Japanese women doctors in the hospital system: Gender gap, professional burnout, and the impact of the COVID 19 pandemic.

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21 January 2025

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ABSTRACT

Japan's national hospital system, which consists of a combination of private, national, prefectural and metropolitan hospitals, is the largest employers of the of the doctors.
The article provides details on the women doctors' discontinuous workforce participation in the Japanese hospital system, the dominance of part-time work patterns, and the nature of inflexibility in the work structures that disallow the maintenance of separate work and life spheres. This paper further discusses the effects of the COVID 19 pandemic on Japanese healthcare provision structures in hospitals and the extensive inhibitions that the pandemic placed on the careers of women doctors. The article details the nature of the chronic doctor shortage in Japan, and professional burnout incidences among the women doctors, and how the COVID 19 pandemic intensified these two factors. The analysis herein raises the policy issues at government and workplace level. The article argues that the establishment of free and universal childcare facilities, and family caregiving mechanisms via government fiscal restructuring would assist in the dissolution of gendered work patterns.

Keywords: Burnout, gender gap, Japan, women doctors, workforce participation

Introduction

On January 16 2020, Japan confirmed its first COVID 19 infection, and following that, on January 27, the government declared the COVID-19 as a designated infectious disease on the face of the rapidly rising infections, and on March 10, the government declared a nationwide state of emergency, and subsequently, three years later, on May 8 2023, the government downgraded the classification of COVID 19 to be on par with a seasonal influenza epidemic, and hence, began to normalise the social and economic life of the nation (Looi 2021: 1, Tsuzuki 2023: 1209). Japan had, as of April 13 2024, 33,803,572 COVID 19 infection cases and 74,694 related deaths (Worldometers 2025).

This article will first explain the problem of the chronic doctor shortage in Japanese hospitals, which became more critical during the stresses of the COVID 19 pandemic. The article then focuses on women doctors who do not participate in the workforce to the extent that they would prefer to do, due to the gendered nature of labor at home, work, and the nature of Japan's relatively low welfare spending measures. The workforce participation of Japanese women doctors who work in hospitals is subject to a persistent gender gap even though there is an ongoing and chronic doctor shortage. The COVID 19 pandemic exacerbated these issues, as raised in the article.

In the hospital system, the spread of the COVID 19 infections increased the burden on healthcare professionals including doctors, and nurses, and amplified the risk of burnout which exacerbated the existing problem of Japan's doctor shortage (Makino 2020a, Saeki and Shimato 2021, Taneda 2021). Before the pandemic, doctors and nurses in Japanese hospitals were already overwhelmed with excessive overtime as part of regular work environment in which burnout was common (Maunder et al. 2021). As a result of the COVID 19 pandemic, medical services in the hospital system became further exhausted (Katayama et al. 2020).

After the start of the COVID 19 pandemic, in comparison to those who work outside the healthcare sector, mental health deterioration was higher among healthcare professionals (Sasaki et al. 2020a, Yamamoto et al. 2020). Moreover, a sense of isolation and lower levels of self-care also accompanied the higher levels of mental health problems among healthcare professionals, following the start of the pandemic (Kotera et al. 2021).

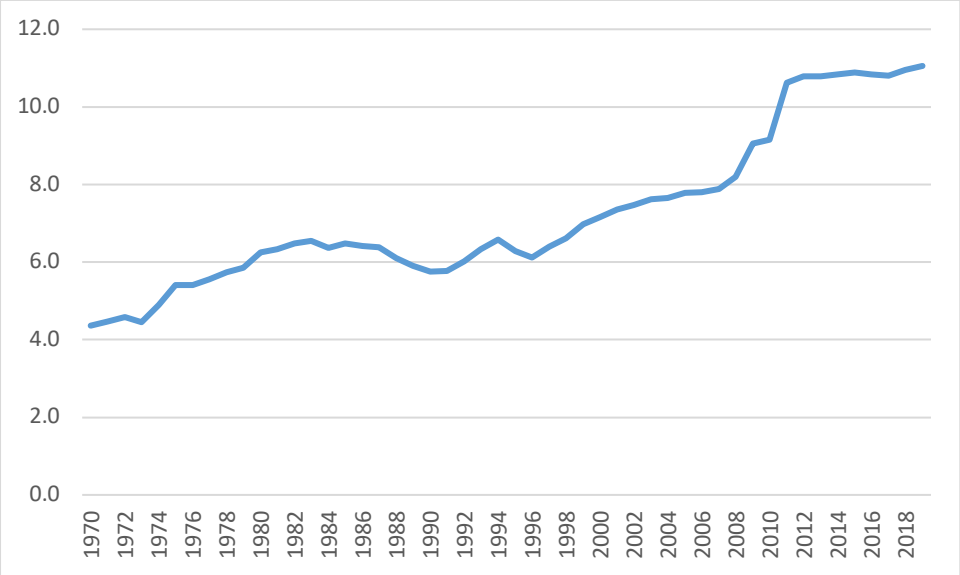
Japan's Hospital system

Japanese hospitals are the largest employer of doctors from all the medical disciplines which include emergency and acute medicine, general medicine, medical research, palliative care, primary care, and specialist medicines. The system provides the major career path for many doctors in both clinical practice and medical research. Over 210,000 doctors (66 percent of all the doctors in Japan) work in the hospital system that include hospitals which are affiliated with medical schools and research centres (Ministry of Health, Labor and Welfare 2018b, Yoshida et al. 2019).

Japan's national healthcare sector provides universal coverage for a core set of services in the hospital system (OECD 2019). For example, the *kaigo hoken* system of free healthcare for the elderly is available regardless of income, place of residence, and type of hospital (Kaneko et al. 2020). The healthcare sector represents a large section of the gross domestic product (Chart 1). The budget of the sector comes from a combination of the financing by national and prefectural governments, and social insurance contributions of the employers and employees via numerous private and public insurance organisations Social insurance contributions from employees and employers form 43 percent of the national health spending with the rest coming from government programmes and government transfers to social health insurance schemes, which means that the healthcare spending represents a quarter of the total government expenditure and that makes the Japanese government the world's biggest healthcare spender (OECD 2020a). As Japan is a rapidly aging society, due to the

declining birth rate as well as longevity, the government healthcare spending needs to keep increasing (Iwata et al. 2020).

Chart 1: Japan's current expenditure on health (% of gross domestic product)



Source: OECD (2020d)

Table 1: Japanese hospitals: Ownership type (2019)

	%
Non-profit medical corporations (regulated by prefectural governments)	68.8
Public medical institutions	14.5
Other	10
National government	3.9
Private individuals	2.2
Social insurance organizations	0.6

Source: Ministry of Health, Labour and Welfare (2020b)

In Japan, the establishment of private hospitals and private medical schools date back to the early nineteenth-century and presently, private hospitals form a larger part of the hospital system in terms of number of beds (Matsuda 2016). Japan has a broad range of hospital ownerships, government (national, prefectural or city), private, and public (Table 1). The category of 'public medical institutions', include National Health Insurance Association, Japanese Red Cross Society, Saisekai Social Welfare Organization, Welfare Agricultural Cooperative Association, Social Welfare Corporation, Hokkaido Social Welfare Association.

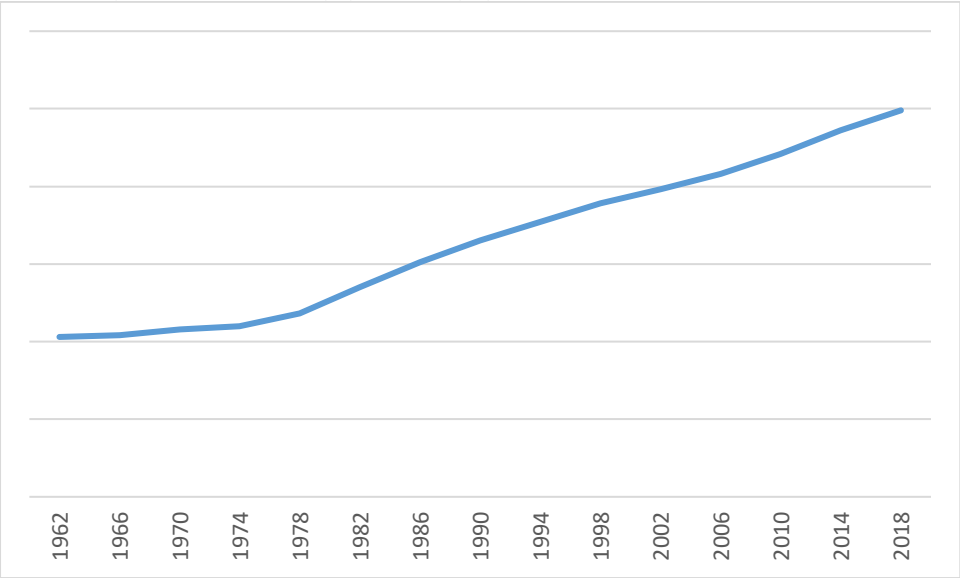
Management of work, regulations, and hierarchy structures in Japanese hospitals do differ depending on the geographical location, designation, type, and size of the hospital (Ihara et al. 2020, Kaneko et al. 2020, Mitadera et al. 2017). Japan's hospital system, though being nationally integrated, has a broad framework as Japan consists of four main (Hokkaido, Honshu, Shikoku, and Kyushu) and approximately 7000 smaller islands, including Okinawa island group, with villages and towns spread out across coastal and mountainous regions. Over ten-percent (12 million) of Japan population live in rural areas, remote mountain ranges, small islands, and peninsulas, half of which are elderly citizens (Takamura et al. 2017). In Japan, each level of government (town, city, prefecture, national) is significant due to this distinctive geography. Hospitals that are outside major centres are essential

critical services and there is no room for their rationalisation via shutting down smaller hospitals in towns to concentrate more beds in larger hospitals in urban settings (Doki 2019).

Doctor Shortage, and Rural and Urban Maldistribution

There are twenty-nine privately-owned and fifty-one public medical schools in Japan. The public medical schools are of various designations and governances, i.e., owned and operated by a city government, prefecture government, or the national government. In 2003, the national government designated all the national universities as 'corporations' responsible for their own financial management that led to mergers and creation of new graduate medical schools (Kozu 2006).

Chart 2: Japan's doctor density (per 1,000 population)



Source: OECD (2020b)

In the period from 1986 to 2006, the Japanese national government reduced several components of the healthcare spending by putting a limit on the number of places in medical schools that led to a subsequent shortage of doctors, and in the 2007-2009 period, there came about a policy reversal (Takata et al. 2011). Japan's doctor density (per 1,000 population) has been increasing (Chart 2) but the shortage is a chronic long-term problem. The shortage has been a factor in the geographical maldistribution between the rural and urban areas across the nation. Due to the doctor shortage, it is impossible to secure replacement for doctors who wish to take leave (personal, family care, childcare) even though leave provisions are inherent part of work contract. Especially in emergency care and critical care sectors, there are many long-term unfilled positions, and it is difficult to find the necessary numbers of doctors for hospitals to be able maintain the team-based work environment that has long characterised Japanese workplaces (Tsutsumi 2020).

Japanese hospitals have a variety of specific designations, such as university (teaching) hospitals and specialised treatment centres (Ihara et al. 2020). After the six-year undergraduate study for a medical degree, and before they start postgraduate specialization training, Japanese doctors must complete a two-year compulsory residency program at a university hospital or a hospital that is designated by the Ministry of Health, Labour and Welfare (Shimizu et al 2019). The residency contract includes a rotation between different specialities (e.g., internal medicine, emergency medicine, and community medicine) within two-years. This residency requirement leads to concentration of young doctors in urban areas where the designated residency hospitals are concentrated (Ishikawa 2020b). Urban university hospitals are also the primary source of the latter postgraduate specialist training, which further amplifies this urban concentration (Ishikawa 2020a).

The Ministry of Health, Labour and Welfare governs licensing of doctors in Japan (Morioka et al. 2014). Japan's national and local governments have some authority to regulate the distribution of doctors across the urban and rural Japan (Yoshida et al. 2019). Since 2004, doctors who complete their residency, are able to choose from available employment options which is why there is a high concentration of doctors in urban areas as they are the most preferred locations (Sakamoto et al. 2018). Doctors in earlier stages of their profession tend to avoid working in small hospitals with fewer number of doctors due to lack of potential promotion and career progression (Kato et al. 2012).

Urban and rural doctor maldistribution exists in all OECD countries (OECD 2019). Japan's primary challenge is that it is the fastest aging country in the OECD group, has the lowest birth rate, and has been long suffering a doctor shortage, all of which makes the issue of maldistribution relatively more problematic. For instance, Tokushima, Kyoto, and Kochi prefectures have the highest numbers of practicing doctor population ratios while the prefectures of Saitama, Ibaraki, and Chiba [the peripheries of Tokyo-To] have the lowest (Okada et al 2018).

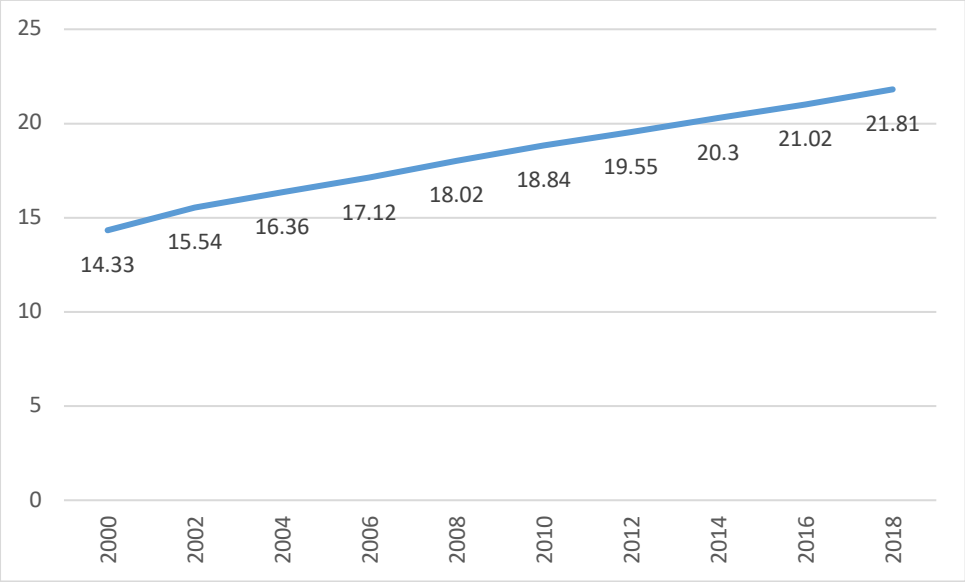
From 2000s onward, the geographic maldistribution has become more intensified, and doctor shortages, including those of specialists, increased, especially in rural locations (Hara et al. 2017, 2018a, 2018b, Ishikawa et al. 2017). As an outcome, the rural hospital doctors are, on average, have longer workforce participation periods than their urban counterparts (Matsumoto et al. 2018b). While the government acknowledges the issue and there are various scholarship programmes for medical students to alleviate these problems, it is yet not clear how effective they will be in the long-term (Matsumoto et al. 2021a).

Towns and cities in rural Japan are reluctant to shut down small hospitals to concentrate and centralise the number of beds and doctors in fewer and larger hospitals (Doki 2019). Geriatric medicine is one of the specialist disciplines that suffers a doctor shortage as Japan is the most rapidly aging mature capitalist society in the world (Iwata et al. 2020). In 2019, 28 percent of Japan was over the age of sixty-five (World Bank 2020). People of rural Japan are, on average, older than their urban counterparts. This necessitates a higher availability of geriatric specialists. Rural patients are more likely to suffer delay in accessing specialist medicine (Maeda and Arima 2020). Specialist doctors need to renew and maintain their medical board [recognition, registration, and certification organisations of each respective specialisation] registration. The ability to maintain one's registration is negatively correlated with working in rural Japan as well as being a woman doctor, and the main reason is the lack of sufficient support for doctors across the geographical distance (Koike et al. 2018).

Women Doctors and Workforce Participation

In the Global Gender Gap Index 2023 rankings, Japan is in the 125th place, out of 145 countries (WEF 2023: 11). Japan has many qualified and experienced women doctors whose qualifications, skills and expertise are underutilized. The number of Japanese women doctors as percentage of the total increased in the period from 2000 to 2018, from 14.33 per cent of the total to 21.81 percent (OECD 2020c). Yet, the average workforce participation rate of Japanese women doctors is consistently lower throughout their careers in comparison to men, and the participation rates of women doctors markedly decline in their late 20s and early 30s, while in contrast, those of men remain at a high level until the age of 65 (Kaneto et al. 2009). The OECD data (Chart 4) chronicles this trend.

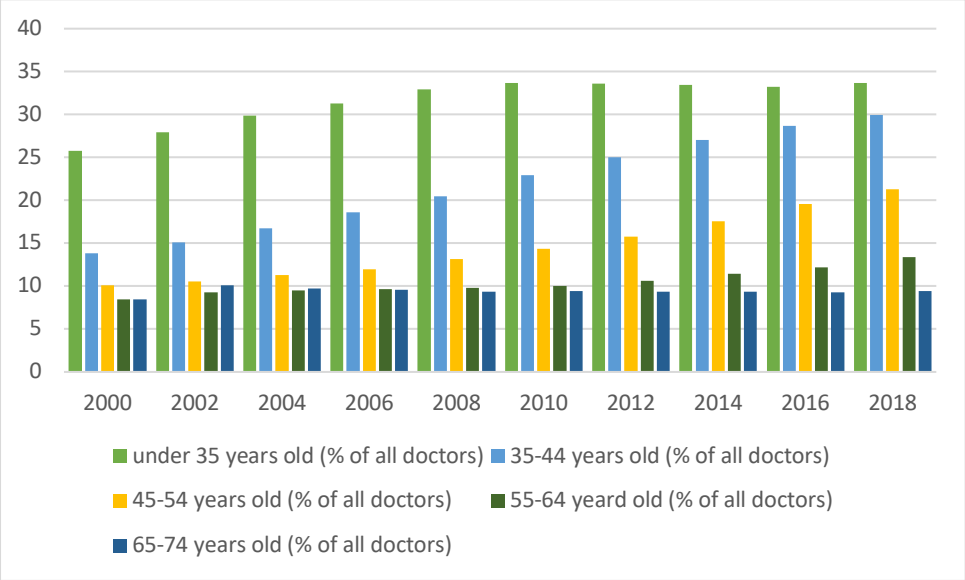
Chart 3: Female doctor numbers as % of all doctors



Source: OECD (2020c)

Following years of complaints from women candidates, an investigation by the Japanese Ministry of Education, Culture, Sports, Science and Technology found, in 2018, that ten Japanese medical schools (out of the total of eighty nationwide) had been engaging in exam result reductions of women applicants to deny them their rightful academic placements (Mishima and Abe 2020, Izawa 2018, Makino 2020b, Niiya 2020). Inoue and Izumi (2019) place these rigging practices in the milieu of the work conditions that inhibit women doctors' careers. One of the universities admitted to have been rigging the exam results for over a decade that places these practices within the timeline in which the government was actively reducing all medical school enrolments. This signifies the added impediment on women candidates' entry into Japan's medical profession.

Chart 4: Female doctor numbers as % of all doctors, age groups distribution



Source: OECD (2020c)

Gendered Part-time Segmentation of Work

Japanese hospitals lack mechanisms, staff numbers, and adequate funding to support flexible ways of working, and this situation inhibits the possibility of the establishment of work and family balance for women doctors (Inoue and Izumi 2019). This is the case even for specialist women doctors (Okoshi et al. 2016, Okoshi et at. 2014, Fujimaki et al. 2016). This is primarily why women doctors' workforce participation has been characterised by part-time work. Japan's highly gendered nature of family care, including care of elderly, the dependents, and children, contributes to inhibition of the career and social capital development of women (Zhou 2020). The prevailing gender roles and the male-domination in the value systems that govern work are the causes of Japanese women's low representation in medical professions (Isa and Chinen 2016). Due to the gender gap in managerial authority, Japanese women doctors in the hospital system work in an environment which is propelled by gender stereotype reinforcement via a patriarchy-driven and highly masculinized culture (Matsui et al. 2019). Women doctors in Japan are more likely than their male counterparts to resign from full-time work due to gendered social roles and expectations (domestic labor, pregnancy, childbirth, child rearing, family care, elderly care) and two-thirds of them likely choose to work part-time upon their return to the workforce (Chatani et al. 2016).

The Japanese gender roles, in society, at home and workplace, manipulate women doctors' workforce participation, including of those seeking to further their careers via specialist training in the Japanese hospital system where doctor shortages create long working hours, with insufficient support for maternity leave, family care leave, and facilities for childcare ['daycare'], and there is an acute lack of assistance for women doctors who choose to work through pregnancy (Nomura et al. 2015).

Women doctors who quit work, with an aim to return to workforce later, either full-time or part-time, cite, as the reasons, insufficient workplace support during pregnancy, inadequate maternity leave, parental leave, childcare leave, and childcare facilities (Arima et al. 2016, Izumi et al. 2013, Maehara et al. 2020, Nomura et al. 2015, Yamazaki et al. 2017). If the government fully institutionalised these facilities, free of charge, then all doctors would be able to make choices on their workforce participation as free of the constraints of gender roles, social expectations, and economic factors. This would then, in turn, create new configurations of work conditions for all, establish a better work-life balance, and reduce the number of unfilled positions in the hospital system.

Discontinuous workforce participation is highly problematic for career progression in Japan despite the high skill and training nature of labor in medical practice. Some Japanese medical boards do not recognize maternity leave, childcare leave, and family leave taken by female physicians as legitimate time-off reasons in considering the granting and renewal of medical board certification (Tomizawa 2011). Such policies serve to further limit women's workforce participation and future career development. The conditions that define the choice of part-time work over full-time is a significant issue in workforce participation. In fact, Japanese women doctors with the strongest perception of the gender-based career obstacles at work are more likely to choose to work part-time on a continuous basis (Nomura and Gohchi 2012).

Working either discontinuously or in a part-time mode can undermine women doctors' efforts to obtain the degree of Doctor of Medical Science, which is necessary to start training to be a specialist doctor (Chatani et al. 2016). But women doctors who obtain the Doctor of Medical Science degree still have to face the gendered work environment obstacles in their career progression (Yasukawa and Nomura 2014). Socially based gendered care roles and the lack of allowance for the individual choice over work and life balance effect women doctors even in a large cohort specialisation, such as surgery (Tomizawa 2013, 2014).

Japanese medical boards, surgical and medical associations have, historically, had limited or no women doctor and surgeon representation as councillors, directors, and chairpersons (Tomizawa 2011, 2019). The proportion of women surgeons in Japan is small percentage of the overall but has been slowly increasing (Yorozuya et al. 2014). In some specialities, there is more of an increase in the proportion of women doctors overall, but their proportion in managerial positions in medical boards, medical societies, and hospital management remains low (Murashita et al. 2021). Further, there is underrepresentation of women doctors at tenured positions (Okoshi et al. 2014). Involuntary discontinuous workforce participation is a primary context of this gap (Kaneto et al. 2009). Increasing the women doctors' presence in the boards of medical societies would create more reliable opportunities to establish career development for women doctors and specialists, and help to build work systems that assist the advancement of their workplace status, especially in academic medicine, and thus, support the improvement of their work-life balance (Tomizawa 2015).

Japan's increasing divorce rate (quantified as over one-in-three of all civil unions) has led to a rise in the percentage of households with single parents, with single mothers forming the majority who form a segment of working population that faces additional social and financial burdens (Kumagai 2020, Tobishima 2018, Yasumitsu and Ando 2020). The research on the work structures that undermine women doctors' workforce participation indicate that divorce can create additional burdens for doctors with children as they may suffer reduced earnings and face further barriers in workforce participation (Hayasaka et al. 2007, Nomura et al. 2015).

Burnout Syndrome

The burnout syndrome consists of one or more of the traits of fixated intention to quit work, low work commitment and low-quality work performance due to consistent and chronic overwork, exhaustion, depersonalization, low self-esteem, and self-assessment, primarily in professions such as, doctors, nurses, and health professionals among whom clinical depression can also accompany burnout (Maslach and Jackson 1981, Maslach et al. 2001, Schaufeli et al. 2009).

Due to staff shortages, doctors and nurses in Japanese hospitals work long day and overnight shifts, and also have to put in excessive overtime. With the rise of the neoliberal deregulatory labor economics in Japan in the 1990s, unregulated overtime work hours across the economy began to increase (Watanabe 2013). There followed an increase in the incidents of *karoshi* (sudden death from overwork), which is a syndrome that first became publicised in the 1970s (Iwasaki et al. 2006).

In the 2000s, incidents of *karoshi* began to increase among Japanese doctors in hospitals, as many were regularly working longer than 80 hours overtime per month (the official threshold cause of *karoshi*) and the hospital management systems lacked oversight and enforcement roles to monitor this aspect of workflow (Ehara 2013, Hiyama and Yoshihara 2008).

The 2018 *Work Style Reform Act* introduced new work regulations and limited the number of overtime work hours in Japanese workplaces but this legislation does not cover Japanese doctors and nurses which are two professional groups that continually have to work excessive overtime due to chronic staff shortages (Wada et al. 2019, Taneda 2021). There are government plans to create a limit of 155 hours a month overtime [which is still excessive] for doctors, from 2025 onward (Ishida 2021). Due to the long-term chronic staff shortages, Japanese healthcare and welfare services sectors suffer from overwork-caused burnout (Murayama et al. 2020, Yuji et al. 2012). Among the hospital doctors, long weekly hours and the compulsory overtime, and the subsequent exhaustion and burnout lead to a high staff turnover problem as many doctors quit work (Kadooka et al. 2017). These factors are also present in the Japanese hospital nursing profession with its own employee shortage and high turnover (Saijo et al. 2016).

The stress induced by interpersonal relationships and mental overload, not just the long working hours, is also one of the causes of burnout among Japanese doctors (Haoka et al. 2010). Included among the symptoms of burnout is active suicidal ideation in some cohorts (Tateno et al. 2016). The extent and the nature of the burnout varies among different doctor cohorts in Japan.

Burnout can occur at the very start of a doctor's career due to unfavourable work conditions. The survey by the Japanese Ministry of Education, Culture, Sports, Science and Technology in 2019 found that, one-half of the 108 university hospitals forced several thousand doctors, many of whom recently qualified, work without a salary and social insurance, without giving them any days off, and many of these doctors had to do paid work in other hospitals to the point of burnout, while in other cohorts, numerous part-time employed doctors worked double the specified hours, often without receiving their leave entitlements (Kobayashi 2019, Kyodo 2019).

For the early career doctors, the sense of low personal accomplishment is a factor that contributes to professional burnout, partly because they have not yet connected with networks and groups at work to build levels of social capital that may actually inhibit burnout (Murayama et al. 2020). Women doctors, who form less than a quarter of all doctors in Japan, are less likely, than their male counterparts, to be part of a network at the workplace. The rates of burnout appear to be higher among early career doctors irrespective of whether they had begun their work before the start of the COVID 19 pandemic or after (Matsuo et al. 2020). Burnout does not solely arise out of full-time work or excessive workload. There are instances in which burnout at work gets worse with the burden of overload in personal life, study and training, family life, and responsibilities for one's dependents. Japan's doctor shortage is the key context.

Among resident doctors, the specialists and general practitioners at the hospitals, long regular working hours and overtime requirements are prime causes of turnover, emotional exhaustion, depersonalisation, burnout, and clinical depression (Saijo et al. 2014, Nishimura et al. 2019).

Among the specialist-researcher doctors in the Japanese hospital environment whose clinical work and research work are symbiotic, there are also cases of burnout (Perumalswami et al. 2021). In this cohort, the types of burnouts include 'research-work related', 'patient related' though 'personal burnout' is the one that is most prevalent among women doctors (Toyoshima et al. 2020).

Within the cohorts of primary care doctors who work at the hospitals, the necessity of continuous full days of work even right after a night shift, due to staff shortage, contribute to overwork stress and lead to physical and psychological problems of *karoshi* (overwork-caused death) and *karojisatsu* (overwork-caused suicide) (Ihara et al. 2020).

Burnout incidences among women doctors

The incidences of burnout is higher among women doctors in comparison to their male counterparts, and, more importantly, burnout among women doctors occurs across Japanese geography, in all hospital types (private, public or university hospital), in both rural or urban locations, and notwithstanding whether the doctors are specialists, residents or attending doctors (Ishikawa 2022c, Kawamura et al. 2018, Kijima et al. 2020, Matsuo et al. 2021, Nishimura et al. 2014, Ogawa et al. 2018, Saijo et al. 2014, Saijo et al. 2018, Umene-Nakano et al. 2013). Among some of these cited articles, in instances when the variables of marital status, or parenthood, or care responsibilities, are mentioned, the authors also do not cross-tabulate them with gender to observe its different effects on women, and men, even though the results do point at gender differences in the burnout rates (see Ishikawa 2022c, Kijima et al 2020, Matsuo et al. 2021, Nishimura et al. 2014, Saijo et al. 2014, Saijo et al. 2018, Umene-Nakano et al. 2013). There is also body of research that does not, at all, discuss marital status, parenthood or care responsibilities (see Kawamura et al. 2018, Kijima et al. 2020, Ogawa et al. 2018).

It is necessary to have a much clearer understanding of burnout phenomenon among women doctors, by focusing on the factors of domestic labor and burden of care. Ihara et al (2020) argue that an insight into burnout syndrome and gender among Japanese doctors is only possible via structured interview-based studies (Ihara et al. 2020). Further, in an interview-based study, Hara et al. (2018) state that the large Japanese gender gap in economic, political, educational and health criteria, and the burden of care for family and children will continue to inhibit the continuous workforce participation of women doctors, and will likely to cause a continual decline in their workforce participation. In short, to counter and remedy the gender gap within a profession, it is essential to understand how it gets constructed and persists, and in order to do that it is necessary examine how it crosstabulates with aspects of work as well as different styles of family life.

The COVID 19 pandemic, women doctors, and burnout

After the start of the COVID 19 pandemic, adverse changes in employment conditions and social interactions led to a long-lasting decline in the general health status of over twenty percent of the Japanese society and the impact was greater on women (Kobayashi et al. 2021, Suka et al. 2021). As primary family caregivers, women experienced a higher rate of mental health deterioration during the COVID-19 pandemic compared to non-caregivers (Noguchi et al. 2021b, 2021b, 2022, Taniguchi et al. 2022).

There was also increase in mental health issues among doctors who treated COVID 19 patients due to the infection risk for themselves and the danger of transmission to their families (Oda et al. 2021). There were cases where women doctors were denied access to service by childcare facilities and were also harassed and bullied, due to their critical healthcare work in the COVID-19 infection environment (Makino et al. 2021, Shimazu et al. 2021). Further, the COVID-19 pandemic, and the subsequent shutdown of several essential services such as childcare facilities, increased the intensity of gendered labor at home and care work for Japanese women doctors, and has drawn attention to the unyielding pressure that gender roles and the lack of universal childcare facilities put on their lives and careers (Nishida et al. 2021).

The COVID 19 pandemic was a new factor that highlighted how the healthcare system is unable to ensure women doctors' continuous workforce participation. As the COVID 19 pandemic developed, the prevailing shortage of doctors became more acute (Kodama 2021). In some specialist fields, a challenging narrative emerged.

After the start of Japan's COVID pandemic, shutdown of several specialist hospital departments, the crisis in healthcare management, and the rise of infection clusters within hospitals led to a decline in the numbers of part-time specialist doctors of whom the majority are women, and many others had to quit work to after their children with the sudden shutdown of childcare facilities (Shimbo and Nakayama 2021). The disadvantages of the gendered structure of part-time work easily multiplied under the new challenges.

As a result of the COVID 19 pandemic, emergency medical services became overwhelmed (Katayama et al. 2020). The increased working hours, and the risk of COVID 19 infection at work, have increased the prevalence of depressive symptoms among healthcare professionals including doctors and nurses, and the impact on women professionals was far more severe than their male counterparts (Inoue et al. 2021). After the start of the COVID 19 pandemic, in comparison to those who work outside healthcare sector, the prevalence of burnout was higher among doctors, especially among those who provided frontline care to COVID 19 patients, with a higher burnout rate among women doctors (Sasaki et al. 2020a, Matsumoto et al. 2021b, Matsuo et al. 2020, Yamada et al. 2021, Yamamoto et al. 2020). Thus, the gender gap in burnout cases had become more acute.

Essentially, the research cited here shows that the gendered roles of parenthood and caregiving reproduces the lack of work and life balance in the lives of women doctors, and contributes or leads to burnout in a way that is linked to the chronic lack of support at workplace. In effect, if flexible types of workforce participation existed, it would serve all doctors, who would have options other than full-time work. This type of solution needs to be established alongside the current efforts to increase the number of new doctors. That is, it is not merely the extent of the workforce participation, but the structure and content of work itself that need to be under focus.

Welfare System Factors

The prime characteristics of the Japan's economic model changed several times since the post-war economic reconstruction. The late 1960s, and the early 1970s, signified the deceleration and the end of the long-boom. The 1970s' Keynesian spending and the 'consumption-led model' was replaced by the late 1970s' model of 'export-led and foreign-investment-led overseas expansion growth', which in turn became superseded by the 'speculative investment model of the 1986-1992', and the 'neoliberal deregulation model' arrived in the late 1990s and early 2000s (Hayashi 2014).

Among these periods, the most financially viable time to invest in a comprehensive welfare system was in the growth period of the 1960s and the early 1970s but the government was not focused on building a welfare system. After the end of the post-war growth period, successive governments' plans to establish a Keynesian-style welfare system went through several failed attempts within the contours of the domestic market and global economic currents (Bayari 2012).

In the mid-1970s, the national government tried move away from the employer-provided welfare measures (such as healthcare, housing, subsidized-rent, holidays, daily commute costs) toward a taxation-based modern welfare state, and in the 1980s, an emergent middleclass paradigm led to the belief that an individual self-funded model could be possible, but Japan's economic malaise of the 1990s-2000s and the subsequent neoliberal restructuring of the labor market undermined this process (Goodman 2002, Hirashima 2004, Oku et al. 2017).

The Japanese labor market has been highly deregulated since the early 2000s, and the workhours and workdays vary across industries and occupations. Japanese welfare system does not have sufficient levels of parent and child benefit payments for working mothers, couples, and single parents, the system of childcare facilities is inadequate as it has waiting lists of thousands, and the operation hours of facilities do not cater for parents who work outside 'nine-to-five' o'clock schedules or those who work long hours even in weekends (Ezawa and Fujiwara 2005, Ezawa 2009, Nonoyama-Tarumi 2017, Tobishima 2018). The existing public daycare centres serve primarily, but not sufficiently, part-time, and casual employees and those who also rely on other family members for additional childcare duties. Past policy proposals, such as cash benefits for working mothers were deemed insufficient (Saito 2017).

Japanese welfare system lacks the fiscal basis for redistributive spending (Shirahase 2015). Employer and employee 'social security contributions' in Japan are well below the OECD averages, and they are especially low in comparison to the other major coordinated market economy; Germany, and moreover, Japan is well below the OECD average, in terms of tax deductions (family benefits and provisions), for employees with children (OECD 2022a, 2022b). It is feasible to transfer Japanese women's burden of care for children, elderly, and other dependents to a new welfare system in which higher taxes on employers and employees can provide the cashflow, but successive Japanese governments have not attempted such a solution (Furugori 1991, Takamura 2012, Ueno 2021).

A final comment on the workforce participation problem

The government policy of increasing medical school enrolments appears to be ineffective to remedy the doctor shortage and the geographical maldistribution of doctors between the rural and urban areas (Hara et al. 2017, Ishikawa 2020b, Ishikawa et al. 2017, Iwata et al. 2020, Matsumoto et al. 2018b, Takata et al. 2011, Tanihara et al. 2011). Among the research cited in this paragraph, Takata et al. (2011) is the only one that reaches the conclusion that recruitment of overseas doctors would remedy the shortage.

Essentially, merely increasing the number places in medical schools does not address the problem of lower workforce participation of women doctors as all new graduates will continue to face the same problematic work conditions. An equitable approach to reduce the shortage is in the reform of the work environment to increase the workforce participation of women doctors, especially for those with children and dependents, by establishing gender equality at workplace, and by creating the conditions to raise women doctors' representation in general and specialist medicine, medical societies, and the management ranks of medical schools and hospitals (Hara et al. 2018, Koike et al. 2009, Yuji et al. 2012).

The possibility of increasing Japanese women's workforce participation depends primarily on government policy measures. There is strong evidence among the Western nations that funding universal welfare measures and guaranteeing childcare support are two main necessary policies to allow women to stay in the workforce (Rubery 2013, Ruber and Rafferty 2013). Japan's government has the legislative authority and fiscal power to establish such changes. The Japanese government, in its domestic market, neutralized many aspects of neoliberal globalization that, has elsewhere hegemonized the economies with diverse varieties of capitalism (Thelen 2012).

An increase in workforce participation of women doctors is not possible without changes in the work systems and the organisational climate (Arima et al. 2016). It is necessary to allow both women and men to work as part-time doctors without inhibiting their career progress, and thus also encourage men, irrespective of their life choices and patterns, to contribute equally to work-life balance at work and home and share the burden of care and domestic labor tasks (Shimizu and Nagai 2021). Thus, it is necessary to establish flexible ways of working and work sharing would utilize the capabilities of all doctors regardless of gender (Inoue and Izumi 2019). Creation of flexible work and work practices that do not morph into a segmentation within a profession can prevent gender wage gap and gender job segregation across Japan (Hara 2018). Workplace conditions reform, including the provision of childcare services for all doctors, women, and men is necessary to increase the workforce participation of women doctors to alleviate the doctor shortage (Kato et al. 2012, Takahashi et al. 2017). The availability of these services within hospitals would enhance the ability to work the night shift and overtime work for all doctors, women, and men (Kono et al. 2020).

Conclusion

The above discussion defined the elements in Japanese hospital system that became intensified during the COVID 19 pandemic, that include the persistence of the shortage of doctors, and their geographical maldistribution that accompany the lower workforce participation of women doctors, and their relatively higher presence in part-time work.

The shortage phenomenon is a complex but also a gendered work problem. It consists of three levels, the nationwide shortage of doctors, the shortage in the rural areas caused by the nationwide shortage and the lack of willing applicants for the rural vacancies, and the low workforce participation of women doctors, which, for some doctors, can occur as early as in the first decade of their careers. This last item is extremely problematic for a such high skill-base occupation.

The structures that inhibit women doctors' continuous workforce participation are socially-driven gender roles that force care duties upon women, and the lack of sufficient welfare spending on care provisions for their dependents, children, and the elderly.

Medical profession governance structures alone can not sufficiently support women doctors' workforce participation and career progression as they lack mechanisms to remedy the disadvantages that the archaic gender roles create.

The lack of a universal free child care system inhibits participation in the highly varied nature of work hours across occupational groups in Japan. The solution lies with the government regulations and spending with the realisation that workplace-based services are necessary for all women and men in all occupational groups.

Japanese labor legislation governing work hours and overtime limits do not cover doctors and nurses in the hospital system but new regulation is due to come into effect soon. How this will affect either the burnout syndromes or the shortage is unclear. The shortage is not remediable rapidly, and will linger, due, also, to the speed in which Japanese workforce, including the doctors, is aging.

The nature of institutional reforms needs to include new measures and conditions to ensure women doctors' a more continuous workforce participation. A matrix of solutions to the problem lies at national political and fiscal structures to reshape social and cultural institutions, rather than leaving the matter to the hospital system which is a healthcare delivery and medical research domain. Most importantly, the power and the reach of the national government in constructing and reforming the national labour markets are quite self-evident.

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