms highlight the need to reinforce efforts to improve health literacy among women.

B) High health literacy was associated with being able to plan pregnancies and the use of infertility treatment

Planned pregnancies

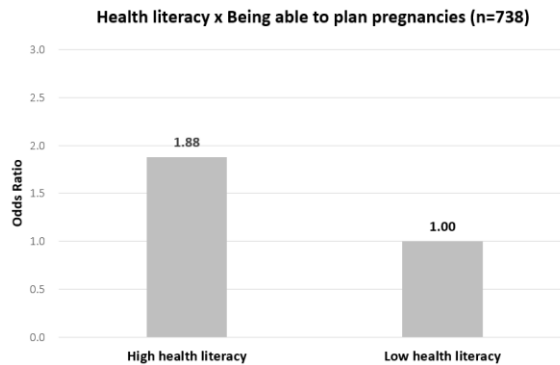
- More than half (53.3%) of the women in this study reported that they felt unable to plan their pregnancies (Figure 11).



- Women with high health literacy levels were 1.9 times more likely to report being able to plan their pregnancies, compared to those with low health literacy (Figure 12). There was a significant correlation between “Being able to plan pregnancies” and the “Knowledge of the female body” on the health literacy scale (Figure 13).

Women with high levels of health literacy were more likely to be able to plan pregnancies

Figure 12



1. The high health literacy group was about 1.9 times more likely to report being able to plan pregnancies, compared to the low health literacy group ($p < 0.01$, results from a univariate logistic regression analysis).
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups. Results were adjusted for age and education level.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

"Knowledge of the female body" was significantly associated with planned pregnancies

Figure 13

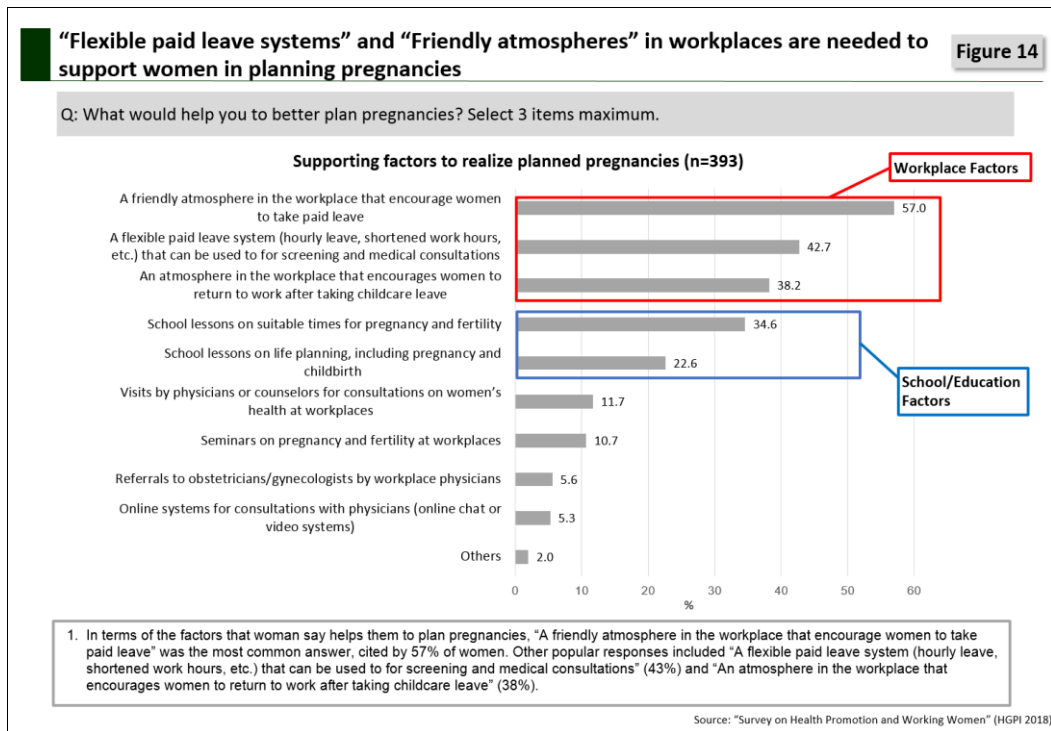
	p-Value	Exp (B)	95% Confidence Interval (CI)	
			Lower limit	Upper limit
1. Women's choices and practices related to health information	.543	1.142	.744	1.753
2. Self-care during menstruation	.610	1.098	.766	1.576
3. Knowledge of the female body	.004	1.905	1.224	2.966
4. Sexual health discussions with partners	.547	.889	.606	1.304

1. There was a significant correlation between "Being able to plan pregnancies" and "Knowledge of the female body" on the Health literacy scale ($p < 0.01$, results from a univariate logistic regression analysis). Results were adjusted by age and education level.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

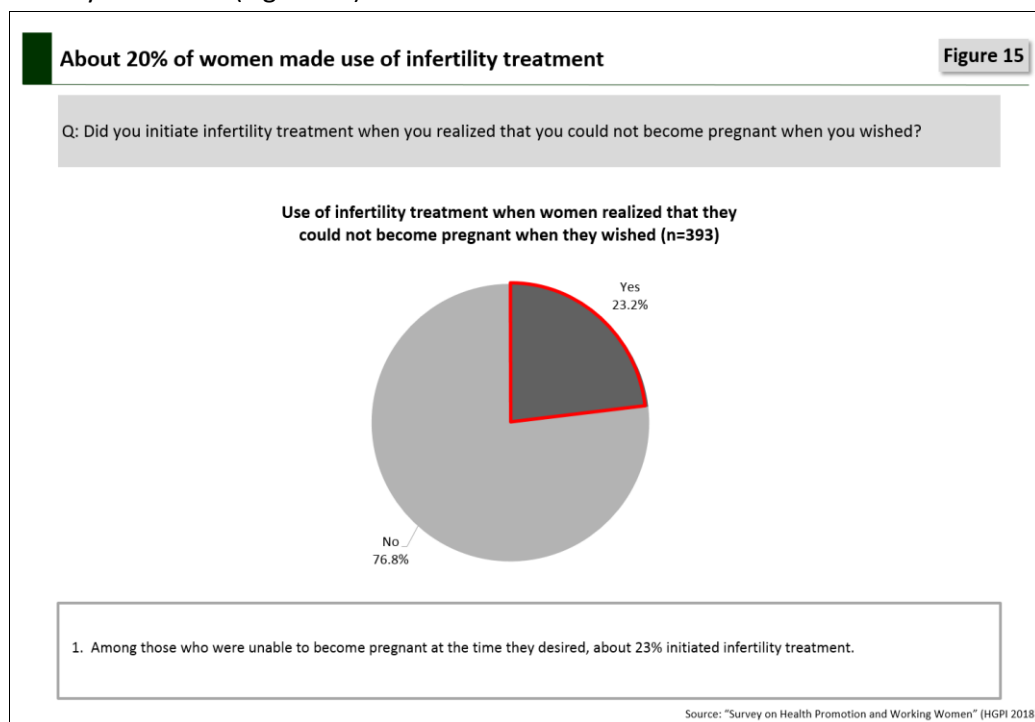
- In terms of the factors that woman say helps them to plan pregnancies, "A friendly atmosphere in the workplace that encourage women to take paid leave" was the most common answer, cited by 57% of women. Other popular responses included "A flexible paid leave system (hourly leave, shortened work hours, etc.) that can be used to for screening and medical consultations" (43%) and "An atmosphere in the workplace that encourages women to return to work after taking childcare leave" (38%).

- Need for school education was also high, as shown by the popularity of answers such as "School lessons on suitable times for pregnancy and fertility," (34%) and "Schools lessons on life planning, including pregnancy and childbirth" (23%) (Figure 14).

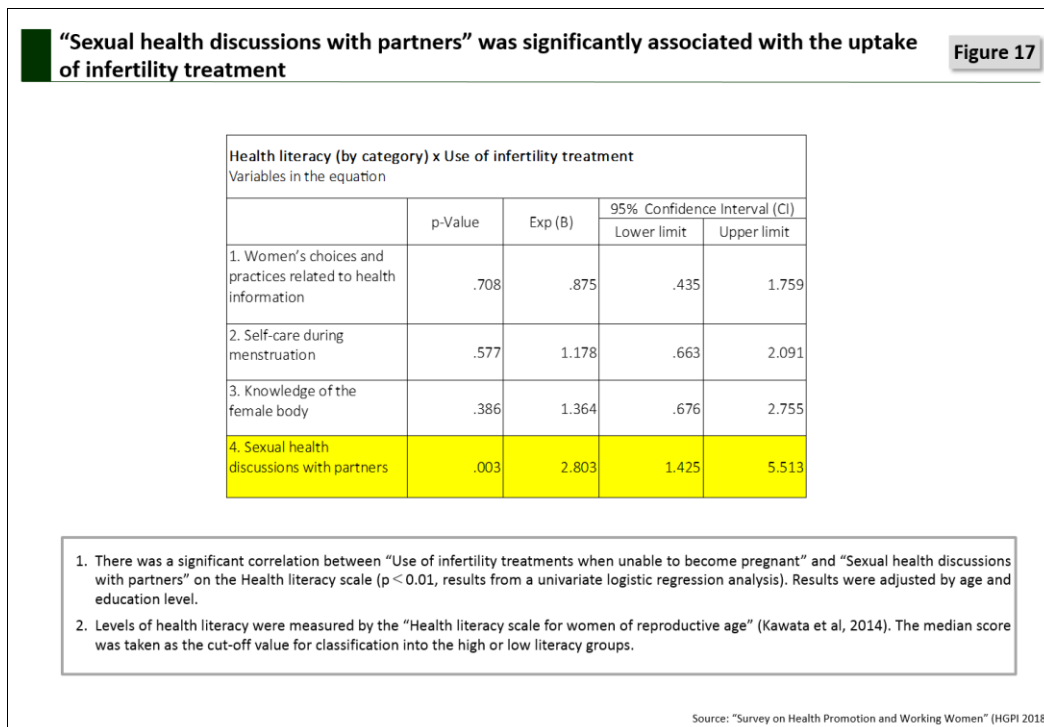
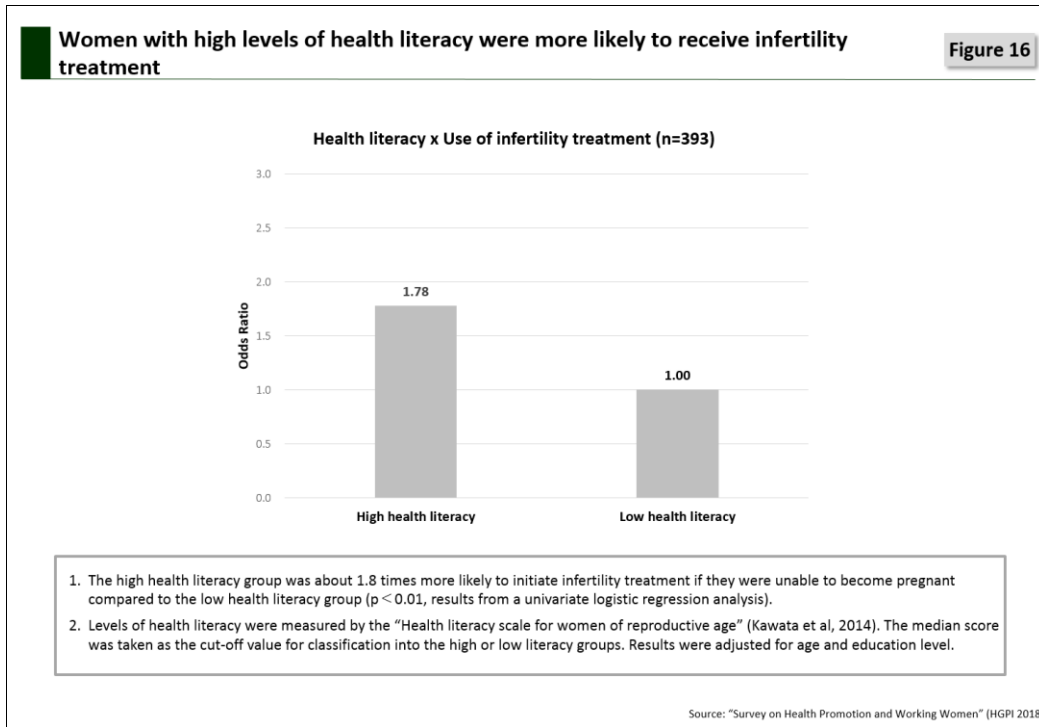


Use of infertility treatment among women who were unable to become pregnant

- Among those who were unable to become pregnant at the time they desired, only 23.2% initiated infertility treatment (Figure 15).



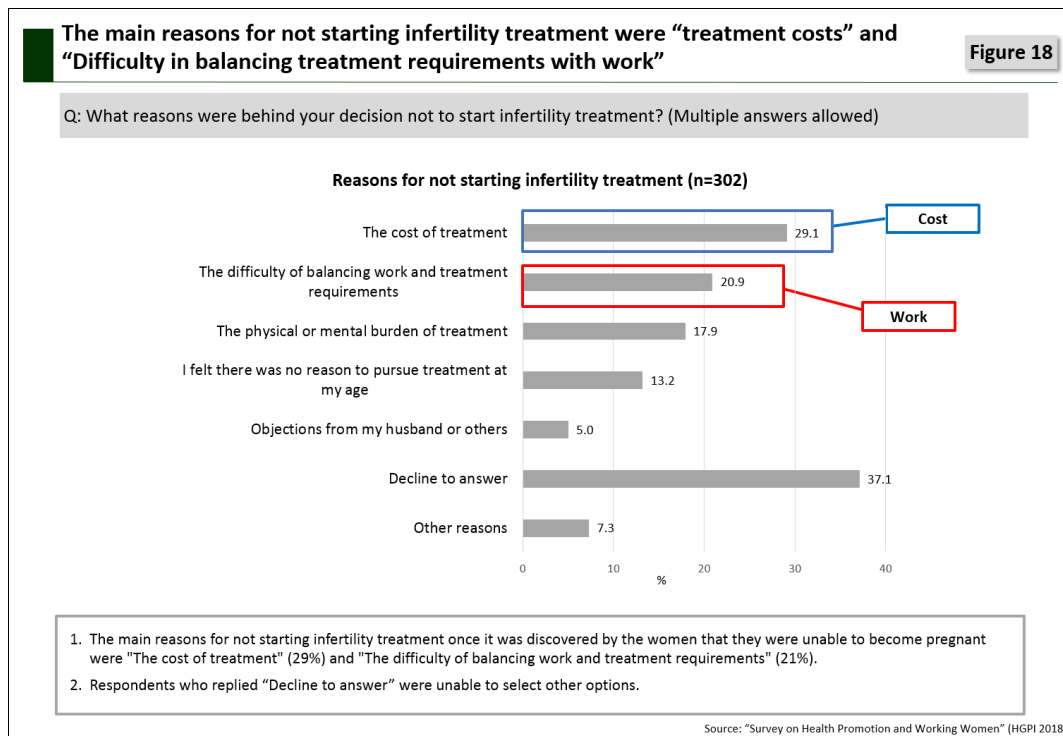
- The high health literacy group was about 1.8 times more likely to initiate infertility treatment compared to the low health literacy group (Figure 16). There was a significant correlation between “Use of infertility treatment” and “Sexual health discussions with partners” on the health literacy scale (Figure 17).



Interpretations

- ✓ The association between “Being able to plan pregnancies” and “knowledge of the female body” indicates the importance of providing information on such matters as the mechanisms of pregnancy.
- ✓ Women reported the desire to have flexible work systems and work environments that encourage women to utilize such systems in order to make it easier to plan pregnancies. These results indicate the need for efforts by companies for institutional reforms and to improve work environments. Results also highlighted the need for school education to provide women with opportunities to learn about pregnancy and to think about their own life plans.

- The main reasons for not starting infertility treatment once it was discovered by the women that they were unable to become pregnant were "The cost of treatment" (29%) and "The difficulty of balancing work and treatment requirements" (21%) (Figure 18).

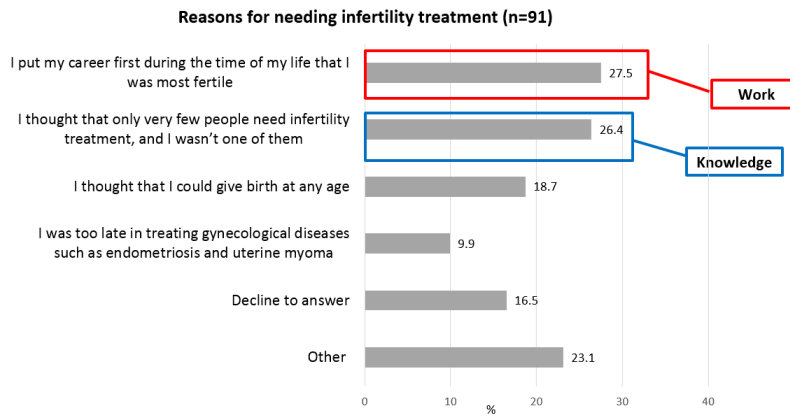


- Main reasons for infertility included "I put my career first during the time of my life that I was most fertile," (28%) and "I thought that only very few people need infertility treatment, and I wasn't one of them" (26%) (Figure 19).

The main reasons that infertility treatment was needed was being unable to balance pregnancy and work, and being previously unaware of treatment options

Figure 19

Q: What was the reason why you decided you needed infertility treatment?



1. The main reasons for needing infertility treatment included "I put my career first during the time of my life that I was most fertile" (28%) and "I (previously) thought that only very few people need infertility treatment, and I wasn't one of them" (26%)
2. Respondents who replied "Decline to answer" were unable to select other options.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

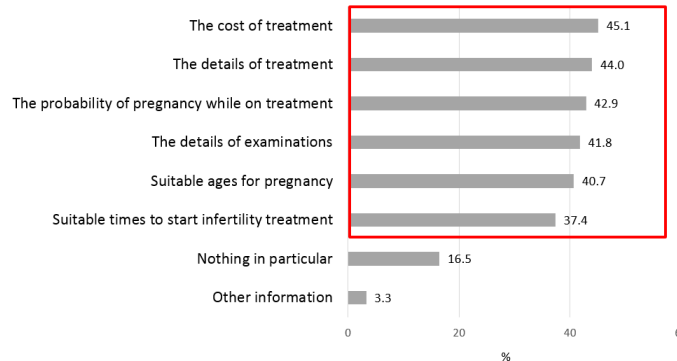
➤ Regarding the information women wanted to know before starting infertility treatment, common answers included "The cost of treatment," "The details of treatment," "The probability of pregnancy while on treatment," "The details of examinations," "Suitable ages for pregnancy," and "Suitable times to start infertility treatment." All of these answers were selected by about 40% of the respondents (Figure 20).

Women wanted to know more about infertility treatment in general, including about its cost, examinations for infertility treatment, and the way that pregnancy happens

Figure 20

Q: What do you wish you knew more about before starting infertility treatment? (Multiple answers allowed)

Information that women wished they knew before starting infertility treatment (n=91)



1. Many women wanted to know more the following items before starting infertility treatment: "The cost of treatment", "The details of treatment", "The probability of pregnancy while on treatment", "The details of examinations", "Suitable ages for pregnancy", "Suitable times to start infertility treatment", all of which were selected by about 40% of respondents.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Interpretations

- ✓ Results suggest that decisions to start infertility treatment are impacted by whether or not women have partners who understand the issue of infertility and can discuss the matter with them.
- ✓ Among those who initiated infertility treatment, many wanted to know more about pregnancy and infertility treatment in general, including the cost of treatment, details about examinations, and the mechanisms of pregnancy. Many women stated that they thought “it is rare for people to need infertility treatment.” Lack of knowledge was one of the impeding factors that caused people to overlook the opportunity for treatment. Both women and men need greater access to information on this issue in order to better plan out their lives.
- ✓ There was a certain number of women who stated that they could not start infertility treatment due to difficulties in balancing treatment requirements with work. There were also women who stated that they put their work priorities first during the time of life when they were most fertile. These results further underscore the need to promote the creation of women-friendly work environments that can help women balance these life events with work as they wish.

C) Women with high levels of health literacy were more likely to seek treatment for health symptoms that are specific to women

Menstrual abnormalities

- About half (50%) of women experienced menstrual abnormalities⁹ either at present or in the past (Figure 21), but 45% of them did “Nothing in particular” that was the most common answer for them (Figure 22). More than half of them (53%) visited an obstetrician/gynecologist after 4 months or more since the onset of symptoms (Figure 23).

⁹ The following symptoms were regarded as menstrual abnormalities:

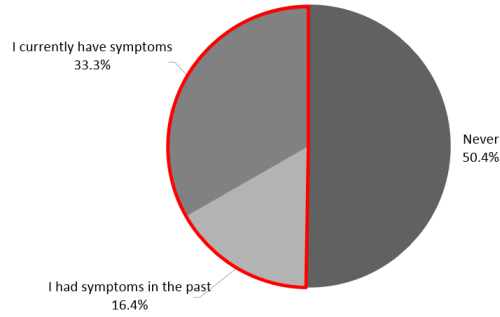
- Irregular and unpredictable menstrual cycles
- Short cycles (within 24 days)
- Long cycles (over 39 days)
- Missed periods over several months
- Insufficient bleeding at menstruation
- Excessive bleeding at menstruation
- Abnormal period length lasting within 2 days
- Abnormal period length lasting more than 8 days
- Strong symptoms during menstruation (lower abdominal pain, lower back pain, abdominal bloating, nausea, headache, fatigue/weakness, loss of appetite, irritability, diarrhea, depression, etc.)
- Abnormal bleeding

About half of women experienced menstrual abnormalities

Figure 21

Q: Have you ever experienced menstrual abnormalities either at present or in the past?

Experience of menstrual abnormalities (n=2000)



- About half (50%) of women experienced menstrual abnormalities* either at present or in the past
 *Irregular and unpredictable menstrual cycles, short or long cycles (within 24 days or over 39 days), missed periods over several months, insufficient or excessive bleeding at menstruation, abnormal period length lasting within 2 days or more than 8 days, strong symptoms during menstruation (lower abdominal pain, lower back pain, abdominal bloating, nausea, headache, fatigue/weakness, loss of appetite, irritability, diarrhea, depression, etc.), and abnormal bleeding

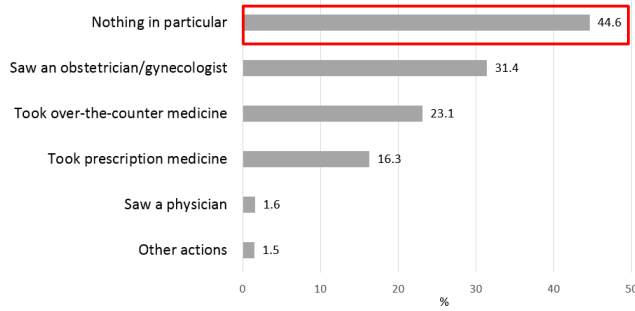
Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Half of women did "Nothing in particular" to address menstrual abnormalities

Figure 22

Q: What did you do to address symptoms when you experienced menstrual abnormalities? (Multiple answers allowed)

Coping behaviours related to menstrual abnormalities (n=992)



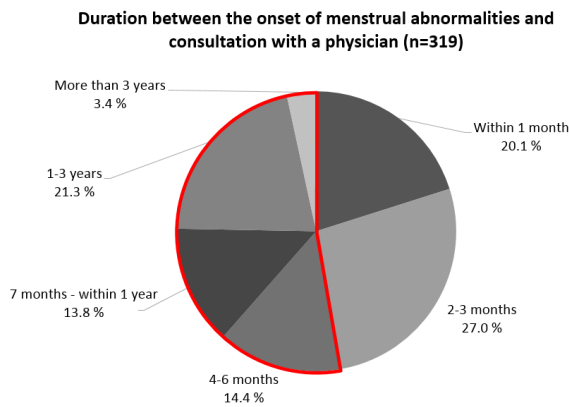
- About 45% of women did "Nothing in particular" to deal with menstrual abnormalities.* This was the most common answer.
 *Irregular and unpredictable menstrual cycles, short or long cycles (within 24 days or over 39 days), missed periods over several months, insufficient or excessive bleeding at menstruation, abnormal period length lasting within 2 days or more than 8 days, strong symptoms during menstruation (lower abdominal pain, lower back pain, abdominal bloating, nausea, headache, fatigue/weakness, loss of appetite, irritability, diarrhea, depression, etc.), and abnormal bleeding
- Respondents who replied "Nothing in particular" were unable to select other options.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Half of women saw a doctor after 4 months or more of experiencing menstrual abnormalities

Figure 23

Q: When did you first see a doctor after having abnormal symptoms related to menstruation?



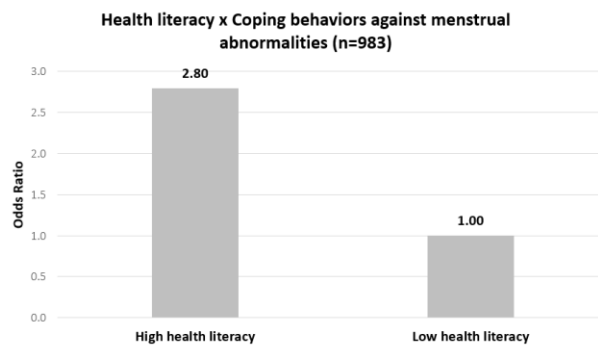
- More than half of women (about 53%) visited a doctor after 4 months or more since the onset of symptoms related to menstrual abnormalities.* This figure should be interpreted with caution as the severity of symptoms and the suitable timing for consultations vary depending on the person.
*Irregular and unpredictable menstrual cycles, short or long cycles (within 24 days or over 39 days), missed periods over several months, insufficient or excessive bleeding at menstruation, abnormal period length lasting within 2 days or more than 8 days, strong symptoms during menstruation (lower abdominal pain, lower back pain, abdominal bloating, nausea, headache, fatigue/weakness, loss of appetite, irritability, diarrhea, depression, etc.), and abnormal bleeding

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

- Women with high levels of health literacy were approximately 2.8 times more likely to undertake coping behaviors for menstrual abnormalities, including taking medicines (prescribed or over the counter) or seeing a doctor (Figure 24).

Women with high levels of health literacy were more likely to undertake coping behaviors against menstrual abnormalities

Figure 24

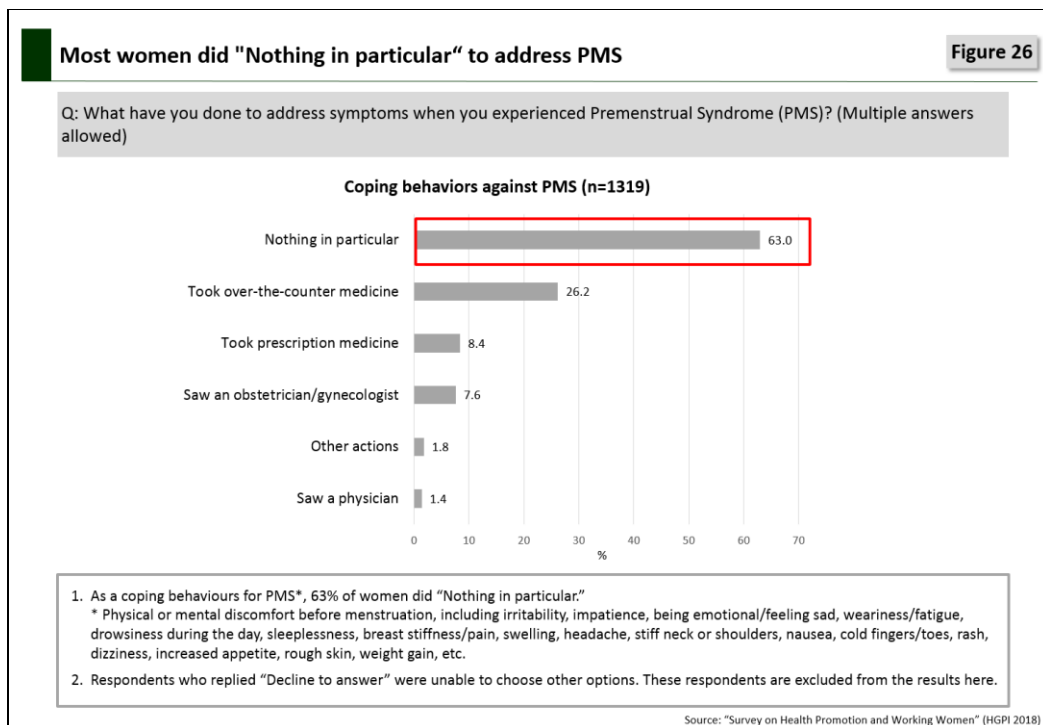
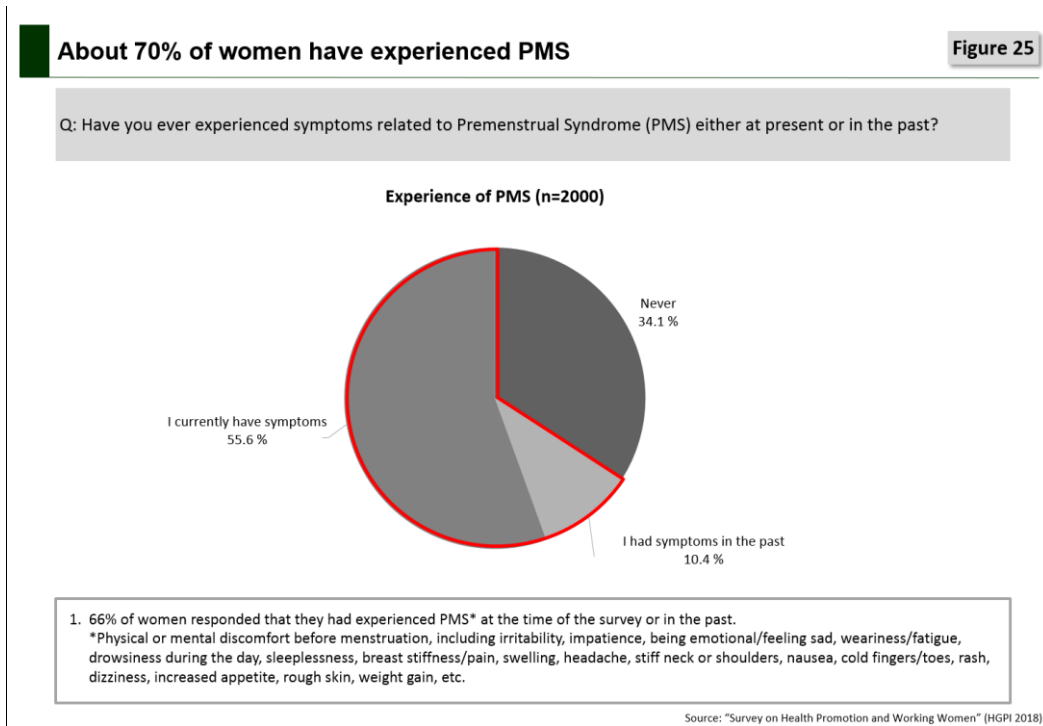


- The high health literacy group was 2.8 times more likely to undertake coping behaviors* against menstrual disorders,** compared to the low health literacy group ($p < 0.01$, results from a univariate logistic regression analysis).
*Coping behaviors include taking medicines (prescribed or over-the-counter), or seeing a doctor (obstetrician/gynecologist/physician).
**Symptoms include Irregular and unpredictable menstrual cycles, short cycles (within 24 days) or long cycles (over 39 days), missed periods over several months, excessive or insufficient bleeding at menstruation, abnormal period length lasting between 2 days or more than 8 days, strong symptoms during menstruation (lower abdominal pain, lower back pain, abdominal bloating, nausea, headache, fatigue/weakness, loss of appetite, irritability, diarrhea, depression, etc.), or abnormal bleeding
- Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups. Results were adjusted for age, education level, and number of children.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Premenstrual syndrome (PMS)

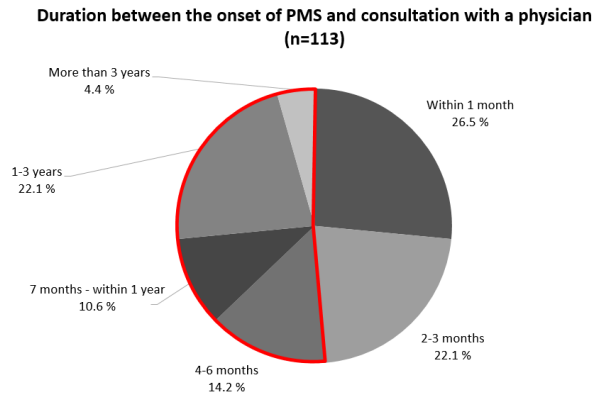
- About 66% of women had experienced PMS at the time of the survey or in the past (Figure 25). Regarding coping behaviors, however, 63% of respondents reported that they did "Nothing in particular" to address their PMS (Figure 26). More than half (51%) visited an obstetrician/gynecologist after 4 months or more of experiencing regular PMS symptoms (Figure 27).



More than half of women visited a doctor after 4 months or more of experiencing PMS symptoms

Figure 27

Q: How long did you wait to see a doctor after experiencing symptoms related to Premenstrual Syndrome (PMS)?



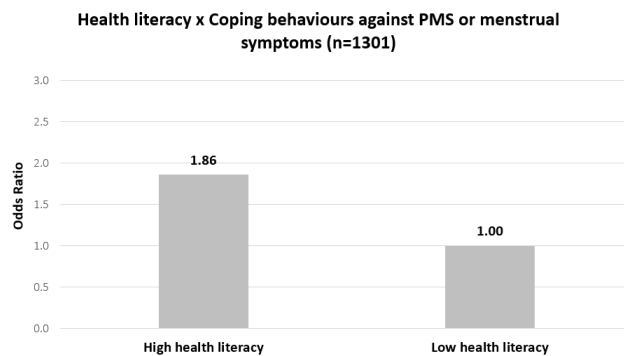
1. More than half of women (about 51%) visited a doctor after 4 months or more since the onset of PMS* symptoms. This figure should be interpreted with caution as the severity of symptoms and the suitable timing for consultations vary depending on the person.
 *Physical or mental discomfort before menstruation, including irritability, impatience, being emotional/feeling sad, weariness/fatigue, drowsiness during the day, sleeplessness, breast stiffness/pain, swelling, headache, stiff neck or shoulders, nausea, cold fingers/toes, rash, dizziness, increased appetite, rough skin, weight gain, etc.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

- Women with high levels of health literacy were approximately 1.9 times more likely to undertake coping behaviors for PMS, including taking medicines (prescribed or over the counter) or seeing a doctor (Figure 28).

Women with high levels of health literacy were more likely to undertake coping behaviors against PMS or menstrual symptoms

Figure 28

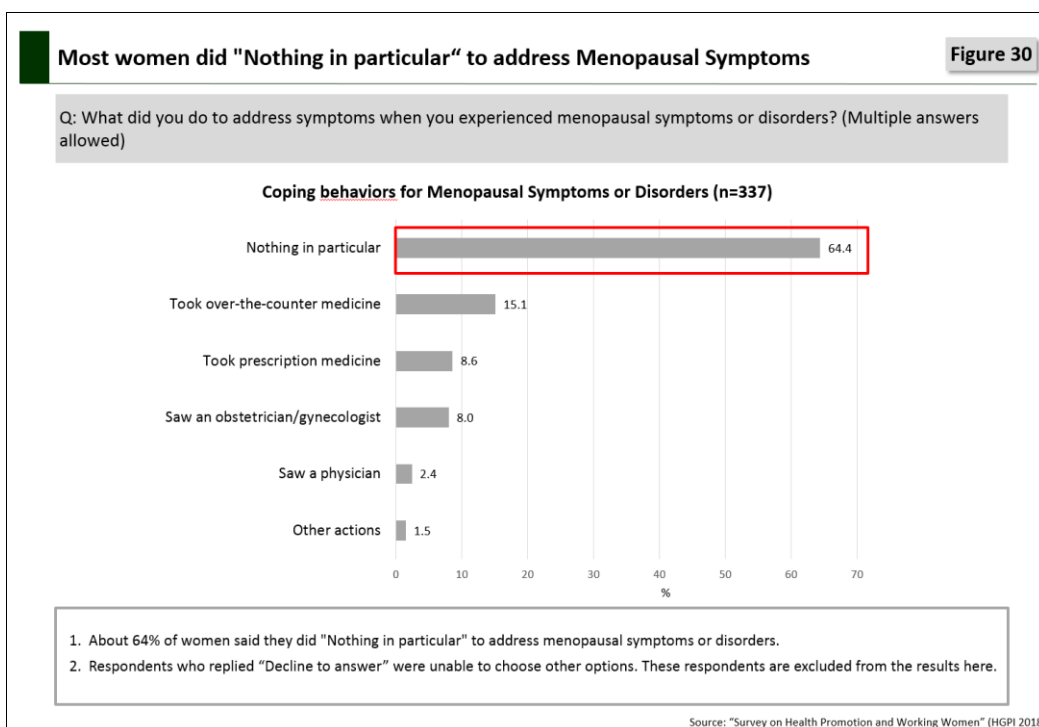
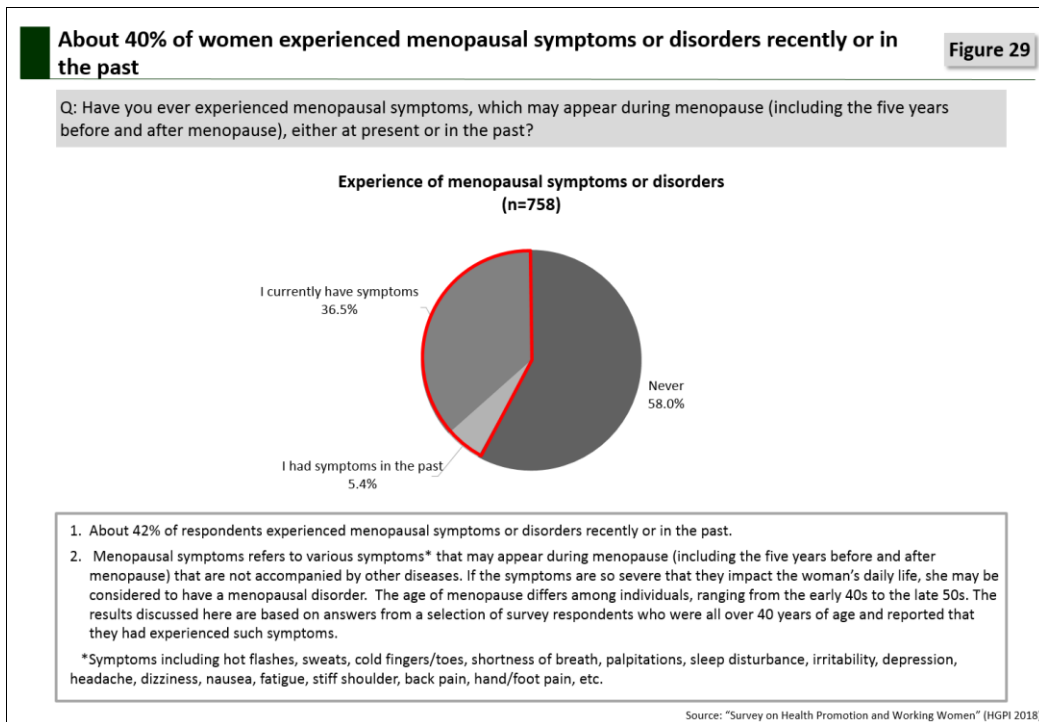


1. Women with high levels of health literacy were approximately 1.9 times more likely to undertake coping behaviors* against premenstrual syndrome (PMS),** compared to those with low health literacy ($p < 0.01$, results from a univariate logistic regression analysis).
 * Coping behaviors include taking medicines (prescribed or over-the-counter) or seeing a doctor (obstetrician/gynecologist/physician).
 ** Physical or mental discomforts before menstruation including irritability, impatience, being emotional/feeling sad, weariness/fatigue, drowsiness during the day, sleeplessness, breast stiffness/pain, swelling, headache, stiff neck of shoulders, nausea, cold fingers/toes, rash, dizziness, increased appetite, rough skin, weight gain, etc.
 2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups. Results were adjusted for age, education level, and number of children.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Menopausal symptoms or disorders

- About 42% of respondents stated that they had experienced menopausal symptoms or disorders recently or in the past (Figure 29). However, 64% said they did "Nothing in particular" to address these symptoms (Figure. 30). Approximately 63% of women visited an obstetrics/gynecology department after 4 months or more of experiencing regular symptoms (Figure. 31).

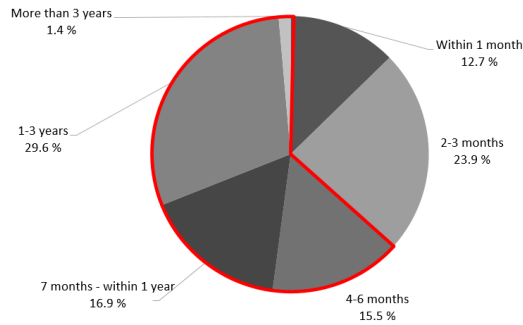


More than 60% of women visited a doctor after 4 months or more since the onset of menopausal symptoms or disorders

Figure 31

Q: When did you see a doctor after having menopausal symptoms or disorders?

Duration between the onset of menopausal symptoms/disorders and consultation (n=71)



1. Approximately 63% of women visited a doctor after 4 months or more of experiencing menopausal symptoms or disorders. This result should be interpreted with caution, as the severity of symptoms and the suitable timing for a consultation may vary depending on the individual.

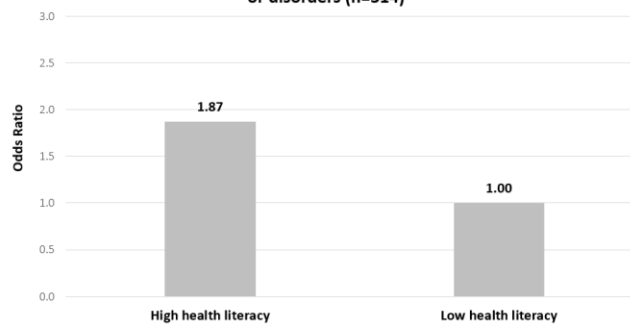
Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

- Women with high levels of health literacy were approximately 1.9 times more likely to undertake coping behaviors for menopausal symptoms or disorders, including taking medicines (prescribed or over the counter) or seeing a doctor (Figure 32).

Women with high levels of health literacy were more likely to undertake coping behaviors against menopausal symptoms or disorders

Figure 32

Health literacy x Coping behaviors against Menopausal symptoms or disorders (n=314)



1. The high health literacy group was about 1.9 times more likely to take coping behaviors* against menopausal symptoms or disorders,** compared to the low health literacy group ($p < 0.01$, results from a univariate logistic regression analysis). Results were adjusted for age, education level, and number of children.

*Coping behaviors include taking medicines (prescribed or over-the-counter), or seeing a doctor (obstetrician/gynecologist/physician)

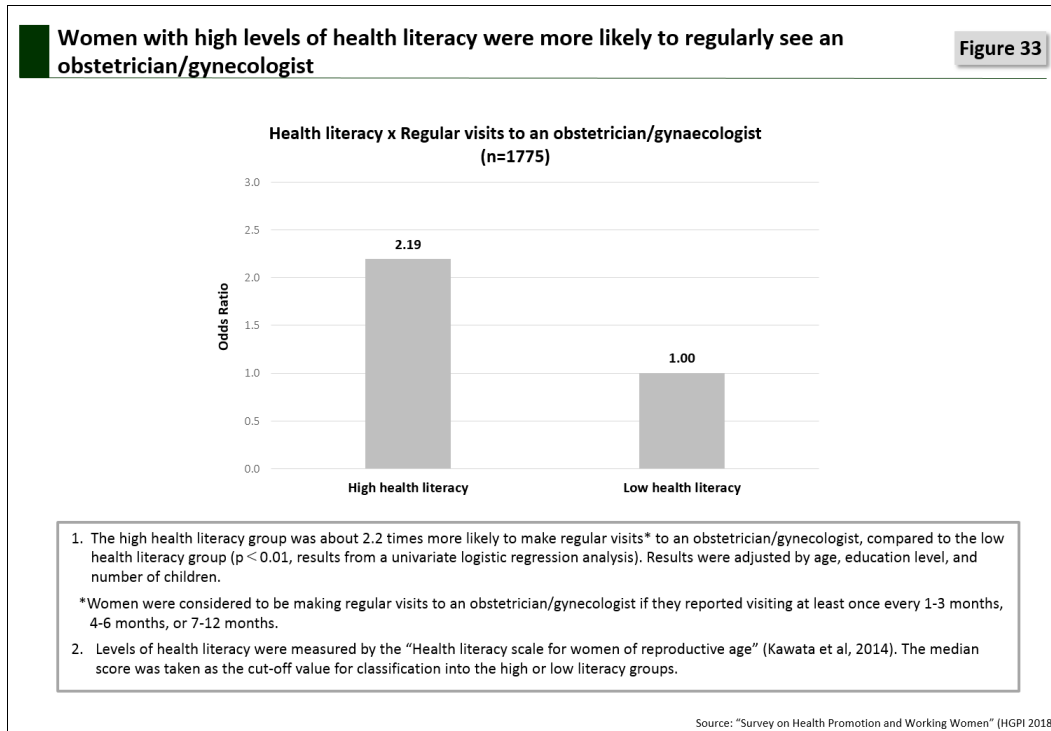
**Symptoms that occur around menopause (5 years before and after menopause) include hot flashes, sweats, cold fingers/toes, shortness of breath, palpitations, sleep disturbance, irritability, depression, headache, dizziness, nausea, fatigue, stiff shoulder, back pain, hand/foot pain, and so on. These are not accompanied by other diseases. If a woman suffers from severe symptoms that affect her daily life, she may be considered to have a menopausal disorder.

2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Regular visits to an obstetrician/gynecologist and self-care

- The high health literacy group was 2.2 times more likely to regularly see an obstetrician/gynecologist (Figure 33).



- Looking at self-care activities related to women's health, about half (50%) of women with high levels of health literacy "Receive regular screenings for gynecological cancers (breast, cervical etc.)." This was the most commonly performed self-care activity for these women. Other common activities included "Use of health applications (mobile apps) to track my menstrual cycle", "Visiting an obstetrician/gynecologist immediately whenever I have symptoms (abnormal bleeding, menstrual disorders, etc.)", and "Use of contraceptives (condoms, pills¹⁰, etc.) to avoid unwanted pregnancy,". On the other hand, more than half of women with low literacy levels were doing "Nothing in particular" (55%). This was the most common answer among these women (Figure 34).

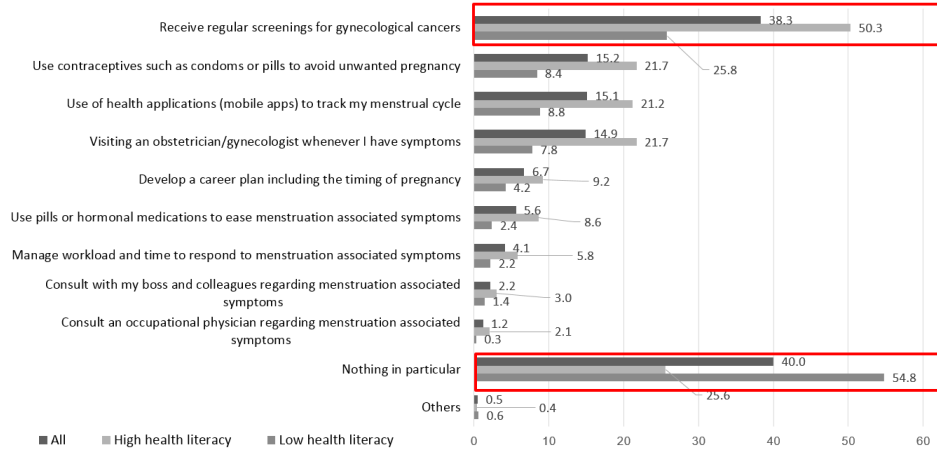
¹⁰ Oral contraceptives can suppress the secretion of female hormones. They are highly effective contraceptives when correctly administered. They can also be used to reduce menstrual pain or to correct menstrual dysfunctions.

The high health literacy group was more likely to undertake self-care activities, while half of the low literacy group did “Nothing in particular”

Figure 34

Q: Are there any activities that you do frequently related to the management of women’s health issues?
(Multiple answers possible)

Health literacy x Self-care activities (n=2000)



1. Levels of health literacy were measured by the “Health literacy scale for women of reproductive age” (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups.

Source: “Survey on Health Promotion and Working Women” (HGPI 2018)

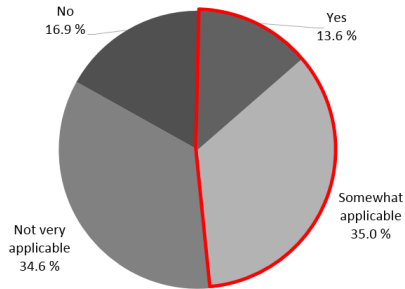
- Regarding coping behaviors, this study asked questions on “Women’s choices and practices related to health information” and “Self-care during menstruation.” These questions informed Health Literacy Scale groupings, and results were compared by age group. Age groups differed in terms of the positive response rate for the following factors: “There are specific activities that I regularly do to maintain my health,” “I know my menstrual cycle,” “I can select appropriate information for me from the wealth of information available on women’s health,” and “I can ask questions to health professionals (doctor, nurse, midwife, etc.) when I do not understand his/her advice or guidance” (Figure 35, 36, 37 & 38). Among these four items, a significant difference was observed among age groups for “There are specific activities that I regularly do to maintain my health” and “I know my menstrual cycle.” The percentage of people who selected these answers was about 6.5% less among women aged 18-29 years compared to their senior counterparts in their 30/40s (Figure 35).

Less than half of women undertook self-care activities. Younger women aged 18-29 years undertook self-care at a lower rate than other age groups.

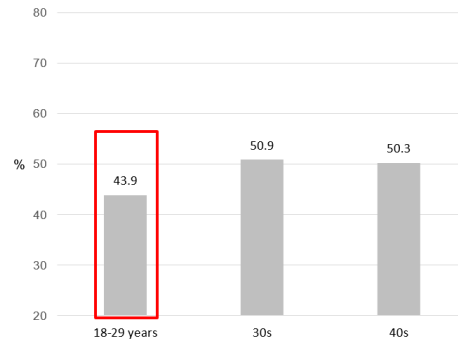
Figure 35

Statement: "There are specific activities that I regularly do to maintain my health"

"There are specific activities that I regularly do to maintain my health" (n=2000)



Women who selected "Yes" or "Somewhat applicable," by age (n=971)



1. About 48% of women are regularly engaged in self-care activities to maintain their health. Younger women aged 18-29 years were relatively less likely to undertake self-care activities compared to their senior counterparts in their 30/40s.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question related to the "1. Women's choices and practices related to health information" category on the Health Literacy Scale.

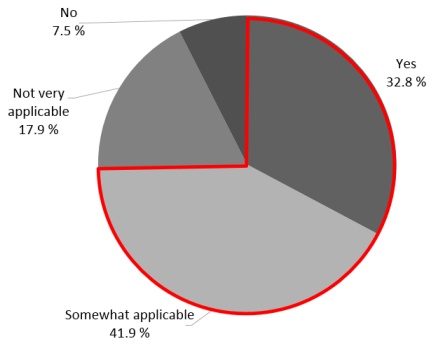
Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

75% of women know their menstrual cycle, but the percentage is lower among younger women aged 18-29 years compared to other age groups

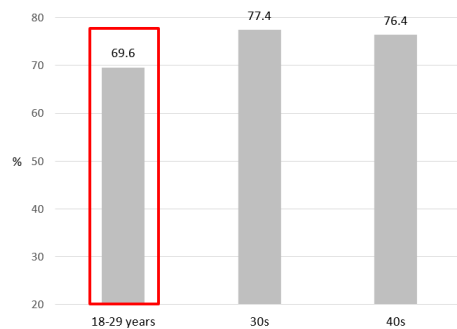
Figure 36

Statement: "I know my menstrual cycle"

"I know my menstrual cycle" (n=2000)



Women who selected "Yes" or "Somewhat applicable," by age (n=1493)



1. Approximately 75% of women responded that they know their menstrual cycle. Younger women aged 18-29 years were relatively less likely to know their menstrual cycle compared to their senior counterparts in their 30/40s.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question related to the "2. Self-care during menstruation" category on the Health Literacy Scale.

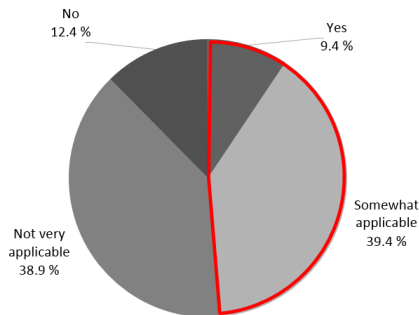
Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Less than half of women were able to discern what information was appropriate for them related to women's health

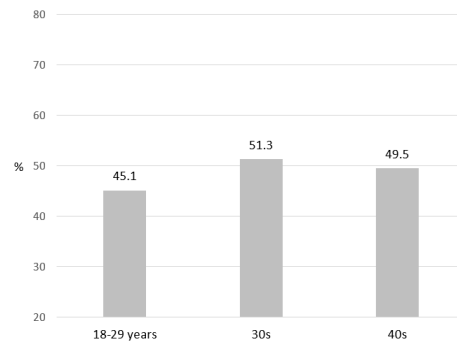
Figure 37

Statement: "I can select appropriate information for me from the wealth of information available on women's health"

I can select appropriate information on women's health (n=2000)



Women who selected "Yes" or "Somewhat applicable," by age (n=975)



1. About 49% of women responded that they can discern the information appropriate to their situation from the wealth of information available on women's health. Women aged 18-29 years seemed to be less capable of selecting appropriate information compared to their senior counterparts in their 30/40s.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question relates to the "1. Women's choices and practices related to health information" category on the Health Literacy Scale.

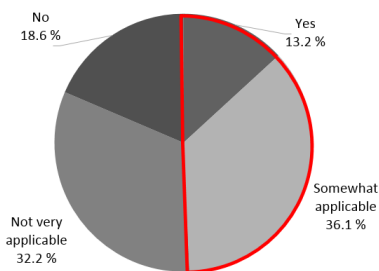
Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Less than half of women said they felt able to ask questions to health professionals when they did not understand health guidance

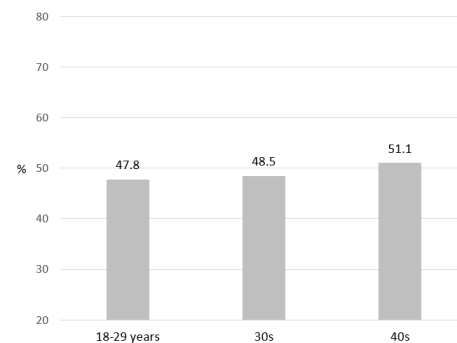
Figure 38

Statement: "I can ask questions to a health professional (doctor, nurse, midwife, etc.) when I do not understand his/her advice or guidance"

I can ask questions to health professionals when I do not understand their advice/guidance (n=2000)



Women who selected "Yes" or "Somewhat applicable," by age (n=985)



1. Approximately 49% of women said that they could ask questions of health professionals (doctor, nurse, midwife, etc.) when they did not understand his/her advice or guidance.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question relates to the "1. Women's choices and practices related to health information" category on the Health Literacy Scale.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

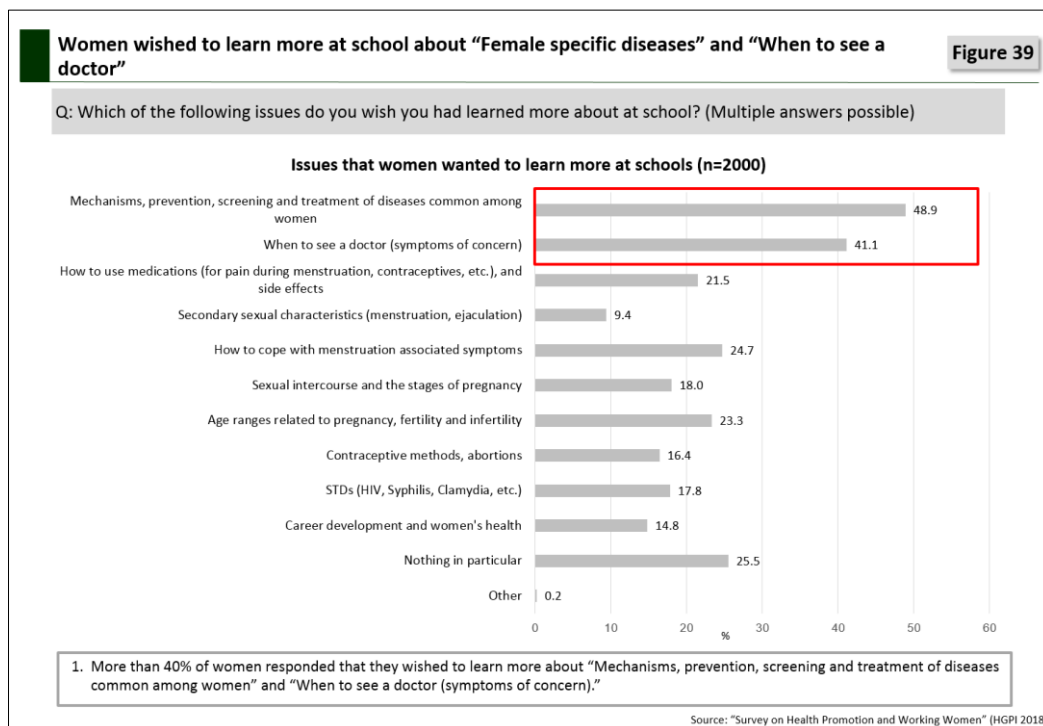
Interpretations

- ✓ There is the possibility that the ability to handle health problems contributes to enhanced work performance. It is critical to provide women with correct information, as there was a more than 10% difference between the high literacy vs. low literacy groups in terms of the uptake of cancer screenings, use of mobile applications to track menstrual cycles, visits to obstetrics/gynecology departments when necessary, and the use of contraceptives to avoid unwanted pregnancies.

- ✓ Younger women aged 18-29 years are less likely to know their own menstrual cycle or take measures to maintain their health compared to women over the age of 30. The proportion of younger women who responded that they felt able to discern what information is appropriate for them related to women’s health was also low. It is important to provide young women with opportunities to learn about women’s health issues from an early age.

D) There is high need for education on the mechanisms, prevention, screening, and treatment of diseases that are common among women, as well as when to consult a doctor about these diseases

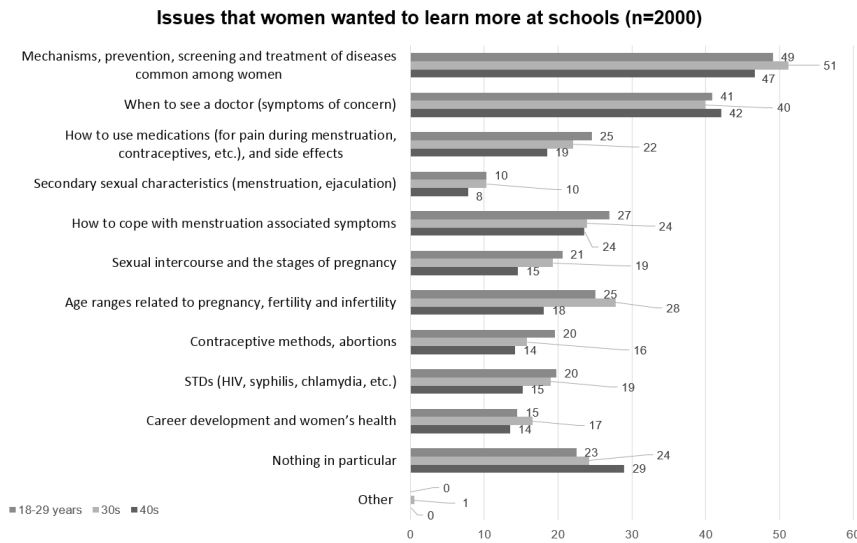
- More than 40% of women responded that they wished they could have learned more in school about the “Mechanisms, prevention, screening and treatment of diseases common among women” and “When to see a doctor (symptoms of concern)” (Figure 39).



<Reference> Regardless of age, women said they wanted to learn more in school about women's health issues and when to see a doctor

Figure 40

Q: Which of the following issues do you wish you had learned more about in school? (Multiple answers possible)

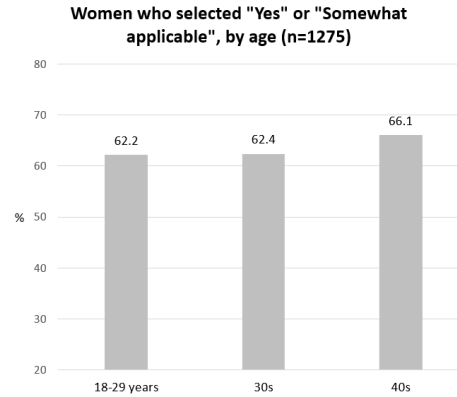
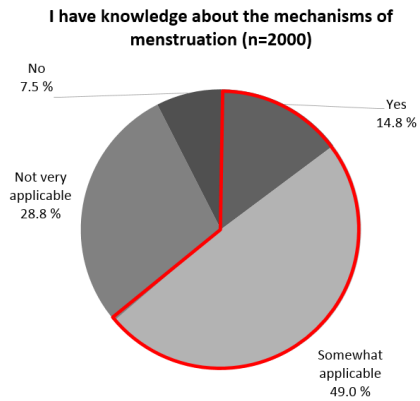


- In terms of knowledge, we compared health literacy scale items related to "Knowledge of the female body" across the different age group. There was a difference between age groups in terms of the number of people who responded "I have knowledge about menstruation," "I have knowledge about the stages of pregnancy," and "I have knowledge about uterine and ovarian diseases" (Figure 41, 42 & 43). Among these three items, there was a significant age-stratified difference for "I have knowledge about uterine and ovarian diseases." About 10% fewer women in the 18-29 and 30-39 age groups selected this answer compared to those in their 40s (Figure 43).

About 65% of women had knowledge about the mechanisms of menstruation

Figure 41

Statement: "I have knowledge about the mechanisms of menstruation"



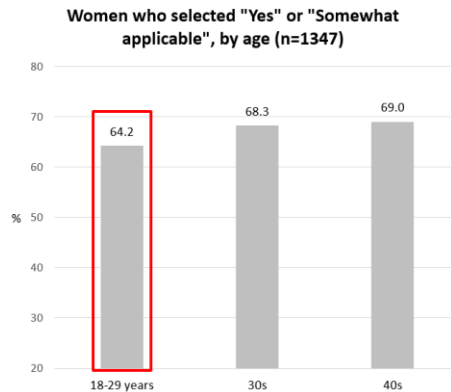
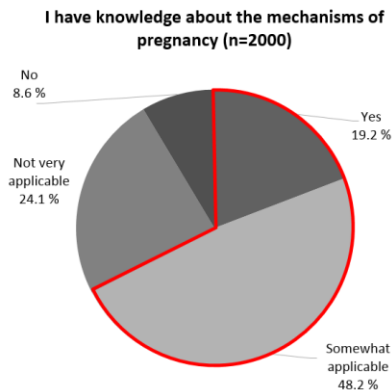
1. About 64% of women indicated that they have knowledge about the mechanisms of menstruation. Women in their 40s were more likely to have such knowledge compared to those aged 18-29 years or 30s.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question is one of the question items of "3. Knowledge of the female body" category on the Health Literacy Scale.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

About 70% of women had knowledge about the mechanisms of pregnancy

Figure 42

Statement: "I have knowledge about the mechanisms of pregnancy"



1. About 67% of women indicated that they have knowledge about the mechanisms of pregnancy. Women aged 18-29 years were less likely to have such knowledge compared to those in their 30/40s.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question is one of the question items of "3. Knowledge of the female body" category on the Health Literacy Scale.

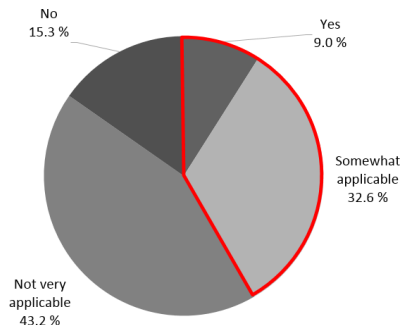
Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

About 40% of women had knowledge about uterine and ovarian diseases, with a lower percentage for younger women (18-29 years/30s)

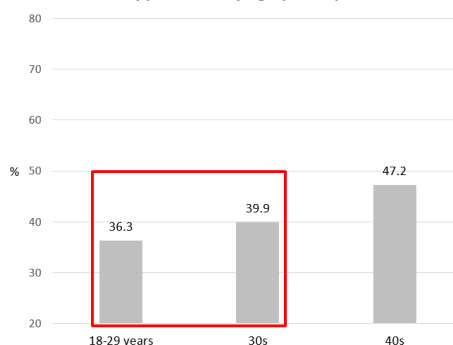
Figure 43

Statement: "I have knowledge about uterine and ovarian diseases"

I have knowledge about uterine and ovarian diseases (n=2000)



Women who selected "Yes" or "Somewhat applicable", by age (n=832)



1. About 42% of women indicated that they have knowledge about uterine and ovarian diseases. Women aged 18-29 years were less likely to have such knowledge compared to those in their 30/40s.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question is one of the question items of "3. Knowledge of the female body" category on the Health Literacy Scale.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

➤ The internet was the main source of information used by women when concerned about women's health. School education and materials were also utilized for some issues such as "Secondary sexual characteristics (menstruation, ejaculation)," "Sexual intercourse, mechanisms of pregnancy," "Suitable times for pregnancy, fertility/infertility," "Means of contraception and abortions," and "Sexually transmitted diseases (STDs; HIV, Syphilis, Chlamydia, etc.);" (Figure 44, 45, & 46).

Sources of information used when concerned about women's health issues

Figure 44

Q: What information sources do you use most when you are concerned about the following issues? (Select 1 per item)

	Mechanisms, prevention, screening and treatment of diseases common in women	When to see a doctor (symptoms of concern)	How to use medications (for pain, pills, etc.) and side effects	Secondary sexual characteristics (menstruation, ejaculation)	How to cope with menstruation associated symptoms	Sexual intercourse, mechanism of pregnancy	Suitable times for pregnancy, fertility/infertility	Means of contraception, abortions	STDs (HIV, Syphilis, Chlamydia, etc.)	Career development and Women's health
1 I have never been concerned with this issue	32.0	32.4	45.1	49.4	40.1	42.2	45.3	46.8	46.4	55.2
2 I was concerned but never searched for information	8.8	7.6	7.8	7.3	7.6	6.5	7.1	6.9	7.1	10.3
3 School education and materials	2.5	1.5	1.9	13.6	3.6	15.8	5.2	8.6	6.9	2.2
4 Partners	2.6	3.2	1.8	3.4	4.0	1.7	1.4	1.6	1.0	1.0
5 Partners	0.8	0.8	1.1	1.3	1.3	1.5	1.1	1.6	0.8	1.2
6 Friends or acquaintances	3.8	4.3	3.7	2.5	4.4	4.1	3.3	2.9	2.5	2.9
7 Health professionals (doctors, nurses, midwives, etc.)	2.3	2.4	3.7	1.3	2.4	1.0	2.0	1.6	2.2	1.1
8 TV	3.1	2.3	1.7	1.3	1.8	1.3	2.1	1.5	2.4	2.3
9 Magazines, books	2.6	2.0	1.6	1.7	2.0	3.3	2.8	3.1	2.5	2.3
10 Internet search engines (Google, Yahoo! etc.)	33.6	35.4	26.4	14.9	27.8	18.7	24.2	21.3	23.8	17.4
11 Q&A sites on the internet (Yahoo answers, LINE Q, etc.)	4.4	5.0	2.9	2.1	2.8	2.2	2.6	2.3	2.7	2.0
12 Official websites of government or professional institutions (doctors associations, academic societies, etc.)	1.1	1.0	1.0	0.3	0.5	0.3	0.6	0.6	0.6	0.4
13 SNS (Twitter, Facebook, etc.) blogs	0.5	0.3	0.2	0.2	0.3	0.4	0.3	0.1	0.1	0.4
14 Smartphone applications	2.0	2.1	1.4	1.1	1.8	1.2	2.2	1.3	1.5	1.6
15 Others	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

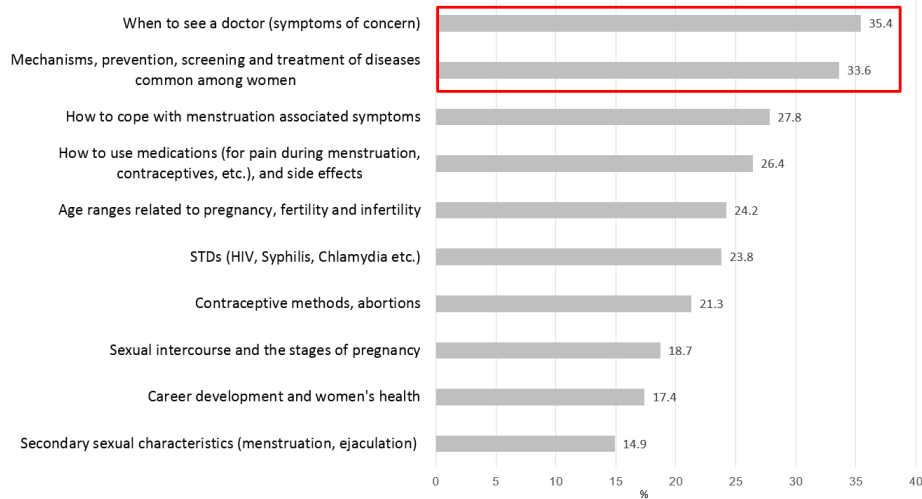
1. The internet was the main source of information most widely used by women when concerned about women's health. School education and materials were also utilized for some issues such as "Secondary sexual characteristics (menstruation, ejaculation)," "Sexual intercourse, mechanism of pregnancy," "Suitable times for pregnancy, fertility/infertility," "Means of contraception, abortion," and "Sexually transmitted diseases (STDs; HIV, Syphilis, Chlamydia, etc.)."

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

<Reference> Issues for which the internet was particularly utilized as a source of information

Figure 45

Use of the internet search engines as a source of information, by subject (Google, Yahoo! etc.) (n=2000)

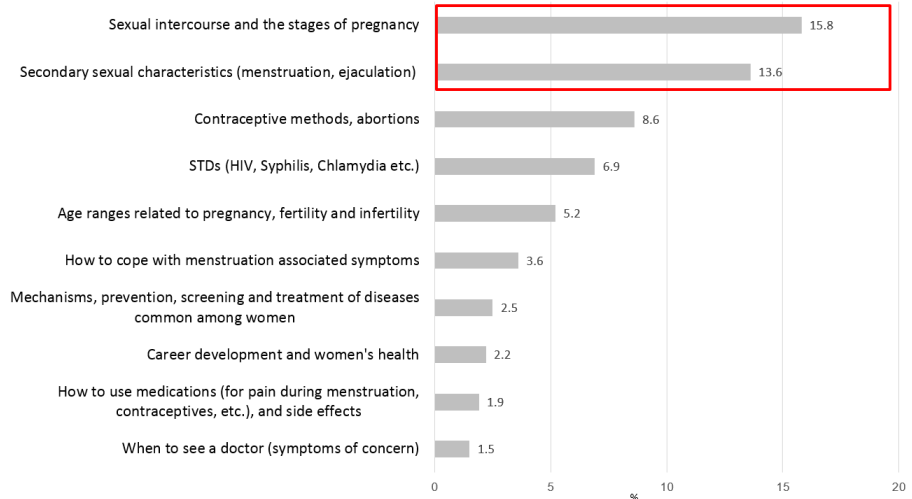


Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

<Reference> Issues for which school education was particularly utilized as a source of information

Figure 46

Use of school education or textbooks as a source of information, by subject (n=2000)



Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Interpretations

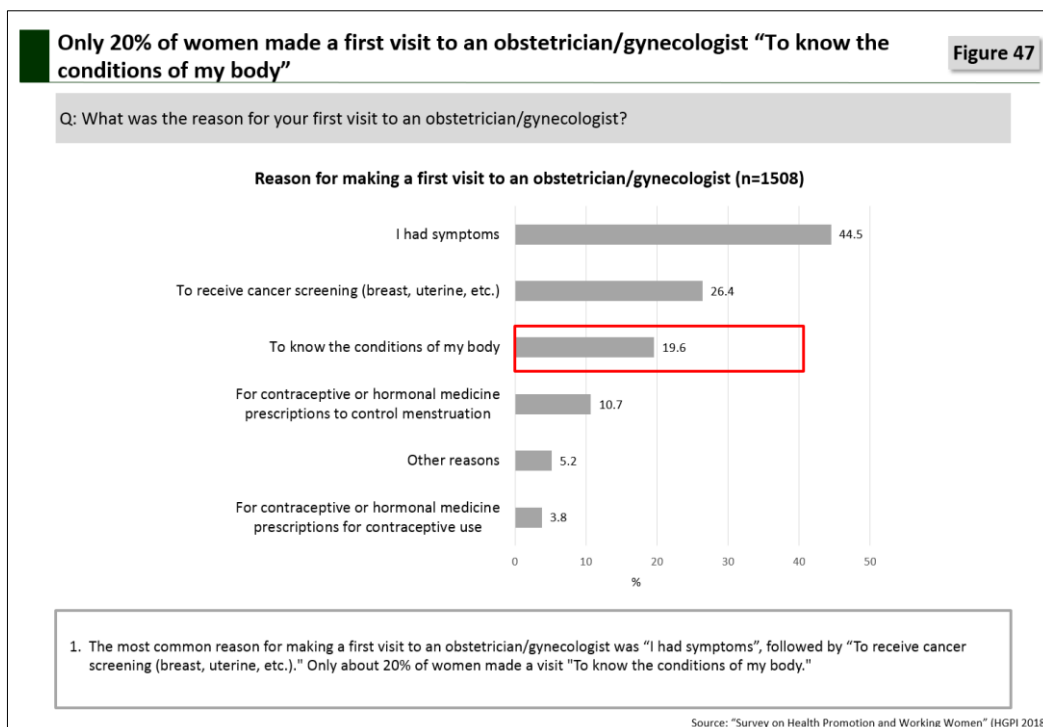
- ✓ Women are exposed to risks associated with female-specific health problem throughout their lives due to hormonal changes accompanying their transitions between life stages. It is essential to provide them with the information they need and education about women's health so that they can understand these risks and take appropriate measures to prevent and cope with any problems

they face. Information and education also help women to better plan out their own lives, including pregnancies.

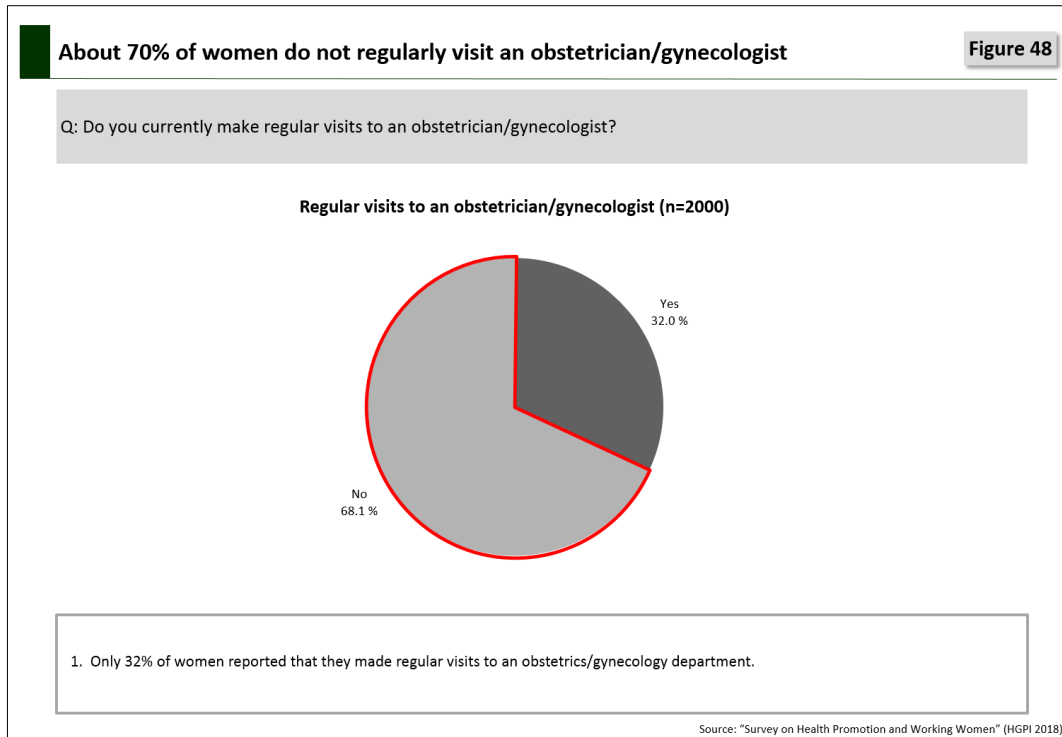
- ✓ In this survey, fewer women responded that they had knowledge about uterine and ovarian diseases compared to the number of women that said they understood mechanisms of menstruation or pregnancy. Many women also reported that they wished they had learned more in school about the mechanisms, prevention, screening, and treatment of diseases that are common among women, as well as when to consult a doctor about these diseases. These results highlight the need to provide women with further opportunities to learn about women’s health issues.
- ✓ The Internet was the most commonly used tool for women when collecting information around women's health. Although information can be easily found on the internet, not all of it is correct. It is thus essential for women to be able to judge and select the information that suits their needs.
- ✓ School education could be more effective by focusing on the areas that were highlighted by women through this survey. Companies also play an important role in providing information to female employees who have difficulty obtaining such information otherwise.

E) Health check-ups organized by workplaces encourage women to make regular visits to obstetrician/gynecologists

- The most common reason for making a first visit to an obstetrician/gynecologist was “I had symptoms,” followed by “To receive cancer screening (breast, uterine etc.).” Only 19.6% of women made a visit "To know the conditions of my body" (Figure 47).



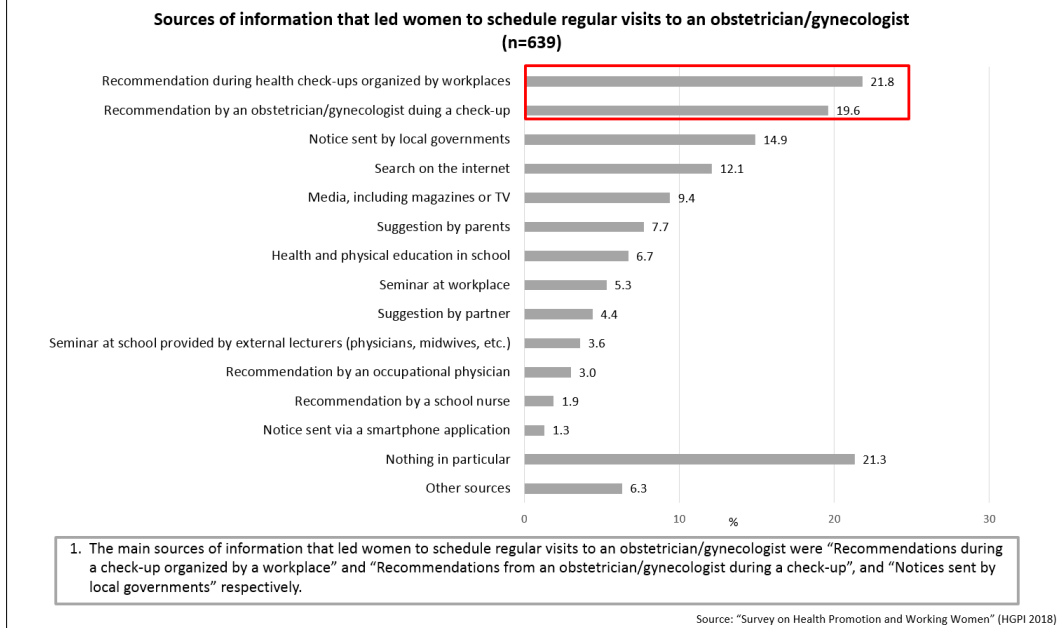
- About 70% of women reported that they do not make regular visits to an obstetrician/gynecologist (Figure 48).



- The main sources of information that led women to schedule regular visits to obstetricians/gynecologists were "Recommendations during a check-up organized by a workplace" (22%) and "Recommendations from an obstetrician/gynecologist during a check-up" (20%) (Figure 49).

“Check-ups organized by workplaces” and “Recommendations by a physician” led women to regularly visit an obstetrician/gynaecologist

Figure 49



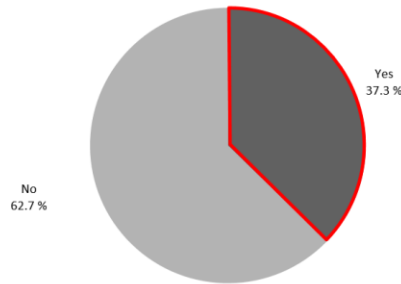
- 37% of women reported that they did not see an obstetrician/gynecologist when they thought it might be necessary (Figure 50). The main reason for this was “I thought my symptoms were not serious” (55%). This was consistent regardless of the level of health literacy (Figure 51). However, the second most common reason was differed between the two health literacy groups. That reason was “It was difficult for me to visit a hospital during its opening hours” for the high health literacy group and “I felt embarrassed/uncomfortable receiving an examination at an obstetrics/gynecology department” for the low health literacy group (Figure 51).

About 40% of women have had the experience of not seeing an obstetrician/gynecologist when they thought they needed to

Figure 50

Q: Have you ever had an experience where you did not see an obstetrician/gynaecologist even though you thought you should?

Experience of not seeing an obstetrician/gynecologist when necessary (n=2000)



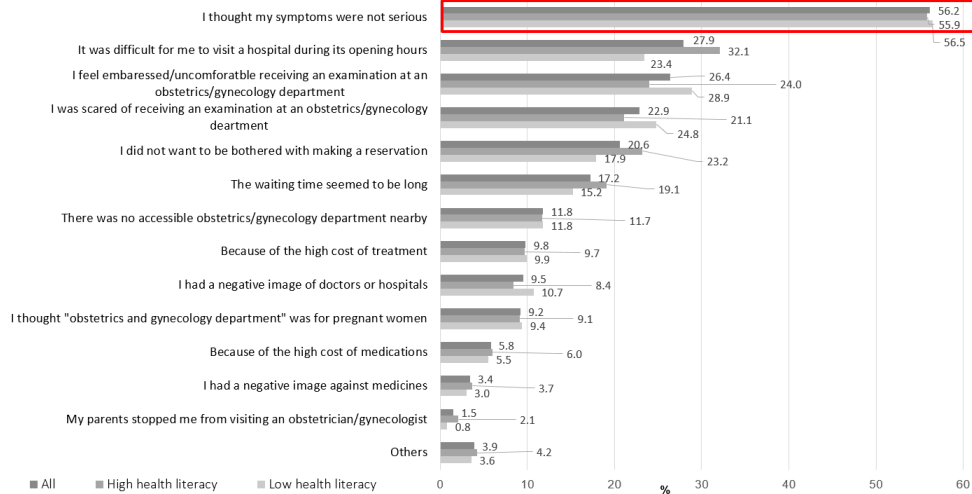
1. About 37% of women reported that they did not see an obstetrician/gynecologist even though they thought it might be necessary.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

The most common reasons for not seeing an obstetrician/gynecologist when needed was "I thought my symptoms were not serious"

Figure 51

Health literacy x Reasons for not visiting an obstetrician/gynaecologist (n=746)



1. The most frequently cited reason for not visiting an obstetrician/gynaecologist was "I thought my symptoms were not serious" (over 50%). This was consistent regardless of the levels of health literacy.
 2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Interpretations

- ✓ Regular visits to an obstetrician/gynecologist are crucial for a woman to fully understand her health. However, only very few women made a first visit to an obstetrician/gynecologist "To know the conditions of (their) body." More should be done to ensure that women have opportunities to learn about their bodies and health and to seek advice by encouraging women to make regular

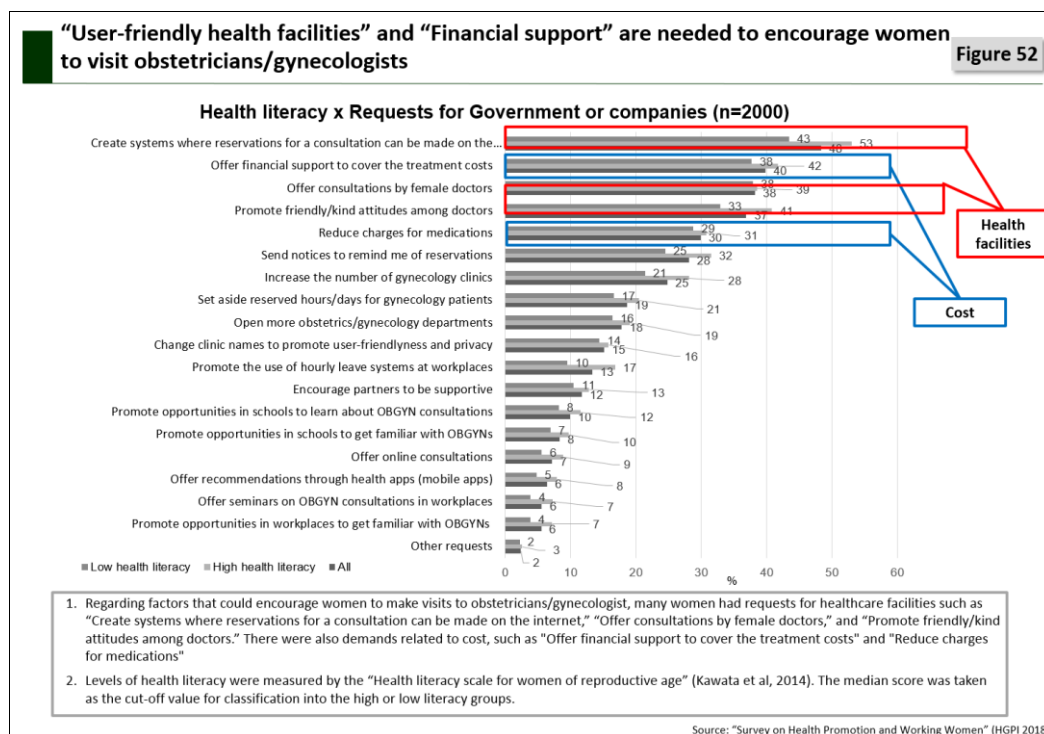
visits to obstetricians/gynecologists from a young age.

- ✓ For working women, health check-ups organized by workplaces are particularly influential in shaping their self-care behaviors. This suggests that companies play a critical role in women’s health, including related to the promotion of regular gynecological check-ups.
- ✓ One of the impeding factors preventing women from visiting obstetricians/gynecologists was unawareness of abnormalities or the severity of symptoms. We thus need to reinforce interventions to improve access to necessary healthcare, such as by providing information on when to consult a doctor and the process of gynecological treatment.

F) Other findings

■ There were high unmet needs related to healthcare facilities and the cost of treatment

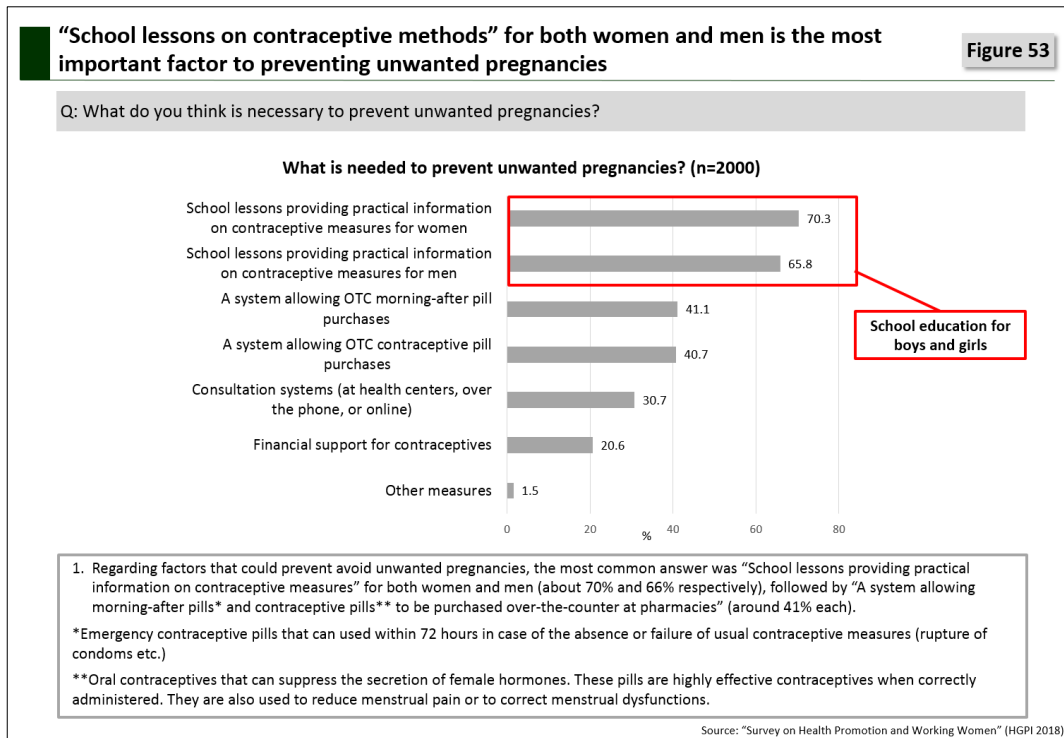
- Regarding factors that could encourage women to make visits to obstetricians/gynecologist, many women had requests for healthcare facilities such as “Create systems where reservations for a consultation can be made on the internet,” “Offer consultations by female doctors,” and “Promote friendly/kind attitudes among doctors.” There were also demands related to cost, such as "Offer financial support to cover the treatment costs" and "Reduce charges for medications" (Figure 52).



■ There is high unmet need for education among men as well to prevent unwanted pregnancies

- Regarding factors that could prevent avoid unwanted pregnancies, the most common answer was “School lessons providing practical information on contraceptive measures.” These lessons should not only be aimed at women but men as well (Figure 53).

- The second most common response was “A system allowing morning after pills¹¹ to be purchased over the counter at pharmacies” (Figure 53).
- Morning after pills (emergency contraceptives) were judged unsuitable as an over-the-counter (OTC) medication by the Ministry of Health, Labour and Welfare (MHLW) during the “3rd Review Meeting on Reclassifying Prescription Medications to OTC Medications.” However, more than 40% of respondents stated that access to these pills is necessary to avoid unwanted pregnancies.



- Two agree/disagree questions were asked to evaluate the health literacy scale’s “Sexual Health Discussions with Partners” item, namely, “I can discuss contraception with my partner when necessary” and “I can discuss the prevention of STDs with my partner when necessary.” About half of women were unable to discuss these issues with their partners (Figure 54 & 55). It is therefore necessary for men as well to be taught necessary knowledge around sexuality and health, ensuring a common ground where they can discuss and talk to each other.

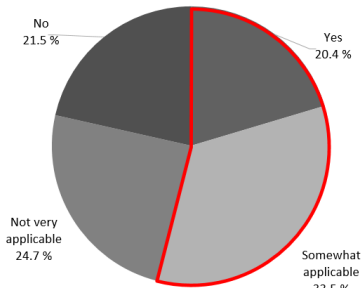
¹¹ Emergency contraceptive pills that can used within 72 hours in case of the absence or failure of usual contraceptive measures (rupture of condoms, etc.)

More than half of women were able to discuss contraception with their partners

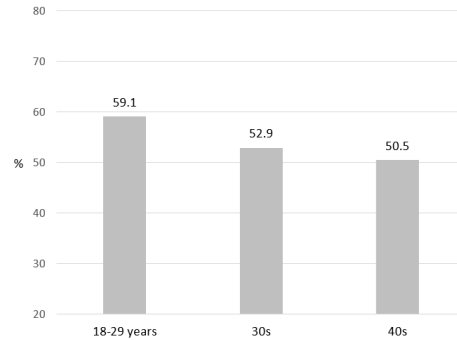
Figure 54

Statement: "I can discuss contraception with my partner when necessary"

I can discuss contraception with my partner when necessary (n=2000)



Women who selected "Yes" or "Somewhat applicable", by age (n=1077)



1. About 54% of women reported that they were able to discuss contraception with their partners when necessary.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question relates to the "4. Sexual health discussions with partners" category on the Health Literacy Scale.

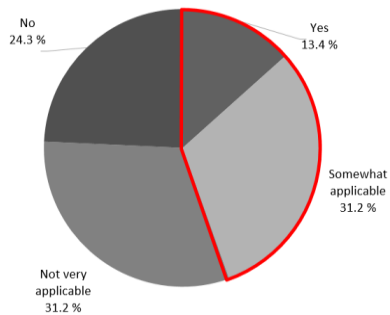
Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

Less than half of women were able to discuss STD prevention with their partners

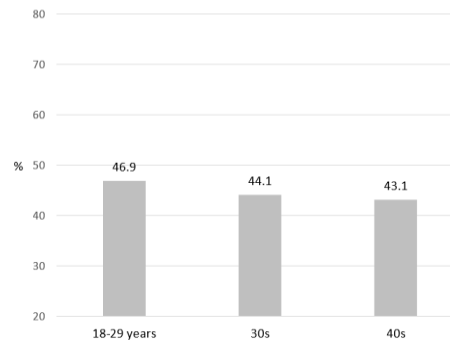
Figure 55

Statement: "I can discuss the prevention of Sexually Transmitted Diseases (STDs) with my partner when necessary"

I can discuss the prevention of STDs with my partner when necessary (n=2000)



Women who selected "Yes" or "Somewhat applicable", by age (n=892)

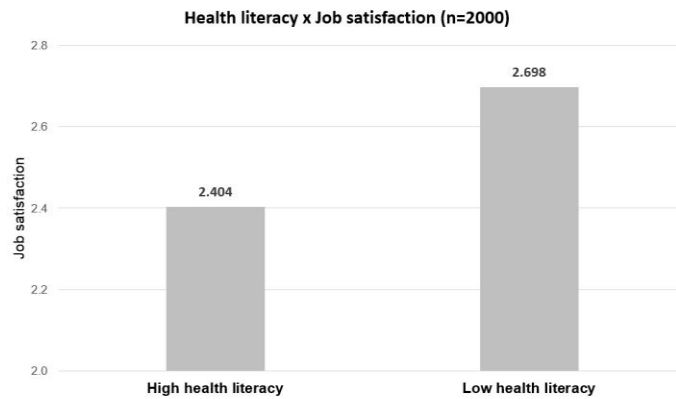


1. About 45% of women reported that they were able to discuss the prevention of STDs with their partners when necessary.
2. Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The above question relates to the "4. Sexual health discussions with partners" category on the Health Literacy Scale.

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

- **High levels of health literacy about women's health is associated with high levels of job satisfaction, living satisfaction, and QOL**
 - Women with high levels of health literacy also had significantly high levels of job satisfaction (Figure 56), life satisfaction (Figure 57), and QOL scores (Figure 58).

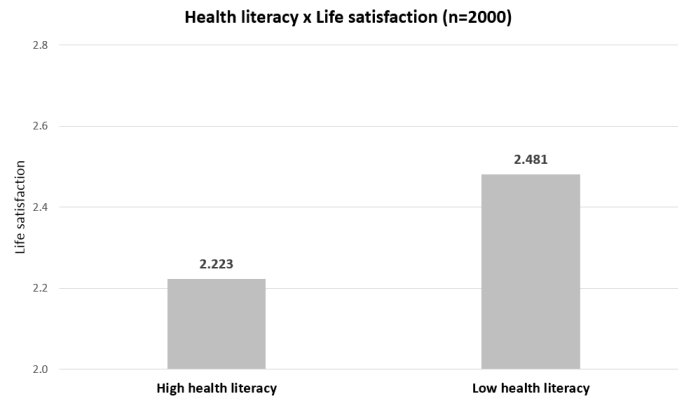
Women with high levels of health literacy had high levels of job satisfaction Figure 56



1. Levels of job satisfaction were significantly high in the high health literacy group compared to the low literacy group (1=Satisfied – 4=Dissatisfied) ($p < 0.01$, results from logistic regression).
Levels of health literacy were measured by the “Health literacy scale for women of reproductive age” (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups. Results were adjusted for age, education level, and number of children.
2. This result should be interpreted with caution as there may be other confounding factors affecting the results, such as work environment or conditions.

Source: “Survey on Health Promotion and Working Women” (HGPI 2018)

Women with high levels of health literacy had high levels of life satisfaction Figure 57

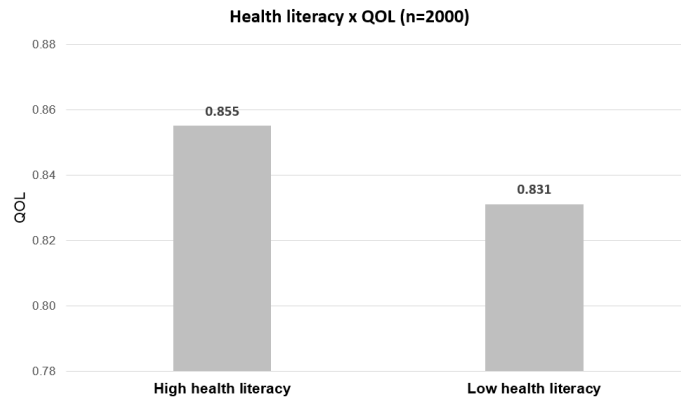


1. Levels of life satisfaction were significantly high in the high health literacy group compared to the low literacy group (1=Satisfied – 4=Dissatisfied) ($p < 0.01$, results from logistic regression).
Levels of health literacy were measured by the “Health literacy scale for women of reproductive age” (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups. Results were adjusted for age, education level, and number of children.
2. This result should be interpreted with caution as there may be other confounding factors affecting the results, such as employment or marital status.

Source: “Survey on Health Promotion and Working Women” (HGPI 2018)

Women with high levels of health literacy had high levels of QOL

Figure 58



1. Levels of Quality of Life (QOL) were significantly high in the high health literacy group compared to the low literacy group (0=Low – 1=high) ($p < 0.01$, results from a logistic regression).

Levels of health literacy were measured by the "Health literacy scale for women of reproductive age" (Kawata et al, 2014). The median score was taken as the cut-off value for classification into the high or low literacy groups. Results were adjusted for age, education level, and number of children.

2. This result should be interpreted with caution as there may be other confounding factors affecting the results, such as family composition or living conditions.
3. Level of QOL were measured by the validated Japanese version of EQ-5D-5L (Ikeda et al, 2015).

Source: "Survey on Health Promotion and Working Women" (HGPI 2018)

IV. Opinions

This survey revealed that there are a certain number of women who feel unable to take appropriate measures when faced with women's health problems due to a lack of knowledge about this topic. Nevertheless, the survey also implied that improving health literacy among women can have a positive impact on health behaviors and consequently on work performance and socioeconomic activities as well as well. The following section presents the opinion of the research team on these results in the form of recommendations for the policy measures needed to further promote women's health.

All of these measures are related to each other. As such, it is crucial that they be implemented as part of a national policy to support women's health. It may also be desirable to establish a national institution to implement these interventions.

A) **Provide the information women need to enable them to take action against women's health risks**

This survey showed that there is high need among women for enhanced knowledge on women's health. "Knowledge of the female body" was significantly associated with high work performance and the ability to plan pregnancies. It is vital to prioritize the provision of educational opportunities for women to obtain such knowledge.

1. Relevant results from the survey

- There is high need for education on women's health issue and coping measures, pregnancy, and infertility treatments in general
- The extent that work performance drops due to PMS or menstrual symptoms as well as menopausal symptoms/disorders is related to a woman's level of health literacy
- Knowledge of women's health was associate with the ability to plan pregnancies
- Younger women (aged from their late teens to 30s) tended to have lower levels of knowledge about women's health or self-care behaviors

2. Recommendations

- **Provide information, through school education or seminars, about pregnancy and women's health issues and coping measures**
 - **Government:** The Government should take leadership on the creation of school curriculums focusing on the specific areas that women need to know about
 - **Schools/academic institutions:** Focus on subjects related to lifelong health management and selfcare for women
 - **Companies:** Offer training or seminars to provide employees with necessary information according to their life stage

3. Points that will be crucial to the implementation of these recommendations

- Subjects to be covered in school classes or seminars

Women's health issues	<ul style="list-style-type: none"> • Women's health issues and the stages, prevention, screening, and treatment of diseases that are common among women (uterine and ovarian diseases, prevention of STDs, etc.) • When to consult a doctor about these diseases or symptoms • The importance of knowing about your own health from an early stage by making regular visits to an obstetrician/gynecologist • Treatment at obstetrics/gynecology departments
Pregnancy	<ul style="list-style-type: none"> • The stages of pregnancy • Ages when it is easy to become pregnant • Suitable times of pregnancy and fertility • Means of contraception • Life planning, including related to pregnancies
Infertility treatment	<ul style="list-style-type: none"> • Details of infertility treatment • Necessary examinations • Probability of pregnancy through infertility treatment • Appropriate timing to initiate infertility treatment • Costs of treatment • Discussions with partners about infertility treatment
Menstruation (esp. for ages 19-29)	<ul style="list-style-type: none"> • The mechanism of menstruation • How to keep track of menstrual cycles • PMS, menstrual symptoms, and coping measures
Menopausal symptoms/disorders (esp. for ages 30-40s)	<ul style="list-style-type: none"> • The mechanisms of menopausal symptoms or disorders • Coping measures for menopausal symptoms or disorders
Selection of information	<ul style="list-style-type: none"> • How to discern what kind of women's health information is appropriate for your situation

➤ Implementation Methods

- Although many of the subjects related to women's health are already incorporated in school curriculums, many working women reported that they wished they had learned more at school, particularly about women's health issues, coping measures for those issues, and pregnancy. The role of school education was also highlighted through the fact that many women used education materials as a source of information, even after leaving school. Necessary education on focused areas could contribute to better health in the future for women, even if class time is limited.
- As the above mentioned topics require technical knowledge about medicine, it would be best if schools collaborated with healthcare professionals, including obstetricians/gynecologists,

nurses, public health nurses, and midwives. External lecturers could help provide students with information about practical topics and case examples, in addition to expert guidance.

- In the case of corporate seminars, it is critical to provide information appropriate for the age of participants, as the knowledge women need varies depending on their life stage.
- Men should also be encouraged to participate in these educational opportunities in order to develop a common understanding about women's health.

B) Strengthen health promotional activities to improve health literacy in workplaces

High levels of health literacy were associated with high work performance as well as the coping behaviors for women's health issues. Interventions to improve health literacy among women should not only provide information but also empower women to utilize such knowledge and take necessary actions.

1. Relevant results from the survey

- Women with high levels of health literacy had high levels of work performance on average over the month prior to the survey
- Although many women experienced negative effects on their work performance from PMS/menstruation or menopausal symptoms/disorders, the high health literacy group was less likely to experience decreased work performance when experiencing these symptoms
- Women with high levels of health literacy were more likely to undertake coping behaviors for women's health issues, including taking medicine or seeing a doctor

2. Recommendations

- **Establish a baseline for the improvement of health literacy among working women**
 - **Government:** Include efforts to improve women's health literacy as one of the criteria to be included in the Health & Productivity Stock Selection portfolio
 - **Government / Research institutes:** Develop evaluation methods to assess health promotional activities in companies
- **Carry out interventions to improve health literacy among working women**
 - **Companies:** Develop a consultation system to improve health literacy levels among women

3. Points that will be crucial to the implementation of these recommendations

- Since FY2014, the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange (TSE) have been managing a Health & Productivity Stock Selection portfolio. This program aims to promote "Health and Productivity Management"¹² efforts within companies by encouraging people to invest in those companies that are engaging in outstanding, strategic efforts to maintain their employees' health. An increasing number of companies see women's health as a priority.

¹² "Health and productivity management" is a registered trademark of the Workshop for the Management of Health on Company and Employee

Efforts to improve women's health literacy should be incorporated into the criteria used to certify the Government's Health & Productivity Stock Selection portfolio, in order to further promote women's health in workplaces.

- The PDCA process (Plan → Do → Check → Act) should be used to evaluate specific objectives, activities, and outcomes for women's health promotion.
- As mentioned earlier, improving "Knowledge of the female body" is a priority task. Levels of health literacy can only be improved by enhancing the ability of women to act using the acquired knowledge. We should establish an effective support system where occupational health professionals can provide technical advice to women or their supervisors/colleagues and encourage them to take appropriate actions.

C) Improve access to obstetrics & gynecology departments

Regular visits to an obstetrician/gynecologist are crucial for a woman to fully understand her health status. Through the consultations, we should communicate with women the importance of knowing their physical conditions.

1. Relevant results from the survey

- About 70% of women reported that they do not made regular visits to an obstetrician/gynecologist
- Among those who are already making regular visits to obstetrics/gynecology departments, regular check-ups organized by their workplace was the main source of information that them to schedule those regular visits. Recommendations from an obstetrician/gynecologist during a check-up was also effective.
- In terms of the factors that encouraged women to make visits to an obstetrician/gynecologist, many women responded that they wanted a system that would allow for reservations to be made over the internet, as well as financial support to cover treatment/consultation costs.

2. Recommendations

- **Communicate the importance of making regular visits to obstetrics & gynecology departments**
 - **Companies:** Incorporate women's health issues into regular check-ups
 - **Healthcare providers:** Communicate to women the necessity of making regular visits to an obstetrician/gynecologist
- **Alter the healthcare system to encourage women to receive necessary check-ups or consultations**
 - **Healthcare facilities:** Develop healthcare delivery systems based on client needs

3. Points that will be crucial to the implementation of these recommendations

- In order to better support working women, it would be best if companies collaborated with insurers, occupational health specialists, etc., to incorporate gynecological items into regular checkups. These partnerships could be expected to make a positive impact on work performance as they would provide women with technical advice that could enable them to take effective selfcare or coping measures.
- More than any other measure, respondents stated that they hoped that more obstetrician/gynecologist departments would use online reservation systems. Healthcare delivery systems should aim to meet outpatient needs.

D) Create environments that ensure women can plan pregnancies and receive infertility treatment as necessary

Survey results show that there is high need among women not only for knowledge about pregnancy and infertility treatment, but also for the creation of better systems related to these topics, and the development of supportive atmospheres in workplaces. It is important that an environment be fostered to ensure that women can get the help they need related to pregnancy planning and infertility treatment.

1. Relevant results from the survey

- Many women responded that a flexible paid leave system and friendly atmospheres in workplaces that encourage women to take paid leave or return to work after taking childcare leave would help them to better plan pregnancies.
- There was a certain number of women who reported that they were unable to become pregnant when they wanted to due to work responsibilities. In addition, one of the top reasons women said that they did not receive infertility treatment was difficulty in balancing with treatment schedules with work.

2. Recommendations

- **Create environments that ensure women can plan pregnancies and receive infertility treatment as necessary**
 - **Companies:** Develop a flexible paid leave system that can be used to take as little as a few hours of leave
 - **Companies:** Ensure friendly atmospheres in workplace that encourage women to utilize the opportunities and systems available to them

3. Points that will be crucial to the implementation of these recommendations

- It is important that flexible systems related to pregnancy and infertility treatment be developed in workplaces that suit the needs of female employees and facilitate a better understanding about these issues among their colleagues.

V. Acknowledgement

HGPI would like to express its sincere gratitude to the following supervisors who provided expert guidance for this survey, sharing their insights on issues related to health promotion and working women, including their view of these topics in the future.

(Titles omitted)

- Yuji Taketani (Chairman, Artemis Women’s Hospital; Supervisor, Project for Whole Implementation to Support and Ensure the Female Life (WISE), Japan Agency for Medical Research and Development (AMED))
- Honami Yoshida (Associate Professor, Department of Health and Welfare, Kanagawa University of Human Services)

VI. “Health Promotion and Working Women 2018” Project Team

(Titles omitted)

- **Yutaka Osuga** (Professor, Department of Obstetrics and Gynecology, Graduate School of Medicine, University of Tokyo)
- **Naho Morisaki** (Chief, Division of Life-course Epidemiology, Department of Social Medicine, National Center for Child Health and Development (NCCHD))
- **Kazumi Kubota** (Assistant Professor, Department of Biostatistics, School of Medicine, Yokohama City University)
- **Shu Suzuki** (MSc candidate, Division of Health Sciences and Nursing, Department of Community Health Nursing, Graduate School of Medicine, University of Tokyo)
- **Yuko Imamura** (Senior Associate, Health and Global Policy Institute)
- **Mariko Oyamada** (Vice President, Health and Global Policy Institute)
- **Yukiko Yoshida** (Program Specialist, Health and Global Policy Institute)

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■ **Contact:**

Health and Global Policy Institute (Imamura/Oyamada)

Mail: info@hgpi.org

Tel: 03-4243-7156