

Laypeople's Perspective on Physician Work-Hour Restrictions in Japan: A Cross-Sectional Study

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Abstract

The aim of the study was to examine laypeople's perspectives on the impending implementation of physician work-hour restrictions in Japan, which had received limited research attention. We conducted a nationwide cross-sectional study in January 2024. The participants were monitors of an internet survey company who responded to closed questions regarding the expected effect of work-hour regulations, along with an open-ended question regarding their expectations or concerns about these restrictions. The data were analyzed using descriptive statistics for closed questions and content analysis for the open-ended questions. The study included 484 laypeople. A significant portion (25.4%) was unaware of the scheduled start of work-hour restrictions. Approximately half of the participants had a neutral view of the overall impact of the restrictions. Content analysis of the open-ended responses identified 130 (60.2%) comments as "expectations" and 70 (32.4%) as expressing "concerns," with a notable number of comments deemed to indicate that the respondents were "unsure" or found the changes "irrelevant" to them. This study indicates a substantial gap between the views of physicians and laypeople on this issue.

Keywords

working hour regulation, duty hour restriction, laypeople, lay participants, general population

Key Points

- The global imposition of work-hour restrictions for physicians addresses critical issues stemming from physician overwork and its adverse outcomes, and Japan has introduced physician working hour restrictions in April 2024.
- While the perspectives of physicians on physician work-hour regulations have been extensively researched, the viewpoints of laypeople remain largely uninvestigated.
- This cross-sectional study showed that, while many respondents expected positive effects of physician work-hour restrictions, a notable number of laypeople were unaware of the scheduled start of work-hour restrictions and exhibited limited interest in the topic.
- The distinctive insights provide valuable contributions to the discourse, with potential implications for future policy-making regarding physician work-hour regulations in Japan and internationally.

Introduction

Physicians are tasked with the responsibility of meeting society's healthcare needs and improving patient well-being. Fulfilling this expectation and providing quality care often necessitate long work hours.¹ However, the prolonged working hours of physicians have recently emerged as a global concern,² and numerous countries have implemented

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restrictions on medical residents' work hours in response.³ In the United States, for instance, regulations on resident working hours were initially established following the Libby Zion case in 1984, with the Accreditation Council of Graduate Medical Education (ACGME) implementing and revising duty hour regulations in 2003, 2011, and 2017.⁴ Similarly, the European Working Time Directive has governed work hours in hospitals across Europe since 1998,⁵ with comparable regulations observed in Western countries and Asia, including Korea and Taiwan.^{6,7}

Conversely, Japan has lacked regulations on physician working hours, leading to significant problems.⁸ A 2019 survey in Japan revealed that ~40% of physicians worked more than 60 h a week, with 10% exceeding 80 h.⁹ The lengthy working hours of physicians are influenced by a number of factors, including the uneven distribution of physicians between regions and specialties,¹⁰⁻¹² lack of task shifting,¹³ and the fact that there are many hospitals, beds, and long length of stay in hospital in Japan.¹⁴ Overwork has been associated with an increase in depressive symptoms and suicidal thoughts among Japanese physicians. In total, these findings prompted the introduction of working hour restrictions beginning April 2024¹⁵ under which physicians will be limited to 960 h of overtime work per year, or 1860 h under special circumstances (ie, physicians at hospitals providing community and emergency care, medical residents, and physicians at the stage of training where they must gain advanced clinical skills).¹⁶⁻¹⁸

Globally, extensive research has highlighted the adverse effects of prolonged work hours on physician health, patient safety, and healthcare organizations. Studies have shown that longer work hours can be detrimental to both physicians themselves (eg, burnout and other mental conditions,^{19,20} cardiovascular and cerebrovascular diseases,²¹ and occupational sharp injuries²²), and patients (eg, patient experience and safety²³). In addition, organizations may experience negative outcomes, including lower work productivity, increased days of sick leave, and strengthening of intentions to leave the current specialty.²⁴ Studies have also examined the perspectives of healthcare professionals regarding working hour restrictions. In their survey of the 2011 ACGME duty hour requirements, Drolet et al^{25,26} found that medical residents and residency program directors in the United States believed that the quality of patient care and resident education were negatively affected. In Korea, Han and Chung²⁷ showed that medical residents and faculty members had different perspectives on the impact of duty hour regulations: medical residents cited the difficulty of completing the same workload as before in limited working hours, while faculty members were more concerned about the potential for patient safety to be compromised by interruptions to patient care and inadequate resident training.

Notwithstanding their significant stake in healthcare outcomes, however, the viewpoint of laypeople on this crucial issue remains underexamined.^{28,29} In 2022, a 26-year-old male resident who was working more than 200 h of overtime in a

single month committed suicide,³⁰ prompting media coverage that brought the issue of excessive working hours for physicians to public attention in Japan. However, the media attention on this case was relatively short-lived, and as of the beginning of 2024, when this study was conducted, there was a lack of clarity regarding how the general public perceives the working conditions of physicians. This is despite the fact that the incorporation of patient perspectives has led to significant progress in areas of healthcare such as patient safety and quality improvement.³¹ Accordingly, research on layperson feedback regarding physician work-hour regulations is of high priority.

Here, to contribute to a more comprehensive understanding of the implications of such policies, we investigated how laypeople perceive the regulations governing physician working hours in Japan.

Methods

Design, Setting, and Participants

We performed a cross-sectional study using an online anonymous questionnaire in January 2024. The study followed the Checklist for Reporting Results of Internet E-Surveys guidelines.³² To recruit members of the general population, we collaborated with an internet research company (referred to as X company), which distributed our survey. The company conducts public opinion surveys. In this study, we targeted the general population; to ensure a broad perspective, participants were adults aged 18 years and over, excluding healthcare staff. We employed stratified random sampling by age group. To ensure sample representativeness, strata rates for age were set as 18 to 24: 25 to 34: 35 to 44: 45 to 54: 55 to 64: 65 to 74: ≥ 75 , at an equal ratio. Although we did not perform sample size calculation for this study due to its descriptive nature, a target of ~400 was set based on previous research that surveyed each stakeholder's perceptions of regulations on physician working hours.²⁵⁻²⁷

Participants received an invitation e-mail message from X company and were enrolled after reading the study description and agreeing to participate. To prevent multiple entries from the same individual, the participants were given a unique identification code and were required to enter their code at the beginning of the questionnaire. The self-administered, closed survey was conducted using the web-based survey platform SurveyMonkey (www.surveymonkey.com). The participants completed the survey online and were incentivized with points redeemable for cash. Emails were sent automatically by the company as reminders to complete the online questionnaire during the survey period. The survey was closed when the number of responses reached 400, resulting in a total survey period of 3 days.

Survey

We developed an anonymous self-administered online questionnaire with reference to previous research.²⁵⁻²⁷ The

questionnaire consisted of 4 sections: informed consent, socio-demographic questions, perceptions of physician working hour restrictions (closed questions), and expectations or concerns towards physician working hour restrictions (an open-ended question). The first author created a draft of the questionnaire by referencing existing research. Subsequently, the first and second authors engaged in repeated discussions and revised the questionnaire to make it easier for laypeople to understand and respond to. The authors reviewed the clarity, writing style, and flow of the questionnaire and confirmed that there were no items that were difficult to understand and answer. The questionnaire had 23 items. The survey had 4 online pages.

The consent section required participants to acknowledge their understanding and agreement to participate. Sociodemographic questions covered gender, age, residential area, marital status, level of education, occupation, annual household income, number of medical visits in the last 6 months, and type of medical institution being usually attended. In this section, they were also asked if they knew that regulations on the working hours of physicians would be implemented in April 2024. All of the responses to these questions were self-reported, and participants were asked to choose only one option from the given options. The next section gauged perceptions of the impact of work-hour restrictions of physicians on various outcomes, including patient safety, quality of patient care, continuity of patient care, physician quality of life, physician fatigue, amount of physician rest, patient care ownership, and quality of education for junior physicians. These items were answered with either a positive (better or increased), neutral (unchanged), or negative response (worse or decreased). The final section allowed for optional free-text responses regarding respondent expectations or concerns towards physician working hour regulations.

Data Analysis

Responses to the closed questions were analyzed by descriptive statistics using SPSS version 29.0. For the free-text question, we performed a content analysis of each response, which ranged from single-term answers to long-paragraph responses, using Microsoft Excel version 16.66.1.³³ We adopted the definition of content analysis as “a research method which allows the qualitative data collected in research to be analyzed systematically and reliably so that generalizations can be made from them in relation to the categories of interest to the researcher” by Haggarty.³⁴ In this study, the specific method of content analysis was based on the method of Hawking et al.³⁵ Briefly, the first author read the responses several times for better understanding and generated initial codes inductively. The first and second authors then iteratively discussed and reviewed the codes. Codes were classified into subthemes and themes based on similarities and differences. The researchers resolved any discrepancies through discussion until a consensus was reached.

Table 1. Sociodemographic Profile of Participants.

Characteristic	N (%)
Gender	
Female	197 (40.7)
Male	283 (58.5)
Others	4 (0.8)
Age (year)	
18-24	78 (16.1)
25-34	70 (14.5)
35-44	66 (13.6)
45-54	66 (13.6)
55-64	62 (12.8)
65-74	67 (13.8)
≥ 75	75 (15.5)
Residential region	
Hokkaido and Tohoku	45 (9.3)
Kanto	207 (42.8)
Chubu	80 (16.5)
Kinki	84 (17.4)
Chugoku and Shikoku	33 (6.8)
Kyushu	35 (7.2)
Marital status	
Never married	196 (40.5)
Married	254 (52.5)
Divorced or widowed	34 (7.0)
Level of education	
Less than high school	21 (4.3)
High school	137 (28.3)
Junior college	71 (14.7)
More than or equal to college	255 (52.7)
Occupation	
Manager or executive	12 (2.5)
Company employee	140 (28.9)
Self-employed	41 (8.5)
Public employee	16 (3.3)
Employee of other organizations	5 (1.0)
Part-time worker	64 (13.2)
Housewife/househusband	44 (9.1)
Student	34 (7.0)
Unemployed	128 (26.4)
Annual household income (million JPY)	
< 3.00 (≈ 20 000 US dollar)	150 (31.0)
3.00-4.99	126 (26.0)
5.00-6.99	84 (17.4)
7.00-9.99	72 (14.9)
≥ 10.00	52 (10.7)
Number of medical visits in the last 6 months	
0	137 (28.3)
1	68 (14.0)
2	51 (10.5)
3	49 (10.1)
4	21 (4.3)
5-9	105 (21.7)
≥ 10	53 (11.0)
Type of medical institution being usually attended	
Clinic	331 (68.4)
Community hospital	122 (25.2)
University hospital	31 (6.4)

Finally, we calculated the percentage of each theme and sub-theme to demonstrate its relative importance in the overall picture.

Ethical Considerations

Before completing the questionnaire, participants were asked to read a description of the study and to check a consent box to participate in the study. They received points that could be exchanged for cash. The ethics committee of Keio University School of Medicine approved this study (approval number: 20231160).

Results

Participants

Of the 4677 people who were invited to participate in the study, a total of 484 participants answered the survey. The response rate was unknown due to the survey design (ie, web surveys). Table 1 shows their characteristics. A total of 283 were male (58.5%). A total of 361 (74.6%) were aware of the scheduled implementation of working hour restrictions for physicians in April 2024, while 123 (25.4%) were not.

Anticipated Effect of Physician Working Hour Regulations

As shown in Table 2, responses indicated mixed expectations about the impact of physician working hour restrictions. Over half of the participants expected no change in aspects of patient care such as safety, quality, and continuity, but about 30% expressed concerns about potential deterioration in the continuity of patient care. In terms of physician well-

being, ~60% anticipated improvements, including reduced fatigue and better rest. Expectations for the impact on medical education were varied, with many foreseeing no significant changes.

Expectations or Concerns

Among respondents, 216 (44.6%) answered the open-ended question on their expectations or concerns regarding the physician working hour regulations. The results of content analysis are presented in Table 3, and exemplar quotes in Table 4. Approximately 60% of these responses were optimistic, anticipating positive effects on physician well-being, while approximately one-third expressed concerns. A notable number of comments stated that they were “unsure” or considered the changes to be “irrelevant to me.” Some respondents used Japan-specific terms to express their views, including “*karoshi*” (overworked to death), “*sabisu zangyo*” (unpaid overtime), and “*burakku kigyō*” (exploitative companies), reflecting unique cultural considerations.

Discussion

This questionnaire-based cross-sectional study of laypeople’s perspectives on forthcoming physician working hour restrictions in Japan revealed that approximately a quarter of respondents were unaware of the impending regulations. About half of the participants had a neutral stance regarding the overall impact of the regulations, while a notable additional portion was unsure about the issue or deemed it irrelevant. Some lay participants expressed their viewpoints particularly through the lens of a specifically Japanese context, such as “*karoshi*,” “*sabisu zangyo*,” and “*burakku kigyō*.”

Despite the implementation of similar regulations affecting physicians around the world, this study is to our

Table 2. Participant Predictions of the Effects of Physician Work-Hour Regulations.

Question	Survey response, N (%)			
	Worse or decreased	Unchanged	Better or increased	Missing data
How will the following be affected by physician working hour restrictions?				
Patient safety	92 (19.0)	295 (61.0)	97 (20.0)	NA
Quality of patient care	96 (19.8)	276 (57.0)	112 (23.1)	NA
Continuity of patient care	144 (29.8)	263 (54.3)	77 (15.9)	NA
Physician quality of life	36 (7.4)	161 (33.3)	287 (59.3)	NA
Physician fatigue	42 (8.7)	128 (26.4)	314 (64.9)	NA
Amount of physician rest	42 (8.7)	151 (31.2)	291 (60.1)	NA
Patient care ownership	56 (11.6)	305 (63.0)	123 (25.4)	NA
Quality of education for junior physicians	81 (16.7)	249 (51.4)	154 (31.8)	NA
		Survey response, N (%)		
	Bad	Neutral	Good	Missing data
Overall, what do you expect to be the impact of the restrictions on physician work hours?	45 (9.3)	245 (50.6)	193 (39.9)	1 (0.2)

Table 3. Content Analysis of Free-Text Responses to the Question Regarding Expectations or Concerns About Physician Working Hour Restrictions (N = 216).

Theme	Subtheme	Count, N (%)	
Expectations	Improved physician well-being	71 (32.9)	
	Improved quality of patient care	35 (16.2)	
	Overall	10 (4.6)	
	Increased number of physicians	5 (2.3)	
	Renewal of the medical care system	2 (0.9)	
	Improved quality of physicians	2 (0.9)	
	Restoration of physician dignity	1 (0.5)	
	Management should be retained within the physician's community	1 (0.5)	
	Improved quality of medical education	1 (0.5)	
	Stabilization of the medical care system	1 (0.5)	
	Patient care as before	1 (0.5)	
	Subtotal	130 (60.2)	
	Concerns	Deterioration in quality of patient care	35 (16.2)
		Questioning the system of regulating physician working hours	23 (10.6)
Deterioration of physician well-being		4 (1.9)	
Physician shortage		4 (1.9)	
Deterioration in the quality of medical education		2 (0.9)	
Unforeseen impact		1 (0.5)	
Deterioration in the quality of physicians		1 (0.5)	
Subtotal		70 (32.4)	
Others	Unsure	13 (6.0)	
	Irrelevant to me	11 (5.1)	
	Generalization	7 (3.2)	
	Increased number of physicians	2 (0.9)	
	Patient engagement	2 (0.9)	
	Need to improve medical education	1 (0.5)	
	Improved quality of patient care by other means	1 (0.5)	
	Efficient medical care	1 (0.5)	
	Physician overwork and mental health	1 (0.5)	
	Strengthening the healthcare system	1 (0.5)	
	Effectiveness varies by hospital	1 (0.5)	
	Healthcare versus small business in society	1 (0.5)	
	Physician salaries	1 (0.5)	
	Patient-centered care	1 (0.5)	
	Unclear	8 (3.7)	
Subtotal	52 (24.1)		
Total		252^a	

^aTotal counts are greater than 216 because some responses were coded multiple times across different themes or subthemes.

knowledge the first to focus on lay perspectives of physician working hour restrictions. A key strength of our study is its diverse participant pool, facilitated by collaboration with an internet research company, which included individuals who do not regularly visit physicians. Recognizing all laypeople as potential stakeholders underscores the critical need for public involvement in healthcare decisions,³⁶ and highlights the societal call for a more inclusive and representative

healthcare system. This revelation of laypeople's perceptions of physician working hour regulations will help inform future policy making in Japan and around the world. Moving forward, it is crucial to explore how these perceptions can be translated into actionable policies that not only safeguard physician well-being but also enhance patient care. However, it appears that the perceptions of other key stakeholders (eg, nurses and healthcare administrators) have been overlooked. Future studies and policy making could focus on assessing the impact of such regulations on healthcare quality, access, and the voices of other healthcare professionals. Additionally, engaging both healthcare professionals and the public in ongoing discussions will be essential to ensure that any policy changes are both effective and widely supported. Policy making regarding physician working hour restrictions that take into account the perceptions of diverse stakeholders, including laypeople and other underrepresented groups, will lead to more effective and sustainable systems.

As the healthcare community actively debates the implementation of physician work-hour restrictions, this study underscores a substantial gap between the perspectives of physicians and the lay public regarding work-hour restrictions. This gap suggests that a portion of lay people may have limited interest in these regulations, consistent with previous findings indicating differing views between healthcare professionals and patients.³⁷⁻³⁹ Bridging this divide requires enhanced communication, and advocating for mutual understanding between physicians and the public.⁴⁰

The study also references some cultural and historical influences shaping attitudes toward work in Japan,⁴¹ exemplified by terms like "*karoshi*," "*sabisu zangyo*," and "*burakku kigyo*." These terms were deeply embedded in the post-World War II economic boom and reflect long-standing working practices and health in Japan. In the post-World War II era, the ideal workers in Japan were considered those who gave their total selves over to work. This was reflected in the popularity of a song, "Can you work for 24 hours?," which appeared in a TV advertisement for an energy drink.^{8,42} As a result, Japan became notorious for its long working hours and resulting problems. For example, deaths due to overwork are so frequent that the country has its own name for the phenomenon, *karoshi*, which literally means "death by overwork."^{8,43} The term *sabisu zangyo* refers to overtime work performed by an employee that is not reported and therefore not paid.⁴² Although this practice is of course illegal, it is rarely enforced. Rather, the practice of requiring employees to work overtime with no pay is so common in Japanese society that the uniquely Japanese term *sabisu zangyo* is now widely used. *Burakku kigyo* is the term for a company that overworks its employees at low wages and represents an important cause of *karoshi*.⁴⁴ In the present study, these terms, which are commonly used on a daily basis in Japanese society, were also used by the lay participants in the context of physician working hour regulations. Since work is an integral part of life, attitudes toward work and its related issues will likely be influenced by history and

Table 4. Exemplar Quotes of the Free-Text Responses to the Question Regarding Expectations or Concerns About Physician Working Hour Restrictions (N = 216).

Theme	Subtheme and exemplar quotes	
Expectations	Improved physician well-being “I hope that the number of physician ‘karoshi’ ^a will decrease.”	
	Improved quality of patient care “(Physicians) ... can be more responsible”	
	Overall “It would be a step toward ideal reform.”	
	Increased number of physicians “I expect an increase in the number of physicians...”	
	Renewal of the medical care system “Hopefully a new medical care system will be established.”	
	Improved quality of physicians “Quality of physicians is expected to improve.”	
	Restoration of physician dignity “I would like to see reforms so that physicians can feel pride and honor.”	
	Management should be retained within the physicians community “(Physician working hour restrictions will be) ... very good. Physicians should take the necessary action through reform.”	
	Improved quality of medical education “(Physician working hour restrictions will) ... lead to improved quality of medical education.”	
	Stabilization of the medical care system “(Desire for) stable medical care system.”	
	Patient care as before “(I would prefer) ... to be able to see the physician as before.”	
	Concerns	Deterioration in quality of patient care “Physicians need to complete their work in a short time to avoid overtime working, which can lead to poor (patient care)...”
		Questioning the system of regulating physician working hours “(Physician working hour restrictions) are due to be introduced, but I think they will only end up increasing ‘Sabisu Zangyo’. ^b ”
		Deterioration of physician well-being “I am concerned that some hospitals are likely to become ‘burakku kigyō’. ^c ”
		Physician shortage “Will it cause a shortage of physicians?”
		Deterioration in the quality of medical education “Young physicians would not be able to learn at home. They would have to learn in the field of medicine.”
		Unforeseen impact “There will be adverse effects somewhere along the line with (physician working hour restrictions)”
Deterioration in the quality of physicians “(Physician working hour restrictions) could cause problems with quality of clinicians.”		
Others		Unsure “I am not familiar with the actual situation (regarding physicians’ working environment).”
		Irrelevant to me “I don’t have any serious diseases, so for me the regulation of physicians’ working hours is not really relevant.”
		Generalization “Physicians are human beings too.”
	Increased number of physicians “The number of physicians should be increased.”	
	Patient engagement “I feel that patient attitudes need to change for physicians to be healthier, so we should work together to change the way they work.”	
	Need to improve medical education “The working environment for physicians needs to be improved, while at the same time the level of their technical skills needs to be raised.”	
	Improved quality of patient care by other means “I would like to see the workload of physicians reduced through the establishment of a new associate medical qualification, AI practice, ...”	
	Efficient medical care “More efficient methods of medical treatment are required.”	
	Physician overwork and mental health “(Physicians) tend to lose their minds because of the poor working conditions that are commonplace...”	

(continued)

Table 4. (continued)

Theme	Subtheme and exemplar quotes
	Strengthening the healthcare system <i>"The functions of medical institutions should be clarified in conjunction with work-style reforms of physicians ... and the management system should be strengthened."</i>
	Effectiveness varies by hospital <i>"I guess (the effectiveness of the physicians' working hour restrictions) depends on something like the nature of each hospital. Physicians and nurses at my hospital are kind."</i>
	Healthcare versus small business in society <i>"I am uncomfortable with the fact that only the healthcare sector is highlighted in general, as any occupation has problems of their (working) environment, income, education, etc There are unimaginable occupations in small and medium-sized enterprises, but they are not highlighted."</i>
	Physician salaries <i>"(Physicians) may be underpaid."</i>
	Patient-centered care <i>"I believe that healthcare services should be tailored to the patient's needs."</i>

^akaroshi means death due to overwork.

^bsabisu zangyo means working overtime unpaid.

^cburakku kigyō means exploitative company.

culture. Further research is required to explore how these cultural factors influence laypeople's perceptions of physician working hour regulations.

Limitations

We should note some possible limitations of our study. First, the web survey study design carries the risk of sample bias. However, a recent study by Spencer et al comparing online and offline surveys showed the effectiveness of online surveys, ameliorating concern on this issue.⁴⁵ Second, there is a concern that it is unclear whether the study participants were representative of laypeople in Japan. Our sample may be representative of the general population with a higher interest in physician work style and/or workload. Accordingly, caution should be taken in generalizing the results of the study. Third, the study was conducted under a cross-sectional design. Further longitudinal data would deepen our knowledge of laypeople's perceptions of physician working hour restrictions. Fourth, a validated questionnaire was not available and could not be used. Another concern is that the public/patients did not have a chance to validate the survey before this study. Instead, our questionnaire was developed with reference to studies investigating perceptions of working hour regulations among medical professionals.²⁵⁻²⁷ Fifth, the value of free-text comments in questionnaires may be controversial.⁴⁶ One of the challenges in using open-ended questions, in which the data are not collected purposefully or systematically, is the possibility that the data analysis reflects a lack of structure or design.⁴⁶ In the present study, both authors thoroughly discussed data coding based on a rigorous methodology of content analysis for trustworthiness as well as to ensure methodological expertise throughout the analysis.⁴⁶

Conclusions

This nationwide cross-sectional study provides distinctive insights into the perceptions of laypeople regarding physician work-hour restrictions. The study indicates that a considerable segment of the lay population exhibits limited interest in the topic, notwithstanding the vigorous discussion it has sparked among medical professionals. This discrepancy underscores the need for physicians to recognize the substantial gap between their own views and those of the general public on the matter of work-hour restrictions. Addressing this divide could be crucial to attempts to align healthcare policies and practices with broader societal expectations and concerns.

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Data Availability

The corresponding author can provide the data sets generated and analyzed in the study upon reasonable request. The data are not publicly available due to privacy requirements and ethical restrictions.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval

The ethics committee of Keio University School of Medicine approved this study (approval number: 20231160).

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Statement of Human and Animal Rights

This study was performed in keeping with the Declaration of Helsinki. All procedures were performed in accordance with relevant guidelines.

Statement of Informed Consent

All participants read a description of the study and checked a consent box to participate in the study before completing the questionnaire.

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References

1. Stern Z. Opening Pandora's box: residents' work hours. *Int J Qual Health Care*. 2003;15(2):103-105. doi:10.1093/intqhc/mzg024
2. Sinsky CA, Trockel MT, Dyrbye LN, et al. Vacation days taken, work during vacation, and burnout among US physicians. *JAMA Netw Open*. 2024;7(1):e2351635. doi:10.1001/jamanetworkopen.2023.51635
3. Temple J. Resident duty hours around the globe: where are we now? *BMC Med Educ*. 2014;14(S1):S8. doi:10.1186/1472-6920-14-s1-s8
4. Accreditation Council for Graduate Medical Education. Common Program Requirements Section VI with Background and Intent. 2017. https://www.acgme.org/globalassets/PFAssets/ProgramRequirements/CPRs_Section-VI_with-Background-and-Intent_2017-01.pdf. Accessed February 26, 2024.
5. UK Department of Health. What is the European Working Time Directive? 2009. http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Managingyourorganisation/Workforce/Workforceplanninganddevelopment/Europeanworkingtime directive/DH_077304. Accessed February 26 2024.
6. Sohn S, Seo Y, Jeong Y, Lee S, Lee J, Lee KJ. Changes in the working conditions and learning environment of medical residents after the enactment of the Medical Resident Act in Korea in 2015: a national 4-year longitudinal study. *J Educ Eval Health Prof*. 2021;18:7. doi:10.3352/jeehp.2021.18.7
7. Wang T-H, Drolet BC, Tsai K-Y, Liu Y-F. Residents' perception of duty hour limits through teaching hospital accreditation status—experience in Taiwan. *J Formos Med Assoc*. 2017;116(5):398-401. doi:10.1016/j.jfma.2016.11.004
8. Fujikawa H, Son D, Eto M. Are residents learners or workers? A historical perspective in Japan. *TAPS*. 2021;6(1):122-124. doi:10.29060/taps.2021-6-1/pv2339
9. Ministry of Health Labour and Welfare. Survey of Physicians' Working Conditions in 2019. 2020. <https://www.mhlw.go.jp/content/10800000/000677264.pdf>. Accessed February 26, 2024.
10. Ide H, Yasunaga H, Kodama T, Koike S, Taketani Y, Imamura T. The dynamics of obstetricians and gynecologists in Japan: a retrospective cohort model using the nationwide survey of physicians data. *J Obstet Gynaecol Res*. 2009;35(4):761-766. doi:10.1111/j.1447-0756.2009.01039.x
11. Ide H, Yasunaga H, Koike S, Kodama T, Igarashi T, Imamura T. Shortage of pediatricians in Japan: a longitudinal analysis using physicians' survey data. *Pediatr Int*. 2009;51(5):645-649. doi:10.1111/j.1442-200X.2009.02839.x
12. Tsutsumi A. Workstyle reform for Japanese doctors. *Environ Occup Health Pract*. 2020;2(1):n/a. doi:10.1539/eohp.2020-0008-OP
13. Ishikawa M. The role of task shifting in reforming the working styles of pediatricians in Japan: a questionnaire survey. *Medicine (Baltimore)*. 2022;101(35):e30167. doi:10.1097/md.00000000000030167
14. Doki S. 2019. Rapid response to: Allowing more doctors to work less than full time could reduce burnout, says Royal College. <https://www.bmj.com/content/366/bmj.15778/rr-0>. Accessed October 6, 2024.
15. Okawara M, Ishimaru T, Yoshikawa T, et al. Working hours, side work, and depressive symptoms in physicians: a nationwide cross-sectional study in Japan. *J Occup Health*. 2022;64(1):e12377. doi:10.1002/1348-9585.12377
16. Koike S, Wada H, Ohde S, Ide H, Taneda K, Tanigawa T. Working hours of full-time hospital physicians in Japan: a cross-sectional nationwide survey. *BMC Public Health*. 2024;24(1):164. doi:10.1186/s12889-023-17531-5
17. Wada K, Endo M, Smith DR. New reforms to limit the excessive working hours of Japanese physicians and help prevent karoshi. *J Occup Environ Med*. 2019;61(6):e304-e305. doi:10.1097/jom.0000000000001595
18. Taneda K. Labor reforms for physicians in Japan. *J Natl Inst Public Health*. 2021;70(1):54-60. doi:10.20683/jniph.70.1_54
19. Lin RT, Lin YT, Hsia YF, Kuo CC. Long working hours and burnout in health care workers: non-linear dose-response relationship and the effect mediated by sleeping hours—a cross-sectional study. *J Occup Health*. 2021;63(1):e12228. doi:10.1002/1348-9585.12228
20. Tomioka K, Morita N, Saeki K, Okamoto N, Kurumatani N. Working hours, occupational stress and depression among physicians. *Occup Med (Lond)*. 2011;61(3):163-170. doi:10.1093/occmed/kqr004
21. Kivimäki M, Jokela M, Nyberg ST, et al. Long working hours and risk of coronary heart disease and stroke: a systematic review and meta-analysis of published and unpublished data for 603 838 individuals. *Lancet*. 2015;386(10005):1739-1746. doi:10.1016/s0140-6736(15)60295-1
22. Lockley SW, Barger LK, Ayas NT, Rothschild JM, Czeisler CA, Landrigan CP. Effects of health care provider work hours and sleep deprivation on safety and performance. *Jt Comm J Qual Patient Saf*. 2007;33(11):7-18. doi:10.1016/s1553-7250(07)33109-7
23. Dewa CS, Loong D, Bonato S, Trojanowski L. The relationship between physician burnout and quality of healthcare in terms of safety and acceptability: a systematic review. *BMJ Open*. 2017;7(6):e015141. doi:10.1136/bmjopen-2016-015141
24. Dewa CS, Loong D, Bonato S, Thanh NX, Jacobs P. How does burnout affect physician productivity? A systematic literature

- review. *BMC Health Serv Res.* 2014;14(1):325. doi:10.1186/1472-6963-14-325
25. Drolet BC, Christopher DA, Fischer SA. Residents' response to duty-hour regulations—a follow-up national survey. *N Engl J Med.* 2012;366(24):e35. doi:10.1056/NEJMp1202848
 26. Drolet BC, Khokhar MT, Fischer SA. The 2011 duty-hour requirements—a survey of residency program directors. *N Engl J Med.* 2013;368(8):694-697. doi:10.1056/NEJMp1214483
 27. Han E-R, Chung E-K. The perception of medical residents and faculty members on resident duty hour regulation. *Korean J Med Educ.* 2020;32(1):67-72. doi:10.3946/kjme.2020.154
 28. Fujikawa H, Son D, Aoki T, et al. Translating and validating a Japanese version of the instrument for patient assessment of medical professionalism (J-IPAMP): a cross-sectional survey. *BMC Med Educ.* 2022;22(1):641. doi:10.1186/s12909-022-03699-8
 29. Wilkinson TJ, Wade WB, Knock LD. A blueprint to assess professionalism: results of a systematic review. *Acad Med.* 2009;84(5):551-558. doi:10.1097/ACM.0b013e31819fbaa2
 30. CNN. 2023. Japanese family says young doctor took his life after working 200 hours overtime in a single month. <https://www.cnn.com/2023/08/23/asia/japan-doctor-suicide-overwork-karoshi-intl-hnk/index.html>.
 31. Ward K, Stanyon M, Ryan K, Dave S. Power, recovery and doing something worthwhile: a thematic analysis of expert patient perspectives in psychiatry education. *Health Expect.* 2022;25(2):549-557. doi:10.1111/hex.13375
 32. Eysenbach G. Improving the quality of web surveys: the Checklist for Reporting Results of Internet E-Surveys (CHERRIES). *J Med Internet Res.* 2004;6(3):e34. doi:10.2196/jmir.6.3.e34
 33. Kleinheksel AJ, Rockich-Winston N, Tawfik H, Wyatt TR. Demystifying content analysis. *Am J Pharm Educ.* 2020;84(1):7113. doi:10.5688/ajpe7113
 34. Haggarty L. What is content analysis? *Med Teach.* 2009;18(2):99-101. doi:10.3109/01421599609034141
 35. Hawking M, Kim J, Jih M, Hu C, Yoon JD. "Can virtue be taught?": a content analysis of medical students' opinions of the professional and ethical challenges to their professional identity formation. *BMC Med Educ.* 2020;20(1):380. doi:10.1186/s12909-020-02313-z
 36. Baumann LA, Reinhold AK, Brütt AL. Public and patient involvement in health policy decision-making on the health system level – a scoping review. *Health Policy.* 2022;126(10):1023-1038. doi:10.1016/j.healthpol.2022.07.007
 37. Blendon RJ, DesRoches CM, Brodie M, et al. Views of practicing physicians and the public on medical errors. *N Engl J Med.* 2002;347(24):1933-1940. doi:10.1056/NEJMsa022151
 38. Mira JJ, Guilabert M, Pérez-Jover V, Lorenzo S. Barriers for an effective communication around clinical decision making: an analysis of the gaps between doctors' and patients' point of view. *Health Expect.* 2014;17(6):826-839. doi:10.1111/j.1369-7625.2012.00809.x
 39. Street RL, Haidet P. How well do doctors know their patients? Factors affecting physician understanding of patients' health beliefs. *J Gen Intern Med.* 2011;26(1):21-27. doi:10.1007/s11606-010-1453-3
 40. Hartley S. Bridging the gap between health care professionals and communities. *Community Eye Health.* 2004;17(51):38-39.
 41. Eugster B, Lalive R, Steinhauer A, Zweimüller J. Culture, work attitudes, and job search: evidence from the Swiss language border. *J Eur Econ Assoc.* 2017;15(5):1056-1100. doi:10.1093/jea/jvw024
 42. Isaka Y, Shimada H. Chapter 5 Peter F. Drucker and the Philosophy of "Management". In: Mitsui I, Isomura K, Takeuchi Y, eds. *Translating and Incorporating American Management Thought into Japan*. Springer; 2022:89-105.
 43. Kanai A. "Karoshi (Work to Death)" in Japan. *J Bus Ethics.* 2008;84(S2):209-216. doi:10.1007/s10551-008-9701-8
 44. Min J. A symbolic framing of exploitative firms: evidence from Japan. *J Bus Ethics.* 2024;190:589-605. doi:10.1007/s10551-023-05404-1
 45. Spencer NH, Syrdal DS, Coates M, Huws U. Assessing bias in online surveys using alternative survey modes. *Work Organ Labour Glob.* 2022;16(1):34-51. doi:10.13169/workorglaboglob.16.1.0034
 46. O'Cathain A, Thomas KJ. "Any other comments?" Open questions on questionnaires – a bane or a bonus to research? *BMC Med Res Methodol.* 2004;4(1):25. doi:10.1186/1471-2288-4-25