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Original Article

The first survey about women doctors in the Japanese Society for Pediatric Endocrinology (JSPE)

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Abstract. The Career Development for Women Pediatric Endocrinologists and Work-Life Balance Committee and Support Team for Women Doctors in Education and Training Committee investigated the current situation of women doctors in the Japanese Society for Pediatric Endocrinology (JSPE). The proportion of women doctors (PWD) was as follows. 1) Members of JSPE: 40.2% in fiscal 2018, versus 33.3% in fiscal 2010; 2) councilors: 21.6% from fiscal 2014 to 2017, versus 6.3% from fiscal 2008 to 2010; 3) board members: 13.6% from fiscal 2014 to 2017, versus 0% from fiscal 2008 to 2010; 4) board-certified endocrinologists (Pediatrics) and certified endocrine educators (Pediatrics): 31.7% and 25.4% in fiscal 2018, versus 22.4% and 15.3% in fiscal 2010, respectively; and 5) average value of first presenters and chairpersons in the Annual Scientific Meeting of JSPE was 41.4% and 22.3% from 2010 to 2019. These PWD figures for JSPE were higher than those of the Japan Pediatric Society and the Japan Endocrine Society, indicating a reducing gender gap in JSPE, although increases in the PWD of decision-making posts remains insufficient.

Key words: proportion of women doctors, the Japanese Society for Pediatric Endocrinology (JSPE), gender gap

Introduction

The proportion of women doctors (PWD) in Japan is 20.4%, which is lower than 39.3%, the mean PWD among the 37 countries of the Organization for Economic Co-operation and Development (1). Since 2000, the proportion of women among successful applicants to medical schools has been more than 30% (2), indicating that more women doctors will work in the near future. In Japan, a basic law on gender equality was enacted in 1999. Accordingly, many medical societies have launched gender equality promotion committee to promote women's participation and gender equality in medical societies. In 2014, the Japanese Society for Pediatric Endocrinology (JSPE) launched the Support Team for Women Doctors as a subgroup of the Education and Training Committee. In 2018, a new committee was developed in JSPE named the Career Development for Women Pediatric Endocrinologists and Work-Life Balance Committee.

The purpose of this study is to understand the current situation of women doctors in JSPE. In 2019, we investigated the following issues: 1) the PWD of members, councilors, board members, board-certified endocrinologists (Pediatrics), and certified endocrine educators (Pediatrics), and 2) the PWD of the first presenters and chairpersons at the Annual Scientific Meeting (ASM) of JSPE from 2010 to 2019. We then compared these data with those for the Japan Pediatric Society (JPS) and Japan Endocrine Society (JES).

Material and Methods

We retrospectivity counted the number of women JSPE members from fiscal 2010 to 2018. The number of women members in each age group from 20–89 y was compared between fiscal year 2010 and 2018 by decades, namely, 20s, 30s, 40s, 50s, 60s, 70s, and 80s and above. The PWD of councilors and board members were calculated over three periods, fiscal 2008 to 2010, 2011 to 2013, and 2014 to 2017. The PWD was calculated for Japan Endocrine Society (JES) board-certificated

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endocrinologists (BCEs) (Pediatrics) and JES certified endocrine educators (CEEs) (Pediatrics) every 2 years from fiscal 2010 to 2018.

The PWD of the first presenters and chairpersons at ASMs of JSPE from 2010 to 2019 were also counted. Programs were divided into four groups: 1. symposia such as plenary lectures, special lectures, and education lectures, 2. corporate planning seminars, 3. general oral presentations, and 4. general poster presentations.

We also compared the data for JSPE with those for JPS and JES (3, 4), both of which are our related societies. Some data were provided by JES with the permission of the representative director through the chief of the JES Women Endocrinologists Association.

The following terminology are used in this article as 1)–5) (5).

1) Member: A person who 1. agrees with the purpose of the JSPE, 2. was recommended by one councilor, and 3. pays the annual fee of 10,000 Japanese yen.
2) Councilor: A JSPE member who 1. has more than 8 years of experience, 2. has attended the ASM of JSPE more than three times within the last 4 years, 3. has given a presentation at the ASM of JSPE more than twice within the last 4 years, 4. pledged to cooperate in volunteer activities according to the mission of JSPE, 5. was recommended by another councilor, and 6. has been approved by the board.
3) Board member: The membership consists of 15–20 directors and one or two inspectors elected by councilor member voting or recommendation by the president.
4) BCEs (Pediatrics): A board-certified pediatrician who has appropriate special training satisfying the JES requirements and has passed the examination for specialists conducted by JES.
5) CEEs (Pediatrics): A BCE (Pediatrics) who has been a JES member for more than 10 years and has appropriate achievements satisfying the JES requirements, including a certain number of publications or presentations at the Annual Congress of the JES.

Results

The PWD of JSPE members: Changes over time and age distribution

The PWD of JSPE members was 40.2% in fiscal 2018, versus 33.3% in fiscal 2010. The number of actual increase from fiscal 2010 to 2018 was 158 for women and 14 for men (**Fig. 1**). In fiscal 2018, the PWD was higher than the proportion of men doctors (PMD) in the 30s, and was almost equal to PMD in the 40s. All PWDs in 30s, 40s, 50s, and 60s increased from fiscal 2010 to 2018: 50.6% to 57.1%, 29.8% to 47.3%, 18.3% to 27.3%, and 2.5% to 17.8%, respectively (**Fig. 2**).

The PWD of councilors and board members in JSPE

The PWD of councilors has steadily increased: 6.3%, 18.4%, and 21.6% in fiscal 2008–2010, 2011–2013, 2014–2017, respectively (**Fig. 3a**). The PWD of the board has also steadily increased: 0%, 5.9%, and 13.6%, respectively (**Fig. 3b**).

The PWD of JES BCEs (Pediatrics) and CEEs (Pediatrics)

The PWD of JES BCEs (Pediatrics) was 22.4% and 31.7% in fiscal 2010 and 2018 (**Fig. 4a**). The PWD of JES CEEs (Pediatrics) was 15.3% and 25.4% in fiscal 2010 and 2018 (**Fig. 4b**).

The PWD of the first presenters and chairpersons at ASM of JSPE over 10 years

The PWD of the first presenters was 41.4% (37.2–

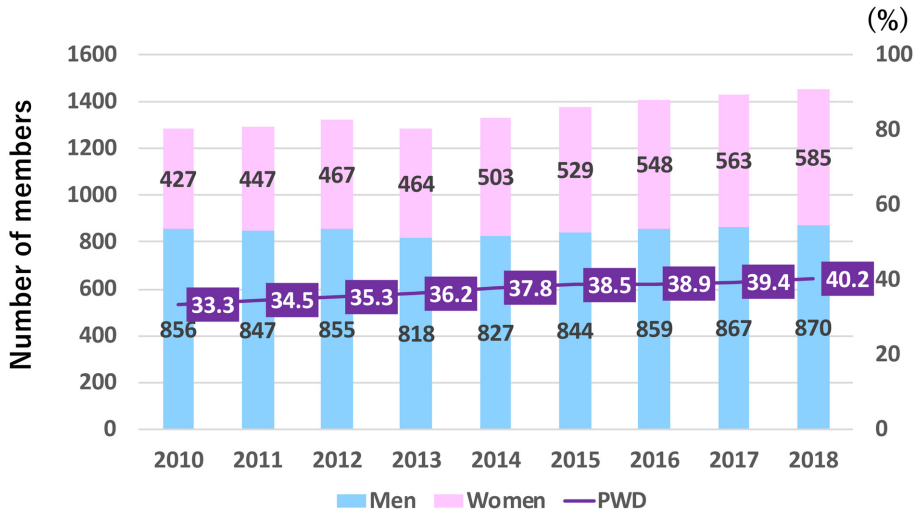

Fig. 1. PWD of JSPE members from fiscal 2010 to fiscal 2018. The numbers of men and women doctors are shown by the blue and pink bars. The purple box shows the PWD among total members for each fiscal.

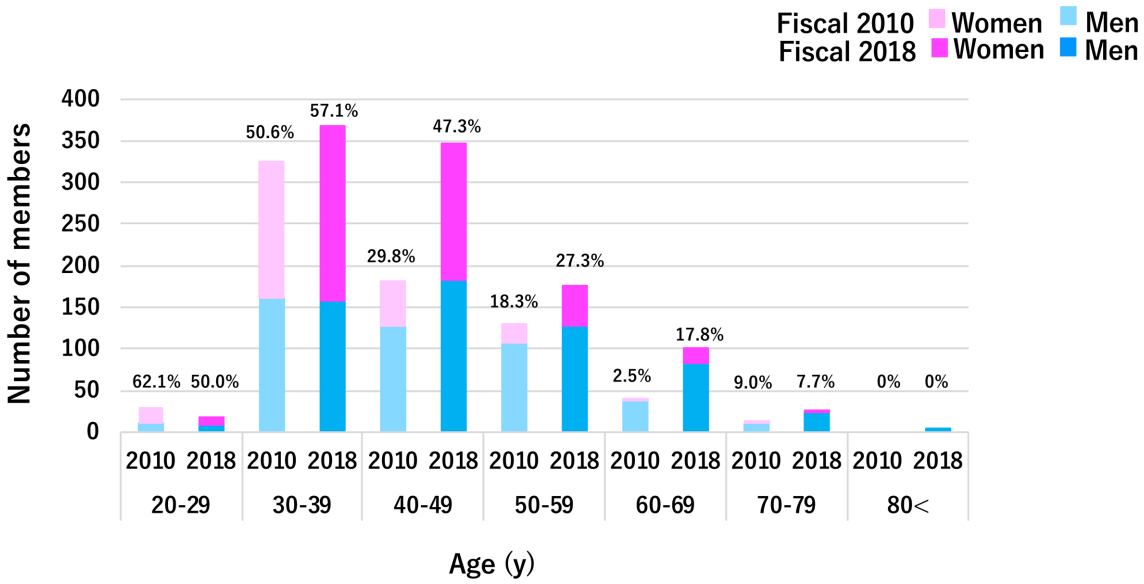

Fig. 2. PWD in each generation among JSPE members in fiscal 2010 and fiscal 2018. The numbers of men (light blue bar in fiscal 2010, sky blue bar in fiscal 2018) and women (light pink bar in fiscal 2010, magenta bar in fiscal 2018) are shown. The data are compared between fiscal 2010 and fiscal 2018. Black figures show the PWD in fiscal 2010 and fiscal 2018, respectively.

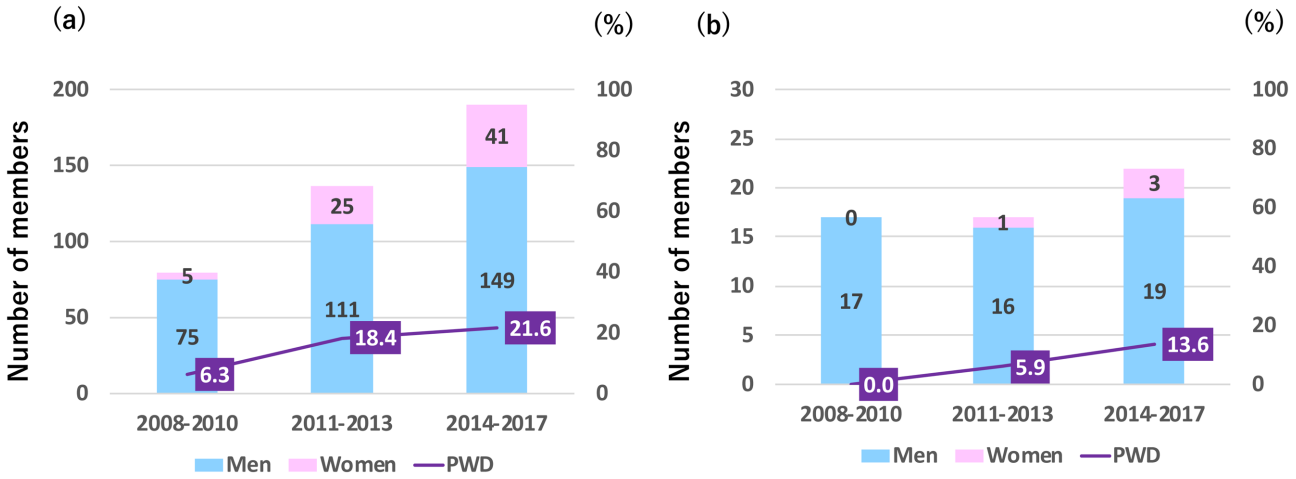

Fig. 3. PWD of councilors (a) and board members (b). PWD were calculated over three periods, fiscal 2008 to 2010, fiscal 2011 to 2013, fiscal 2014 to 2017. The numbers of men and women doctors are shown by the blue and pink bars. The purple box shows the PWD among total councilors and board members for each period.

44.5%) (mean (range)) at ASM of JSPE from 2010 to 2019. The PWD of the first presenters in 2010 and 2019 was 38.5 and 40.7% (**Fig. 5**). All these PWD were almost equal to that of JSPE members as a whole, 40.2% in 2018. The PWD of the first presenters at symposia, corporate planning seminars, general oral presentations, and general poster presentations was 26.2% (12.5–42.1), 20.9% (0–44.4%), 41.3% (27.5–56.4%), and 43.9% (40.4–47.3%), respectively (**Table 1**). It is notable that the PWD of the first presenters at symposium and corporate planning seminar varied depending on the year.

The PWD of all chairpersons from 2010 to 2019 was 22.3% (13.1–40.0%), which was about half the PWD of JSPE members, 40.2% in 2018 (**Fig. 6**). The PWD of all chairperson was 14.0% and 23.8% in 2010 and 2019, respectively. The PWD of chairpersons at symposia, corporate planning seminars, general oral presentations, and general poster presentations were 16.9% (0–40.0%), 17.8% (5.8–44.4%), 23.3% (10.0–45.0%), and 24.4% (12.5–43.7%) (**Table 1**).

Comparison between JSPE and JPS and/or JES

1) The PWD of society members

The PWD of JSPE members, 40.2% in fiscal 2018, exceeded those of JPS and JES members, 35.6% in fiscal 2016 and 31.1% in fiscal 2017 (3, 4). The PWD

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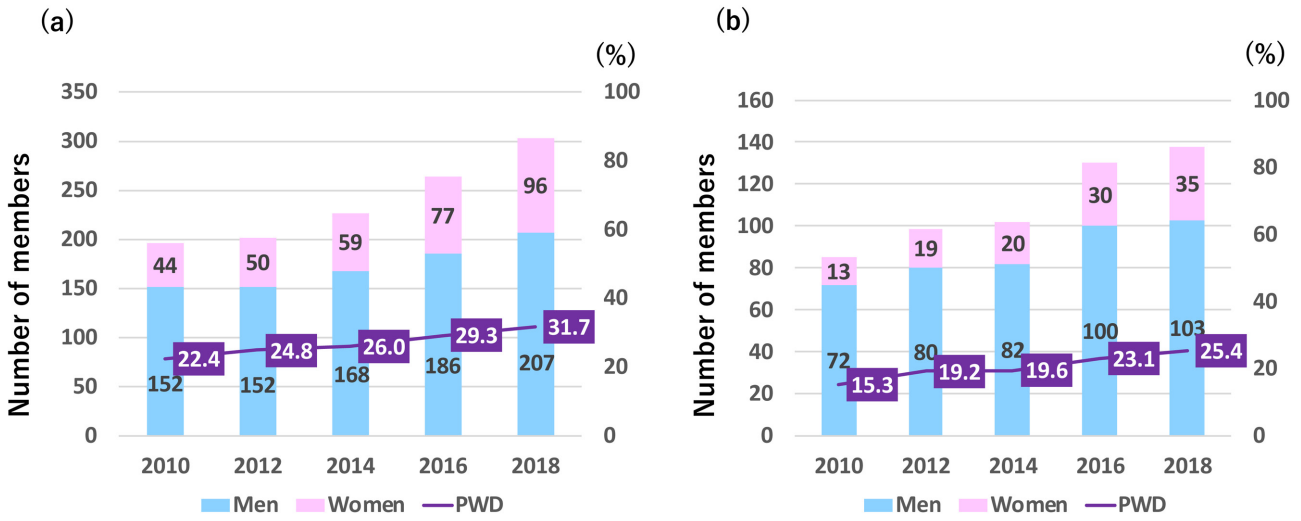

Fig. 4. PWS of BCEs (Pediatrics) (a) and CEEs (Pediatrics) (b) in fiscal 2010, 2012, 2014, 2016, and 2018. The numbers of men and women doctors are shown by the blue and pink bars. The purple box shows the PWD of total BCEs (Pediatrics) and CEEs (Pediatrics) for each fiscal.

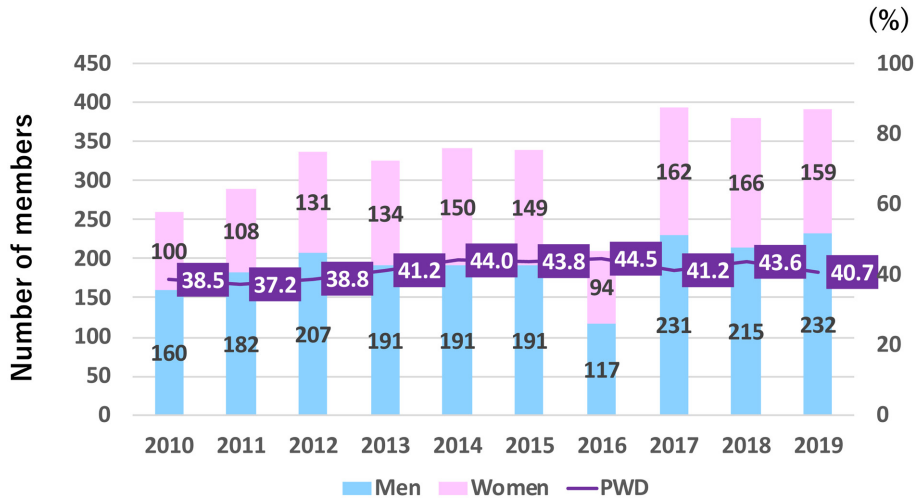

Fig. 5. PWD of the first presenters at ASM of JSPE, 2010 to 2019. The numbers of men and women are shown by the blue and pink bars, respectively. The purple box shows the PWD among total speakers for each year.

Table 1. PWD of the first presenters and chairpersons at ASM in JSPE, since 2010 to 2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Average
PWD of first presenters (%)											
Symposia	42.1	23.8	26.3	12.5	17.6	17.6	31.3	29.4	35.4	26.4	26.2
Corporate planning seminars	18.1	16.6	27.3	13.3	44.4	0.0	33.3	25.0	16.6	14.2	20.9
General oral presentations	32.4	27.5	37.9	44.0	46.0	48.0	52.0	31.6	56.4	37.5	41.3
General poster presentations	40.4	41.4	40.5	43.3	45.2	47.3	44.4	46.1	43.9	46.0	43.9
PWD of chairpersons (%)											
Symposia	18.1	0.0	12.5	0.0	7.2	20.0	33.3	40.0	16.6	21.4	16.9
Corporate planning seminars	11.1	10.0	12.5	7.1	12.5	21.4	44.4	20.0	5.8	33.3	17.8
General oral presentations	16.6	10.0	31.8	15.0	22.2	11.5	45.0	33.3	20.8	26.9	23.3
General poster presentations	12.9	16.6	21.9	23.7	12.5	22.2	35.0	33.3	43.7	21.8	24.4

of councilors and board members of JSPE, 21.6% and 13.6%, also exceeded those of JPS and JES; the PWD of representatives and board members of JPS were 7.8% and 9.1% (3), and those of councilors and board members of JES were 11.6% and 8.8% (4).

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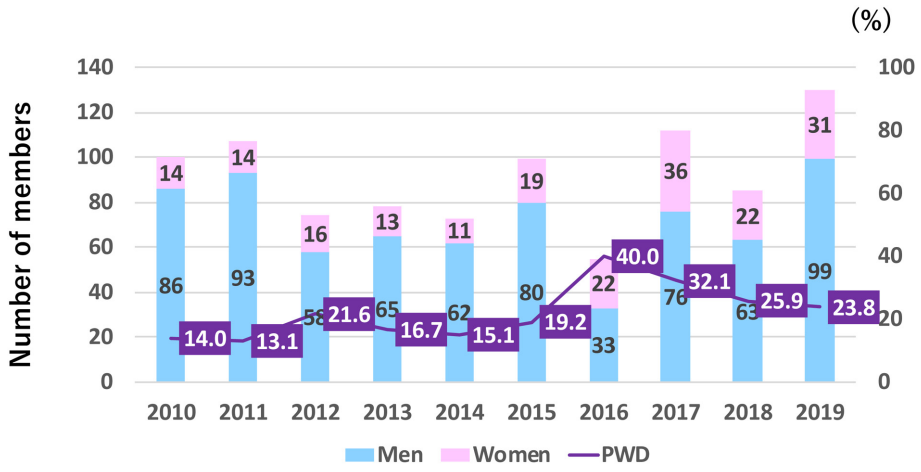

Fig. 6. PWD of chairpersons at ASM of JSPE, 2010 to 2019. The numbers of men and women are shown by the blue and pink bars. The purple box shows the PWD of total chairpersons for each year.

2) The PWD of JES BCEs (Pediatrics) and CEEs (Pediatrics)

The PWD of JES BCEs (Pediatrics), 31.7% in fiscal 2018, was equal to that of the JPS (certified pediatricians), 31.7% (6). The PWD of JES BCEs (Pediatrics) and CEEs (Pediatrics), 31.7% and 25.4%, were higher than those of JES BCEs (Internal medicine) and CEEs (Internal medicine), 27.5% and 18.8%, respectively.

3) The PWD of the first presenters and chairpersons at ASM

The PWD of the first presenters and chairpersons in JSPE for these 10 years, 41.4% and 22.3%, were higher than those in JES in 2017, 31.8% and 18.6% (4). The PWD of the chairpersons in JSPE over these 10 years, 22.3%, was also higher than that of JPS in 2016, 12.5% (3).

Discussion

We surveyed the current situation of women doctors in JSPE for the first time. In short, all the PWDs have been increasing-members, councilors, board members, JES BCEs (Pediatrics), and CEEs (Pediatrics)-for the last 10 years. The PWD of the first presenters at ASM has maintained high, almost equal to that of the members of JSPE. The PWD of the chairpersons at ASM has also been increasing. Of note is that PWD of JSPE members was higher than that of JPS and JES members, as well as for first presenters and chairpersons at annual meetings. These results suggest that women doctors have been more active and diligent in JSPE. The PWD of JSPE members was 40.2% in fiscal 2018. Consistent with 158 women out of 172 new members, the PWD of members in their 30s is 57.1%, and in the near future the PWD of all JSPE members might exceed one-half. Moreover, the PWD of JSPE members in their 40s had remarkably increased in fiscal 2018 compared with fiscal 2010. It is presumed that the members who joined in their 30s in fiscal 2010 had continued their academic activities even in their 40s in fiscal 2018. Based on these results, the JSPE must undertake initiatives for career development projects for woman doctors. Career development for women is expected to play an important role in the overall development of the JSPE. According to the Ministry of Health, Labour and Welfare, "Japanese women leave employment after either getting married or having children, then return to the workforce once they finish raising their children, after their children reach a certain age, or after they feel secure about leaving their children and going back to work. This work pattern results in a labor force participation rate (population of workers accounted for in the population of people aged 15 and older) that resembles the letter M" (7). The age distribution of PWD in JSPE member does not show an M-shaped curve, suggesting a higher motivation in JSPE women doctors.

The significantly lower PWD of councilors and board members is alarming: 21.6% and 13.6% from fiscal 2014 to 2017. Possible reasons for this include the fact that women may not be as interested as men in acquiring leadership qualifications (8); however, it is difficult to prove this thought. To increase the PWD of decision-making posts, further self-education and self-effort are mandatory to meet the criteria for councilors, such as presentations at ASM of JSPE and publishing papers. Other meticulous actions are necessary. In detail, intervention of the Career Development for Women Pediatric Endocrinologists and Work-Life Balance Committee must be a key to maintain the achievement motivation of each of our women colleagues, and JSPE may reconsider the election system for councilors and the board.

The proportion of JES BCEs (Pediatrics) was 31.7% in fiscal 2018. This must be due to constant ambition of women doctors in spite of many "life events" such as marriage, pregnancy and delivery, childcare, and care of the elderly. In the endocrinological field, women pediatricians may have higher study motivation for the specialty, judging from the higher PWD for JES BCEs

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(Pediatrics) and CEEs (Pediatrics) than for internal medicine, even though in the internal medical field, the PWD of JES BCEs was higher than the PWD of Japan Society of Internal Medicine BCEs, which was 12% in fiscal 2010 (9). For further increases, training institutes should be established all over Japan. In addition, for all members, not only for women, supporting programs by JSPE, such as web-based systems, might be promising measures to promote self-education at home.

Three kinds of differences were identified regarding the ASM of JSPE: First, the PWD of general oral or poster presenters (41.3% or 43.9%) and those at symposia or corporate planning seminars (26.2% or 20.9%); second, the PWD of presenters (41.4%) and of chairpersons (22.3%); and third, the PWD of chairpersons at general oral or poster presentations (23.3% or 24.4%) and those at symposia or corporate planning seminars (16.9% or 17.8%). These differences indicate the presence of a gender gap and tasks to solve so as to increase the PWD of presenters at symposia or corporate planning seminars, and of chairpersons, especially at symposia or corporate planning seminars, to that of members (about 40%).

This study has some limitations. First, 34.9% of members are of indeterminate age, and were thus not included in the study of the age distribution. Second, a geographic review was not done; the situation might differ by prefecture or city. Third, we do not know details on the working style, marriage, pregnancy and delivery, childcare, and care for the elderly among women doctors. At the moment, we thus cannot propose any concrete strategies to eliminate the gender gap completely.

In conclusion, this study suggests that the gender gap in JSPE has been reduced during the years of study, although increases in the PWD of decision-making posts remains insufficient. These data must be the basis for JSPE to consider the continuation of work and measures to promote the work-life balance of women doctors. We believe that further activities of JSPE, and especially of the Career Development for Women Pediatric Endocrinologists and Work-Life Balance Committee, are mandatory to achieve completely equal treatment and opportunities between the genders.

Conflicts of Interest: All authors declare no conflict of interest.

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