Review of Policy to Support Work-Life Balance for Female Hospital Doctors

— Suggestions to Japan in Comparison with Western Countries in Working-Time Length, Pay Level and Number of Doctors —

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Abstract

This research intends to offer suggestions to Japan about two major courses of action that Japan should take for the support policy of work-life balance (hereinafter referred to as “WLB”) for female hospital doctors, i.e., a course in which economic superiority is used for solution, and a course in which publicly-owned social facilities and systems or subsidies for hospital organizations are enriched for solution, by researching the policy types adopted by European countries.

Key Words: Women Physician work-life balance Physician’s wage Physician’s duty hours

1. Introduction

Recently, it has been pointed out that the working environment for hospital doctors should be improved to solve the shortage of hospital doctors, which has been made a mock of as “medical collapse” and become one of the serious social problems. In particular, the policy to support the improvement of the WLB for a sharply increasing number of female hospital doctors has gained recognition [1]. For such support policy, two courses of action are conceivable: one course in which childcare and nursing care are incorporated into the social system like seen in Northern European countries, and the other course in which domestic affairs are completely outsourced by hiring a maid on their own account like female hospital doctors in Southeast Asian countries do. Conventionally, the Japanese policy to support female hospital doctors has forced them to make excessive efforts, i.e., depending on imprinting a prototype of dutiful wives and devoted mothers who can completely run the gamut of childbirth, childcare and work (Takino, 2010) [2]. In the future, in preparation for times when the female hospital doctor rate is expected to increase up to the level of Western countries, it is necessary to reform the policy only to force female hospital doctors to make excessive efforts, and review the possibility of selecting a course of action by providing support through the upgrade of social infrastructures, like making the aforementioned flexible working arrangements complete or urging the utilization of outside personal service by way of economic superiority like raising the pay level.

Referring to this selection of the course of action, Yonemoto (2011) compared the increase and present situation of female hospital doctors between Japan and Western countries by reviewing the relevant statistic data and precedent research papers, and confirmed that (i) the Japanese female hospital doctor rate had been on the sharp increase recently, but Japan was positioned as one of the lowest countries compared with that of the U.K., France,
Germany and the U.S. (Table 1), (ii) Japanese female hospital doctors had to cut down their working hours in their housekeeping or childcare years for such domestic affairs, and (iii) the pay level of female hospital doctors was lower than that of male hospital doctors, showing male-female difference as to pay level in the medical field [3]. From these fact-findings, Yonemoto concluded that the policy to support the WLB improvement for female hospital doctors based on the recognition that "making the working environment of hospitals pleasant for female hospital doctors would result in pleasant working environment for male hospital doctors and the improvement of the medical quality" (Kiyono, 2010) [4] was one of the effective policy choices that would lead to the control of the eccentric presence of hospital doctors in diagnosis and treatment departments and work locations and their quitting their hospitals to go into practice, and the solution to the shortage of hospital doctors.

Also, in order to grasp how much economic superiority was enjoyed by Japanese hospital doctors, Yonemoto (2010) [5] made comparison in the pay level between hospital doctors and self-employed doctors of Japan and also among four countries of the U.S., the U.K., France and Germany based mainly on the OECD data as to the working mode (specialist doctors and general doctors) and the employment mode (self-employed doctors and hospital doctors). As a result, the pay level of Japanese practicing physicians (self-employed general doctors) was found notably higher and, in contrast, that of Japanese hospital doctors was low. This implies that the pay level of hospital doctors should be raised as a WLB support policy (Table 2). (Yonemoto, 2010) [5]

However, researches in these two choices of the WLB support policy for female hospital doctors are independent of each other. The researches in these two courses of action, i.e., a nonmonetary type and a monetary type, have not yet progressed to such an extent that allows the selection of which one is valid in terms of policy. Here, the nonmonetary type aims to have social or hospital infrastructures support the WLB of female hospital doctors, and the monetary type aims to raise the pay level of individual doctors and enable them to hire private service with their economic superiority to solve the problems.

2. Objective of This Research
This research treats the selection of two
courses of the WLB support policy for female hospital doctors, an effective, urgent policy to correct the social problems with the female hospital doctor shortage. The two courses are as follows:

[Policy hypothesis 1]
A course in which the pay level of hospital doctors is raised to give the monetary superiority to them so that they can abundantly hire private services (hereinafter referred to as “individual pay type”).

[Policy hypothesis 2]
A course in which, as a social system or welfare means within hospital organizations, environmental support service is upgraded to nonmonetarily support hospital doctors (hereinafter referred to as “social support type”).

For these two policy hypotheses, this research employs the childcare leave type classification of Haas as a WLB policy type, and compares the type-specific average data of the pay level of hospital doctors of the countries categorized in the respective types as the indexes of the individual pay type and long-hour worker rate as the indexes of the social support type with the Japanese counterpart data. Thereby, the research intends to obtain suggestions about the selection of the policy that Japan should take.

3. Method of This Research
3.1 Application of comparative countries by advance research
To compare the two policy types, the individual pay type and the social support type, which is the objective of this research, since there are no precedent researches of the WLB policy type classification for doctors corresponding to these two types, the four types of childcare leave in European countries presented by Haas (Haas, 2003) [6] are quoted for use in comparison with the data of each country belonging to each type as the WLB type for comparative study.

Haas divided countries according to each type of childcare leave. For the first type, Haas named Italy, Spain, Greece and Portugal as the “private care-driven type” countries, where traditional housework division between males and females was strong, leaving childcare to females, and they were not so enthusiastic about the development of public childcare facilities to socialize childcare. For the second type, Haas named the U.K., Ireland and the Netherlands as the “market-driven type” countries, where there had been no childcare leave system until EU Directive for childcare leave was issued and the legal intervention by the government in childcare was minimized. In this “market-driven type,” the U.S. and Australia having a typical policy of non-intervention in the labor market is considered to be included (Yamaguchi, 2009) [7], and this research supports this interpretation. For the third type, Haas named three Northern countries of Sweden, Denmark and Finland as “childcare value-added type” countries, where public support to childcare to allow females to participate in working was strengthened. Yamaguchi (2009) included Norway in these countries, and this research supports his interpretation. For the fourth type, Haas named five countries of Austria, Belgium, France, Germany and Luxemburg as intermediate “family-centered type” countries, where working was supported more than the first type, “private care-driven type,” but less than the third type, “childcare value-added type.” This research also supports this interpretation.

According to the type classification by Haas, the second type, “market-driven type,” of the U.K., Ireland and Netherlands corresponds to the “monetary support (individual pay) type” that hires the private service by taking advantage of monetary superiority, which is the policy comparison type of this research, as a main alternative resource. On the other hand, the third type, “childcare value-added type,” of Sweden, Denmark and Finland corresponds to the “nonmonetary support (social support) type” that upgrades the support service as a social system or a welfare policy within hospital organizations, which is the policy comparison
type of this research. Assuming the above, this research compared and analyzed the data of the countries that fell under these two types.

In addition to the above two types, the data was also compared between the first type, “private care-driven type,” and the fourth type, “family-centered type,” and shown in Table 3 for the reference purpose only.

### 3.2 Comparison by WLB type

Next, as the comparison data of the monetary support (individual pay) type in [Policy hypothesis 1], by using the comparison data by country of doctors’ pay level sourced from the OECD and the comparison data of doctors’ pay level between Western countries and Japan sourced from Yonemoto (2012), the significant difference in the average pay of hospital doctors of the target countries of the market-driven type and childcare value-added type was subjected to t-test, and the test values were compared with each other. From the results of this comparison, the policy that should be taken by the average pay level of Japanese hospital doctors was considered.

The average pay level of hospital doctors by WLB type was expressed by the pay magnification of specialist (hospital) doctors when the average pay level by country was 1. The 2007 investigation data was used as a base, and the data of proximate year was used in case of discrepancy.

As the comparison data of the nonmonetary support (social support) type in [Policy hypothesis 2], by using the long-hour worker rate shown as a scale to measure the degree of fullness of the social support system sourced from the OECD, the significant difference in the average long-hour worker rate of the target countries of the childcare value-added type and market-driven type was subjected to t-test, and the test values were compared with each other. From the results of this comparison, the policy that should be taken to improve the Japanese long-hour worker rate was considered. Here, the “long-hour worker rate” is one of the WLB indicators publicized in the OECD’s better life index. It is the ratio (percentage) of the employees who are working over 50 hours a week to all workers. On an average of the overall OECD, the WLB indicator is under 5% for females but a higher 12% for males.

Furthermore, these policy comparison types of the monetary support (individual pay) type and nonmonetary support (social support) type, and the female hospital doctor rate and the practical physician rate were compared by type and studied to identify the correlation among them, and overall considerations were given to the results. The correlation among them is shown in diagram in Fig. 1.

#### Table 3 Target comparison types and countries

<table>
<thead>
<tr>
<th>Haas childcare leave type</th>
<th>Target comparison types</th>
<th>Target countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market-driven type</td>
<td>Monetary support (individual pay) type</td>
<td>U.K., Ireland, Netherlands, U.S., Australia</td>
</tr>
<tr>
<td>Childcare value-added type</td>
<td>Nonmonetary support (social support) type</td>
<td>Sweden, Denmark, Finland, Norway</td>
</tr>
</tbody>
</table>

3.3 Correlation among the monetary support, the nonmonetary support and the number of doctors

Now, in order to look into the correlation
among the monetary support (individual pay) and the nonmonetary support (social support) and the number of practicing physicians and the female hospital doctor rate, this data was added to the policy study data for analyzing the correlation among the data classified by country.

4. Results

The data of the long-hour worker rate, hospital doctor pay level, number of practicing physicians and female hospital doctor rate were classified by WLB type, and the average value (standard deviation) by type were obtained as shown in Table 4.

4.1 Comparison of the hospital doctor pay level by WLB type

As a result of the comparison of the hospital doctor pay level by WLB type, the average pay level of the market-driven type was found 3.96 (SD = .39), which was significantly higher than 2.30 (SD = .34) of the childcare value-added type by 1.72 times (p<.1). The average pay level of the Japanese hospital doctors was found 2.6 (Yonemoto, 2010), which was lower than that of the market-driven type by 1.36 points or by .65 times, and higher than that of the childcare value-added type by .3 points or by 1.13 times (Fig. 2).

4.2 Comparison of the long-hour worker rate by WLB type

As a result of the comparison of the long-hour worker rate by WLB type, the average rate of the market-driven type was found 8.19 (SD = 5.69), which was significantly higher than 2.75 (SD = .87) of the childcare value-added type by 2.97 times (p<.1). The long-hour worker rate of Japanese workers was found 29.54, which was higher than that of the market-driven type by 21.35 points and higher than that of the childcare value-added type by 26.57 points. This shows an extremely large difference in working hours (Fig. 3).

4.3 Comparison of the number of practicing physicians by WLB type

As a result of the comparison of the number of practicing physicians by WLB type, the average number of practicing physicians of the market-driven type per 1,000 population was found 2.92 (SD = .60), which was significantly lower than that of the average 3.43 (SD=.040) of the childcare value-added type by .51 points (p<.05). The number of Japanese practicing physicians was 2.10, which was lower than that of the market-driven type by .82 points and extremely lower than that of the childcare value-added type by .33 points (Fig. 4).

4.4 Comparison of the number of female hospital doctors by WLB type

As a result of the comparison of the female hospital doctor rate by WLB type, the ratio of the female hospital doctors to the market-driven type doctors was found 36.00% (SD = 4.3),
which was lower than the average 45.25 (SD = 7.41) of the childcare value-added type by 9.25 points but confirmed not significant. The rate of the Japanese female hospital doctors was found 17%, which was about 1/2 or lower than that of the market-driven type by 19 points and lower than that of the childcare value-added type by -28 points, showing quite a low rate (Fig. 5).

Fig. 4 Comparison of each WLB type and the number of Japanese practicing physicians

Fig. 5 Comparison of each WLB type and Japanese female hospital doctor rate

4.5 Correlation among the long-hour worker rate, hospital doctor pay level, number of practicing physicians and female hospital doctor rate by country

As a result of the comparison of the long-hour worker rate, hospital doctor pay level, number of practicing physicians and female hospital doctor rate by country, negative correlation was found in the long-hour worker rate of each country between the number of practicing physicians
and the female hospital doctor rate (P<.01). Particularly, a deep correlation was recognized between the long working hours and the small number of female hospital doctors. Incidentally, in the hospital doctor pay level, no significant correlation was found between the number of practicing physicians and the female hospital doctor rate (Table 5).

Table 5 Analysis of correlation among long-hour working, hospital doctor pay level, number of practicing physicians and female hospital doctor rate

<table>
<thead>
<tr>
<th></th>
<th>Long-hour working</th>
<th>Hospital doctor pay level</th>
<th>Number of practicing physicians</th>
<th>Female hospital doctor rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-hour working</td>
<td>--</td>
<td>0.17</td>
<td>−0.58*</td>
<td>−0.73**</td>
</tr>
<tr>
<td>Hospital doctor pay level</td>
<td>--</td>
<td>−0.08</td>
<td>0.31</td>
<td></td>
</tr>
<tr>
<td>Number of practicing physicians</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female hospital doctor rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, **p<.001

5. Consideration

5.1 Verification of [Policy hypothesis 1]

As a result of the comparative analysis of pay level by WLB type, in the market-driven type countries of the U.K., Ireland, Netherlands, the U.S. and Australia, the pay level of the hospital doctors was found extremely higher than that of the average national pay level (average 3.96 times), indicating that the hospital doctors maintained the WLB by concluding a contract for private childcare stand-in service taking advantage of monetary superiority. Particularly, this was confirmed one of the choices of the WLB support policy for female hospital doctors, particularly sophisticated specialists. However, the difference of 2.6 times in pay level between these countries and Japan is significantly large. And it cannot be denied that it is impractical to raise the average pay level of Japanese hospital doctors by about 1.5 times up from the current level by obtaining national consensus from the viewpoint of the current Japanese financial situation for supporting the social security. When it comes to the two types presented as reference types, it should be noted that Germany and France of the family-centered type are increasingly higher than Japan by 4.1 times and 4.4 times, respectively, expanding the difference, but Italy and Greece of the private care-driven type are of the same level as Japan. Concerning the private care-driven type, Haas attributed the fact to the strong tradition of male-female domestic labor division that childcare should be taken care of by females. However, the female hospital doctor rate is as high as 38% in Italy, 47% in Spain, 37% in Greece and 49% in Portugal. Also, the average number of practicing physicians per 1,000 population in these four Western countries of the private care-driven type is 4.06, extremely larger than 2.1 of Japan. From these, in view of the present situation of Japan that the pay level of hospital doctors is low, the tradition of male-female domestic labor division is strong, while the socialization of childcare is backward, Japan should aim at the WLB policy not only of Northern European countries but also of Southern European countries, such as Italy and Spain, which have not attracted attention.

5.2 Verification of [Policy hypothesis 2]

Taking notice to the long-hour worker rate in [Policy hypothesis 2], it was compared and analyzed by WLB type. As a result, in Sweden, Denmark, Finland and Norway, the countries of the childcare value-added type, the long-hour worker rate was found extremely low. This indicates that these countries are maintaining the WLB by the social support type policy that nonmonetarily supports the upgrade of environmental support service as welfare polity within hospital organizations. Here, the improvement of social infrastructures was confirmed one of the choices of the WLB support policy for female hospital doctors. However, in comparison with the short working hours of these countries, since the Japanese long-hour worker rate of 29.54% is significantly high from the international viewpoint, it is not easy to quickly realize the policy to narrow this much wide gap in the Japanese society with

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deep-seated long-hour working practice, and it is too early to simply seek for only the model of the WLB support policy for female hospital doctors in Northern European countries without improving the overall social system. In contrast, other than the childcare value-added type, including the reference types, a comparatively high long-hour worker rate of 13.99% was seen in Australia of the market-driven type, which was the highest among all analysis target countries. Assuming that the pay is balanced with the labor, these market-driven type countries with a high pay level confirmed in [Policy hypothesis 1] should have higher long-hour worker rate compared with Japan having a low pay level, but it is not the case with them. From this, it can be understood that the pay-labor unbalance is internationally distinctive in Japanese doctors. Also, in the childcare value-added type countries, the number of practicing physicians is large. Particularly, the rate of female hospital doctors is high with the highest 56% of Finland, and significant correlation is seen between the long-hour worker rate and the female hospital doctor rate. Therefore, Japan having an anticipating sharp increase in the female hospital doctor rate has no room to wait for the realization of shorter social labor hours, and separately from the social system, should have a policy to shorten the working hours of doctors as a medical policy. By increasing the number of practicing physicians to at least 2.92 per 1,000 population of the market-driven type, which is 1.4 times as much as the current level, the number of female hospital doctors should be raised to the minimum level that enables the maintenance of the WLB. In view of this, the reason was indicated for the success of Southern European countries, such as Italy and Spain, as derived from [Policy hypothesis 1] in increasing the total number of female hospital doctors without spoiling their quality by increasing the female hospital doctor rate, and controlling the pay level of medical doctors by means of a flexible working system.

5.3 Examination of the intermediate type
Judging from the results of the examination of the above two policy hypotheses about the WLB support, it was found not feasible as a model of policy target to raise the pay level of the Japanese hospital doctors up from the present level by 1.5 times to be the same as that of the market-driven type or to shorten their working hours to be the same as that of Northern European countries due to the too much wide gap. Instead, the private care-driven type, which is regarded as an intermediate type and which

Table 6  Transition of weekly working-hours of doctors by WLB type (Unit: hour)

<table>
<thead>
<tr>
<th>Family centered type</th>
<th>Private care-driven type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Finland</td>
</tr>
<tr>
<td>France</td>
<td>Germany</td>
</tr>
<tr>
<td>Denmark</td>
<td>Greece</td>
</tr>
<tr>
<td>Spain</td>
<td>Italy</td>
</tr>
<tr>
<td>Portugal</td>
<td></td>
</tr>
</tbody>
</table>

Source: OECD Health Working Papers No. 21, 2006
is not so positive about the upgrade of publicly-owned infrastructure, i.e., the socialization of childcare, has presented itself as a Japanese policy model.

To look into this type, the working-hour length of female hospital doctors of the private care-driven type was compared based on the OECD data with the countries of the family-centered type, and consideration was given to the results.

As a result, between the private care-driven type and the family-centered type, the difference, which was not noticeable in the afore-mentioned nation-wide long-hour worker rate, was found noticeable as long as it is limited to the working hours of doctors, and the working hours of doctors in the private care-driven type countries showed a tendency of shortening (Table 6). Also the difference in working hours between the male hospital doctors and the female hospital doctors had a tendency to have a smaller gap in all generations in the private care-driven type countries (Table 7).

This raises the possibility that the private care-driven type countries with a high female hospital doctor rate increased the number of all doctors by increasing the number of female hospital doctors, shortened the working hours by increasing the supply of doctors, and, at the same time, succeeded in controlling the pay level of doctors.

From the above, the author considers that the private care-driven type of Italy, Spain, Greece and Portugal is an appropriate model indicating the course of action that the WLB support policy of the Japanese female hospital doctors should take.

These number of doctors (number of all doctors, number of female hospital doctors), working hours (all doctors, male doctors, female doctors), and pay level are summarized by type in Table 8.

**Table 8** Comparative summary of the number of doctors (all, male, female), working hours, and pay level by type

<table>
<thead>
<tr>
<th>Number of doctors</th>
<th>Private care-driven type</th>
<th>Market-driven type</th>
<th>Care-value-added type</th>
<th>Family-centered type</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practicing physicians</td>
<td>++</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Female hospital doctor rate</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Working hours</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>All doctors</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Male doctors</td>
<td>-</td>
<td>++</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Female doctors</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pay level</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
6. Suggestions about Policy Selection

From the above considerations, the course of action for the WLB support policy that Japan should take for the female hospital doctors, an effective, urgent, corrective action against the shortage of hospital doctors, which is the objective of this study, can be summarized as follows:

1) Like the market-driven type represented by the U.S. and the U.K., the individual support policy that achieved by raising the pay level of hospital doctors and offering the private service by making monetary superiority resulted from the raised pay level of hospital doctors as a main alternative resource will excessively widen the gap from the Japanese low pay level. Therefore, in view of the present medical financial situation, it is not practical for Japan to raise the pay level to such an extent that the monetary superiority can show the effect.

2) To realize the social support type policy with quite a few overtime hours as a social system or welfare policy within hospital organizations like the childcare value-added type represented by Northern European countries, the Japanese long-hour worker rate has an extremely wide gap from that of Northern European countries. Therefore, without considering this much difference in social infrastructures from those countries, it is not practical for Japan to simply seek for a model of the WLB support policy of female hospital doctors, a highly sophisticated profession, in the medical system or hospital organizations of Northern European countries by taking their profession like the profession of general females.

3) In contrast with them, in the Southern European countries of the private care-driven type, the possibility is high that the number of female doctors was increased and thereby the number of all doctors was increased and their working-hour length was shortened, and, at the same time, their pay level was successfully controlled.

4) Therefore, the policy that Japan should take is not of alternative selection between the monetary support (individual pay) type represented by the U.S. and the U.K., and the nonmonetary support (social support) type represented by Denmark and Finland. As a conclusion, Japan should learn from the policy of Southern European countries, such as Italy and Spain, of the private care-driven type, where the moderate pay level is equivalent to that of Japan but the working-hour length is shorter and the female hospital doctor rate is higher than those of Japan.

7. Outlook for the Future

In the future, the author plans to investigate and study the private care-driven type of Italy, Spain, Greece and Portugal, pointed out as the country that Japan should learn from about the course of action of the WLB policy for Japanese female hospital doctors.

Acknowledgement

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