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A review of government-led health and productivity management and disclosure practice in Japan

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The concept of occupational health and safety (OHS) is changing to include more job-related factors, resulting in an enlarged role for OHS management and a greater need for information disclosure in response to social expectations. It is vital for businesses to keep up with the new concept in health management and build a cohesive system if they are to achieve their sustainability goals. This paper examines current regulations and government initiatives to encourage health management and information sharing, as well as company practices in Japan, demonstrating that an increasing number of Japanese companies are adopting the new health management approach. We suggest a government-led H&PM model based on the model proposed by Johanson and Aboagye and best practices in Japan, demonstrating that legislation, policies, and implicit employee-centered stakeholder culture are important factors in the success of government-led projects. It also suggests that, to prevent window dressing and one-time booms, intrinsic motivation and psychological aspects should be researched and addressed more thoroughly.

KEYWORDS

health and productivity management, disclosure, stakeholder culture, motivation, government-led, occupational health and safety, policy

Introduction

Occupational health and safety (OHS), a vital component of human capital, is receiving increasing attention at both the micro and macro levels. OHS management contributes to decreased turnover, more engagement, and enhanced company performance. It is also intended to promote quality of life and social inclusion while reducing the financial strain on the social security system (Goetzel et al., 2016; Hashimura, 2020; METI, 2020; Sharman, 2020).

The scope of the OHS discourse has shifted as the understanding of OHS has evolved in response to new social demands. Total worker health considers work as a social determinant of health (NIOSH., 2016), with all job-related aspects influencing employee health. As a result, the focus of OHS has shifted beyond keeping workers safe and preventing sickness. It has grown to address psychological health concerns, work-life balance, interactions with coworkers and supervisors,

and other job-related variables through increasing leader engagement and rebuilding organizational structure and culture. These factors have an influence on the wellbeing of employees and their families, as well as the community (NIOSH., 2016; Street et al., 2021).

Meanwhile, investors that incorporate environmental, social, and governance (ESG) data into investment decision-making (ESG investors) want more information on how companies care for their employees to have a better understanding of the business's resilience and sustainability (Oda, 2021). Simultaneously, standard setters such as the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC), the Sustainability Accounting Standards Board (SASB), and the International Accounting Standards Board (IASB) have worked individually or collaboratively to influence health and safety and human capital disclosure. The question of whether companies can keep up with the expanding idea and practice of OHS while also meeting the growing social need for information sharing has become crucial.

This study gives clarifications to this question in the context of Japan. To begin with, Japan is a country dealing with a significant challenge of an aging population and a growing financial load caused by medical care costs. Employee health management is regarded as a cornerstone of the national sustainability plan (ACCJ-EBC, 2017; METI, 2020). Secondly, since 2008, Japan has implemented several measures, including legislative revisions, different initiatives, and programs, based on the recommendations of OHS experts and pioneer companies to promote employee health and productivity management (H&PM) (Mori et al., 2021).

The specific research questions include the following: how far the H&PM practice has spread since the Japanese government initiated the H&PM campaign; what variables encourage or impede the government-led H&PM practice; and what must be done in the future? The review of the practice helps us understand the current situation by identifying the differences between practice and theoretical models and investigating whether there are any gaps between practice and institutional intentions. It has consequences for both human resource professionals in corporations and policymakers in other countries. It also suggests the research that is lacking.

The paper is organized as follows: Section A summary of regulations and government-led initiatives provides a brief review of the regulations and government initiatives; Section Theory and methods describes the theory and methods, including the model and data used to analyze the H&PM practice; Section Analysis of H&PM and disclosure practices demonstrates the results of the analysis; Section Discussion discusses the reason for the diffused H&PM practice and the challenges left to avoid the practice becoming window dressing or a one-time boom; Section Concluding remarks concludes.

A summary of regulations and government-led initiatives

While employee health concerns, shown as either presenteeism or absenteeism, cause corporations to lose productivity and corporate value, they also raise societal medical care costs and lower the healthy working population (Edington and Burton, 2003; Loeppke et al., 2009; Furui et al., 2018; Hashimura, 2020). Faced with the problem of aging individuals, Japan has been attempting to build an OHS system to maintain a healthy population and boost the vitality of businesses and society. The following is a summary of recent regulations and government initiatives (Table 1 summarizes the initiatives).

Regulations

In Japan, there are several labor-related laws and regulations, two of which have a direct influence on contemporary H&PM practice. The first was the Industrial Safety and Health Act of 1972, which was enacted in response to the large number of occupational accidents caused by unfamiliar machine operations and changes in the working environment that accompanied the

TABLE 1 The health and productivity initiatives.

Laws and regulations	Year
Amendments of the health insurance act	2008
Amendments of the industrial safety and health act	2015
	2019
Education and support	**Year**
Corporate health and productivity management guidebook	2014
Training program for "adviser for H&PM"	2014～
Feedback of the H&PM survey to companies	2014～
Guidebook for disseminating information regarding health management	2016
Guidelines for health investment management accounting	2020
Incentives	**Year**
Health and productivity stock selection	2015～
Certified health and productivity management outstanding organizations recognition program	
• For Large companies	2017～
• White 500 (top 500 of the above)	2019～
• For Small and medium-sized companies	2017～
• Bright 500 (top 500 of the above)	2019～

1960s' rapid economic expansion. Some sections are amended each year, with the two most important amendments being in 2014 and 2019, affecting companies' current behavior.

The amendments made in 2014 went into effect on December 1, 2015. It requires organizations with 50 or more employees to undertake stress checks at least once a year to identify workers with significant psychosocial stress (Act No. 82 of 2014[1]). Companies must conduct frequent psychosocial stress assessments, report individual worker findings, organize physician interviews for high-stressed workers, and improve the working environment based on the suggestions of health specialists. Furthermore, they are not permitted to act against the worker because he or she requires a change in working conditions. Companies must examine stress check data in relevant groups and use the results to enhance the psychosocial work environment (Kawakami and Tsutsumi, 2016).

The 2019 amendment focuses on controlling working hours and strengthening the independence of occupational physicians. For the past 20 years, the total yearly working hours of general workers have been about 2,000 hours. To reduce the number of industrial accidents caused by brain and heart disease because of work overload, the Act added five new requirements for employers: the obligation to properly grasp working hours; doctor guidance; strengthening occupational physician/occupational health functions; methods for disseminating laws and regulations; and handling of information on physical and mental conditions (Act No. 71 of 2018[2]).

Following the amendments, companies are now legally required, under the Industrial Safety and Health Act, to (1) establish a safety and health management system in the company; (2) implement specific measures to prevent employees from danger and health impairment; and (3) assess risk in the workplace and create a comfortable working environment, (4) conduct medical examinations, control working hours, and promote the physical and mental health of employees.

The Health Insurance Act is another statute that promotes employee health. According to the 2008 amendment, corporate health insurance organizations are obligated to do health inspections and provide specific health advice to targeted groups. The specialized health check is a medical examination for persons aged 40–74 that focuses on metabolic syndrome. The goal is to prevent and identify lifestyle-related illnesses, which account for over 60% of all deaths in Japan. When a health concern is identified, personalized counseling recommendations to change lifestyle patterns will be provided.

The two Acts work in tandem to compel the two parties, companies, and health insurance associations, to work together to protect worker safety and health. Companies are required to submit information about health examination results to health insurance associations. Companies must also provide the results of regular health examinations for personnel under the age of 40 who are not subject to the specialized health check-ups when asked beginning in 2022.

Incentive, education, and support initiatives to promote H&PM

In addition to the regulations, starting in 2013, when the Japanese government established the headquarters for healthcare policy (chaired by the Prime Minister), several policies and initiatives were launched to promote health and productivity management in companies. These initiatives give rewards, guidance, and assistance to companies, encouraging them to take voluntary actions in addition to complying with regulations. The Ministry of Health, Labor, and Welfare (MHLW) and the Ministry of Economy, Trade, and Industry (METI), particularly the latter, played critical roles.

The MHLW launched the "Data Health" program in 2015 to encourage health insurance associations to use electronically gathered health and medical information to provide health counseling more effectively and efficiently. With the digitalization of medical receipts and the electronic management of health medical information, it is now easier than ever to examine this data. The METI-led H&PM campaign, on the other hand, suggests that companies consider employee health from a management perspective and strategically implement health management—investing in employee health is expected to revitalize the organization, improve employee vitality and productivity, and, as a result, lead to improved business performance and an increase in stock prices (METI, 2020). The two initiatives are analogous to "two wheels of an automobile," necessitating collaboration between the two parties, health insurance associations, and companies. METI's initiatives, on the other hand, are seen as particularly significant since they directly appeal to businesses, helping to spread H&PM in Japan (METI, 2020).

METI has been providing organizations with guidebooks and training programs for advisors since 2014 to assist them in developing knowledge and creating capabilities to embrace H&PM. METI has created an incentive system, two recognition programs, and an award to entice companies to join. The H&PM Stock Selection program and the Certified H&PM Outstanding Organization program are part of the recognition program. METI and the Tokyo Stock Exchange chose outstanding listed

1 Overview of the Act for Partial Revision of the Industrial Safety and Health Act (Act No. 82 of 2014) https://www.mhlw.go.jp/file/04-Houdouhappyou-11301000-Roudoukijunkyokuanzeneiseibu-Keikakuka/0000049181.pdf (in Japanese).

2 Overview of the Act on the Development of Related Laws to Promote Work Style Reform (Act No. 71 of 2018) https://www.mhlw.go.jp/content/000332869.pdf (in Japanese).

companies in the Stock Selection program (one company per industry) from approximately 3,600 listed companies. The program's selected companies (later portfolio companies) are viewed as attractive investment opportunities by investors that prioritize long-term company value enhancement[3].

The Certified Health & Productivity Management Outstanding Organizations Recognition Program was established in 2016 to recognize outstanding large companies (the top 500 are referred to as "White 500") and small and medium-sized enterprises (the top 500 are referred to as "Bright 500") in implementing H&PM. Awarded companies are likely to acquire more recognition, for example, from workers, job seekers, linked businesses, and financial institutions[4].

The tool used in the recognition program to evaluate applicant companies' practices is an H&PM Survey Sheet developed by an expert committee of METI. The 2020 version comprises eighty-six questions (some of which are not included in the evaluation) about twenty-three issues. The evaluation items are presented in Table 2 in Section Theory and methods.

The initial criteria relating to company philosophy and policy carry the most weight in the evaluation since they are located at the top of the evaluation framework. It covers two distinct topics: how H&PM is distributed within and outside the company and how the company popularizes health management as a top runner. Meanwhile, to encourage companies to use the PDCA cycle, the weight of the criteria "assessing/improving" from the previous year has steadily climbed to 30 percent. The weight reflects what the evaluators believe is important in H&PM. It is intended that the responding companies would improve their practices by disclosing the evaluation framework and the weight and providing feedback to them.

Theory and methods

Beginning in 2015, an increasing number of companies have joined the H&PM Recognition Program. Figure 1 depicts a rise in large companies and a surge in SME members. Thus, the first research question is to determine to what extent these companies created an H&PM system that accommodates the new health concept.

To answer this question, we examined the METI survey data. To examine the data, we need to employ a framework with theoretical rigor. However, the framework METI utilized to construct survey questions and evaluate companies lacks a detailed theoretical debate, even though it is based on the ideas, information, or experience of Japanese experts and companies. As a result, we adopt a model based on a survey of the literature.

The METI framework and survey questions, on the other hand, can help us understand what has been identified as important in adopting and implementing H&PM in practice but has been overlooked in the theoretical model. Therefore, we begin by matching the survey items to the model elements to determine which items are included and excluded from the model. Second, we summarize the data for each element. Then we decide whether those that have been excluded should be included in the model. We cannot only investigate the extent to which companies have established an H&PM system through these three steps, but we can also re-examine and modify the theoretical model if there are differences between the practice and theoretical model.

Furthermore, based on the modified model and Japanese practice, we analyze and discuss what causes the H&PM campaign to succeed or fail (the second question). The third question is about what has been overlooked in practice or the challenge that requires additional effort from both practice and research perspectives. The model and data used to conduct the analysis are described below.

The model used to analyze H&PM practice

Although there are not many in the literature, some OHS management models have been proposed (Manimaran et al., 2015; Mazur, 2015; Chari et al., 2018; Johanson and Aboagye, 2020; Kajiki et al., 2020). This paper analyzes Japanese companies' practices using the model proposed by Johanson and Aboagye (2020) because it is a comprehensive framework that can be applied to OHS management of all organizations rather than specific types of companies or specific sectors. This model is based on a review of performance management literature, interviews, and case studies of Swedish companies. As the author stated, it is not a final solution and is still subject to debate, but it is hoped that it will provide a theoretical perspective to help us understand the H&PM (Johanson and Aboagye, 2020).

This model is made up of (1) fundamental beliefs and values, which refer to what is seriously expressed about what the organization should obtain; (2) contextual support provided by organizational factors (organization, information system, and responsibility); (3) central functional processes consisting of vision, strategy, goals, critical factors and risks, performance measurements, and evaluation; (4) interactive communication to achieve mutual understanding and encourage participation, rewards for participation (motivation), and continuous learning from experience. It also emphasizes the coherence that failures can occur if the framework's elements do not fit well together (either in design or use).

3 METI (2022) Fifty Enterprises Selected under the 2022 Health & Productivity Stock Selection. https://www.meti.go.jp/english/press/2022/0309_001.html.

4 METI (2022) Announcement of Organizations Selected under the 2022 Certifi ed Health & Productivity Management Outstanding Organizations Recognition Program https://www.meti.go.jp/english/press/2022/0309_002.html.

Table 2 shows how survey items in the evaluation framework correspond to components in the Johanson and Aboagye (2020) model. The items that are not included in either the METI framework or the Johanson and Aboagye (2020) model are highlighted. The analysis includes model elements as well as items not included in the model but found in the survey.

Data source and sample

For academic research, companies' H&PM practices are analyzed using survey data provided by the Ministry of Economic, Trade, and Industry (METI). Since 2014, METI has surveyed the company's health and productivity management and evaluated companies based on their responses. Since 2016, organizations other than listed companies (the vast majority of which are companies) have taken part in the survey (see Figure 2).

Data for listed companies is available for 8 years, and data for non-listed organizations is available for 6 years. However, because the survey questions are updated yearly, many do not have time-series data. Because the paper's focus is on whether and how much the H&PM catches up with the evolution of the OHS concept and theory, the most recent

TABLE 2 Matching the evaluation items to the elements of Johanson and Aboagye (2020) model.

Evaluation items included in the Survey (2020) (Reproduced based on evaluation criteria of METI 2020)			Elements of the model
1.Management philosophy (awareness as a corporate manager) (Weight in the evaluation:30%		Documentation/ stipulation of H&PM (information Dissemination to employees)	Basic value
		Disclosure of H&PM (including strategy)	
		Promotion of health management to various stakeholders including business partners	×
2. Organizational Structure (Weight in the evaluation: 20%)		Management Structure	Organization and responsibility
		×	Information system
		Cooperation with insurers	×
3. Implementation system and measures (Weight in the evaluation: 20%)	Understanding employees' health issues and discussing necessary measures	×	Vision
		Understanding health issues （three issues)	Strategy
			Critical factors and risks analysis
	Creating a basic foundation and work engagement for realizing H&PM.	Examination of measures	Plan and goals
		Improving health literacy	×
		Promotion of good work-life balance	
		Revitalizing the workplace （measures to promote communication)	
		Support that balances the treatment of illnesses and work	
	Specific measures to promote the mental and physical health of its employees	Health guidance	
		Health promotion and lifestyle-related disease prevention measures	
		Measures for preventing infectious diseases	
		Measures to reduce overworking	
		Measures for mental health	
		Measures for passive smoking	
	Ensuring the quality of initiatives	Involvement of qualified professionals	
4.Evaluation and improvement (weight in the evaluation: 30%)		Verification of the effect of measures	Perfromance measurement and evaluation
		Verification of the effect of health management	
5. Adherence to laws and regulations / risk management			×
			Communication
×			Motivation
×			Learning

The blue blows demonstrate that the survey questions concerning the evaluation items can be matched to the elements of the Johanson and Aboagye (2020) model.

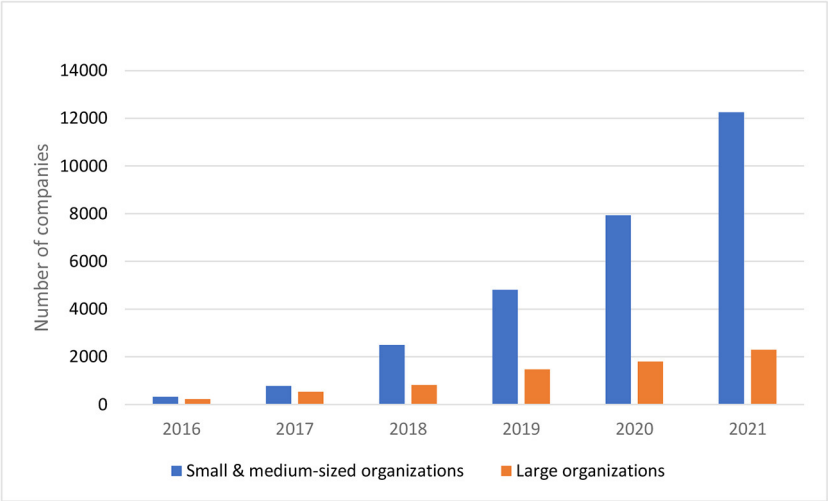

FIGURE 1
Certified H&PM outstanding organizations.

	2014	2015	2016	2017	2018	2019	2020	2021
Organizations other than listed companies	0	0	116	525	941	1364	1553	1811
Listed companies	493	573	610	714	859	964	970	1058

FIGURE 2
Number of companies that participated in the HPM survey.

available data for 2020 (survey conducted from August 24, 2020, to October 16, 2020; data available from June 2021) will be used unless otherwise specified. The sample contains 2,523 companies, with 970 (38.4%) listed on the Tokyo stock exchange. H&PM Portfolio companies are comprised of 48 companies. Figure 3 depicts the number of companies with various scales.

Analysis of H&PM and disclosure practices

Fundamental beliefs and values

Companies must review their management philosophy to see if employee wellbeing has been integrated into their values

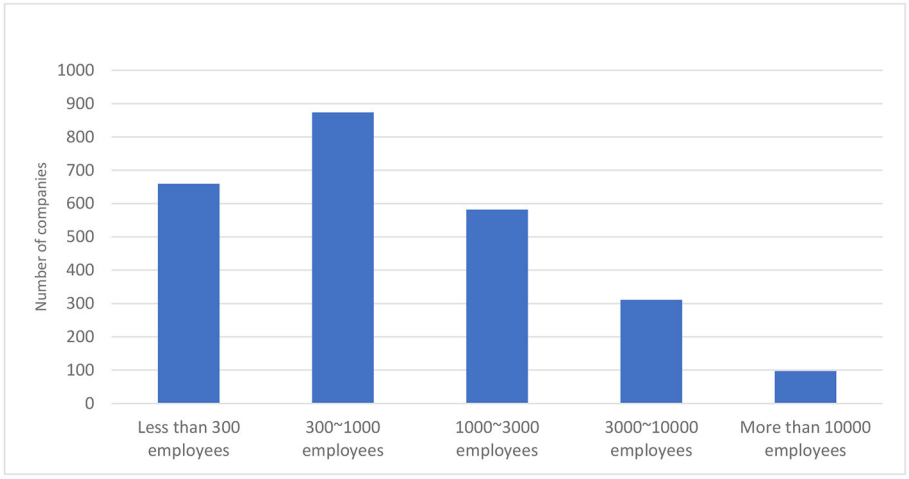

FIGURE 3
Number of companies with different scales.

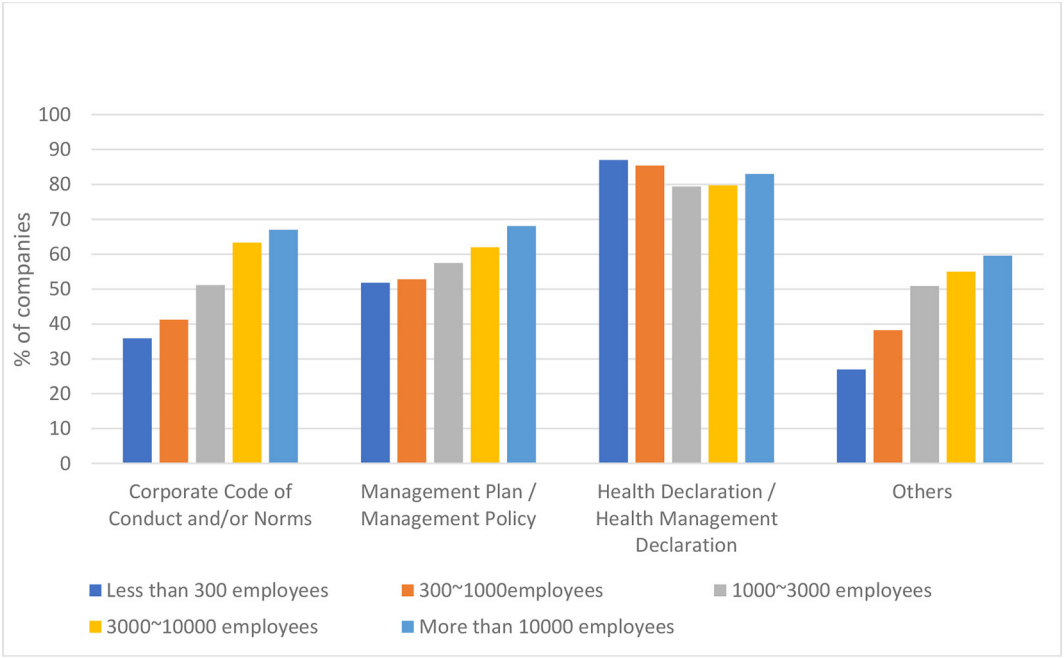

FIGURE 4
The way H&PM is documented/stipulated in different scales of companies.

and fundamental beliefs to avoid H&PM being a superficial process without actual changes in health behavior and working environment. METI investigated whether the position of H&PM is documented in their management policy. When compared to smaller companies, the largest companies (twice the percentage) are more likely to include H&PM in the corporate code of conduct or corporate norms, as well as the management plan or management policy that ensures the H&PM is implemented (see Figure 4). While the Health Declaration is a tool used by both companies, particularly by more than 80% of SMEs, to signal the importance management attaches to employee health, a lack of a clear statement of H&PM consideration in company philosophy or policy may cast doubt on management's level of commitment.

Contextual support

Contextual support includes critical organizational factors related to the resources that companies can use (Johanson and Aboagye, 2020). Many questions have been set in the survey, such as how frequently H&PM is discussed in different levels of internal meetings, which department oversees it, whether there are collaborations with other parties, and who is responsible for overall H&PM in the company. However, no questions in the survey ask whether companies have established H&PM information systems.

Organizational structure

In general, H&PM portfolio companies discuss H&PM more frequently in board meetings (on average three times per year) and management meetings (on average 54.5% meetings) than total responding companies. Meanwhile, smaller companies with fewer than 1,000 employees have more frequent discussions of H&PM in both levels of meetings than larger companies. Furthermore, 37.5% of companies have independent specialized departments to deal with H&PM issues, while 52.1% have H&PM as a function of the human resources department. Smaller companies, however, tend to designate a supervisor to oversee H&PM issues rather than putting the function in a dedicated department either independent of or within the human resources management (Figure 5).

Responsibility

The CEOs of 81.3% of portfolio companies oversee H&PM overall. The remainder delegate this responsibility to the executive in charge. When compared to large companies, the CEO of a small company (fewer than 1,000 employees) is more likely to be in charge (73%). There is no information available about other levels of management.

Collaboration

Collaboration is not a component of the model. However, it is included in the METI survey. METI considers collaboration with healthcare professionals and health insurance associations to be especially important organizational factors, which are included in the most recent revision of the survey sheet. Healthcare professionals such as occupational physicians and health nurses have more important roles in portfolio companies than the average. Health professionals participate in almost all H&PM processes in more than 90% of the largest companies (with more than 10,000 employees), including discussing health issues with the person in charge, jointly formulating medium- to long-term policies, embodying and clarifying the authority to collect information from employees, and verifying the effectiveness of management efforts. More than half of the portfolio companies reported that health professionals attended management meetings. Furthermore, collaboration with health insurance associations through data sharing, targeted employee consultation, and labor union involvement in setting mid and long-term policies is more common in portfolio companies and larger companies.

Central functional process

Even though the majority of companies saw H&PM as necessary for addressing the business challenges identified in the management policy, the survey contains no questions about the company's vision.

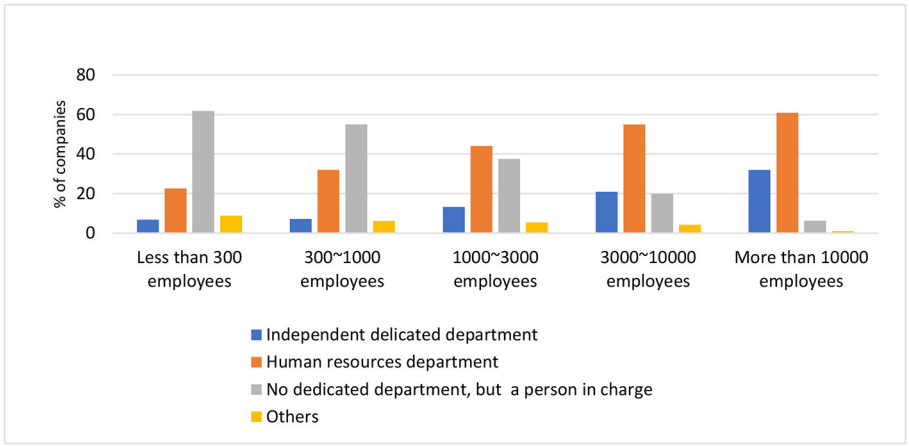

FIGURE 5
The department in charge of H&PM.

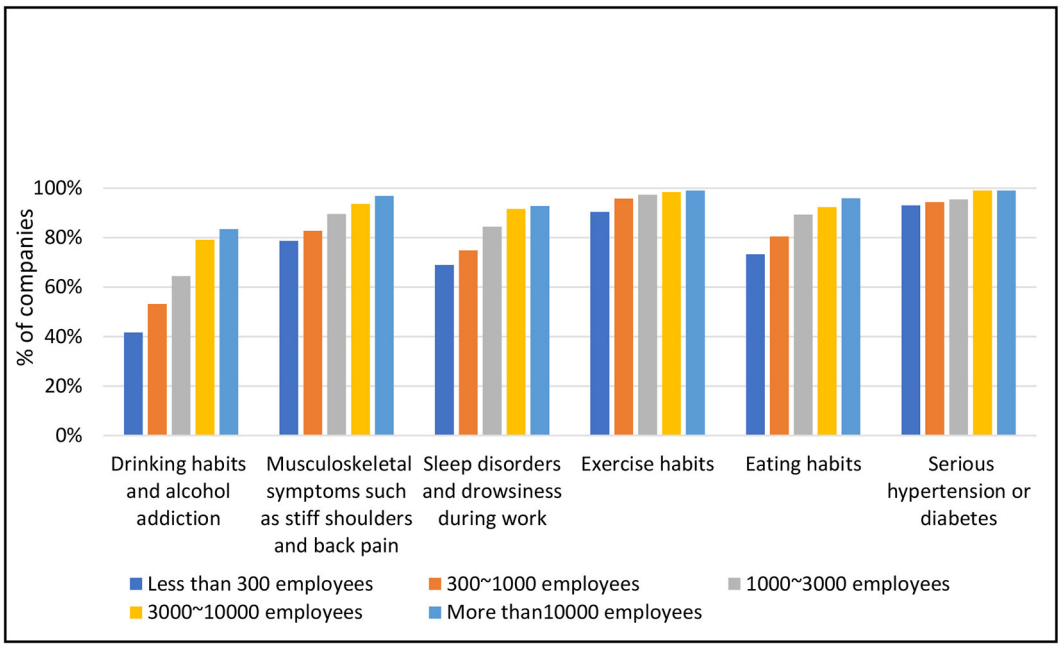

FIGURE 6
Measures to help employees tackle the health risks.

Strategy

Strategy is not a criterion by which portfolio companies are evaluated. We did, however, obtain information from the survey asking how companies describe their H&PM to investors. Many companies claim to have an H&PM strategy, but only a few (13.6%) have it as part of their overall strategy. The larger the company, the more likely it is to integrate H&PM into the sustainability goal, while most portfolio companies (85.4%) explain H&PM as part of their growth strategy.

Understanding health issues

No questions in the survey directly ask about critical factors and risk analysis that help in the formulation of a strategy. However, understanding health issues, included in METI's evaluation framework, is considered a type of risk analysis that serves as a foundation for determining H&PM strategy and measures. According to the survey results, most companies collect data on employee health, such as the rate of overweight, participation in various health checks, sports habits, drinking, and so on.

Measures

Measures are not a model element. The METI survey, on the other hand, investigated 14 different aspects of the implementation system and specific measures, such as improving health literacy, promoting work-life balance, revitalizing the workplace, and other disease prevention and health promotion measures. These indicators show that the concept of health management has progressed beyond the traditional OHS. Companies must respond to at least 12 of the questions. Most companies involve more than 12 of them and keep track of the rate of participation in various programs, some of which are legally required while others are voluntary. Furthermore, as illustrated in Figure 6, large companies generally provide more assistance to employees in addressing the following health risks.

Furthermore, data from METI's "Comparability with 2021 certified SMEs with excellent health management"[5] that even SMEs have embraced a broader health concept that goes beyond disease and harm prevention. These SMEs were asked to provide three measures to the Outstanding Company Recognition Program evaluators. According to the findings (Figure 7), many companies promote communication and make efforts to establish appropriate work styles, in addition to high participation (100%) in mandatory health check-ups and infectious disease prevention.

5 METI (2022) "Compatibility with 2021 Certified Corporations (Small and Medium-Sized Enterprises) with Excellent Health Management" https://www.meti.go.jp/policy/mono_info_service/healthcare/kenkoukeiei_yuryouhouzin.html.

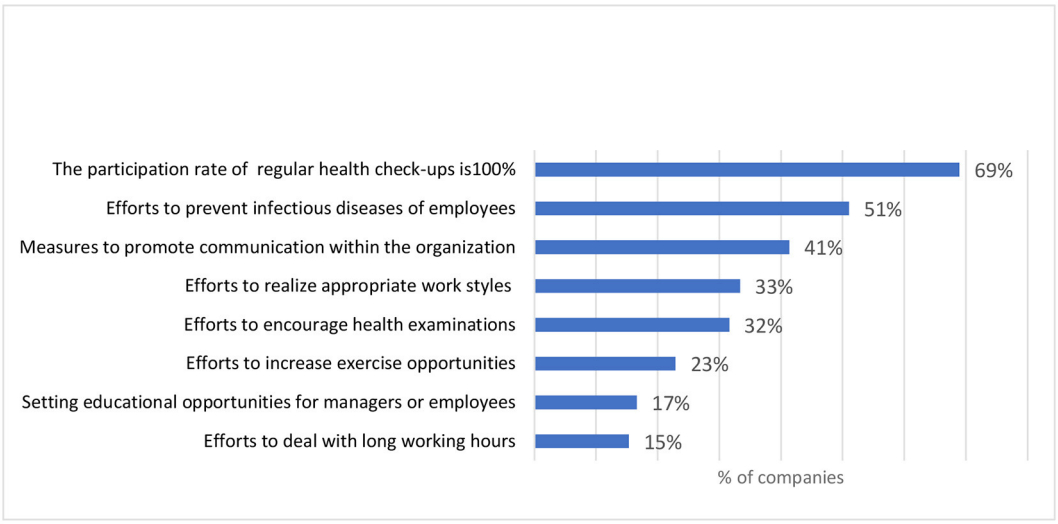

FIGURE 7
Top 8 specific H&PM measures that companies want to apeal to the evaluators (n = 7299, 2021).

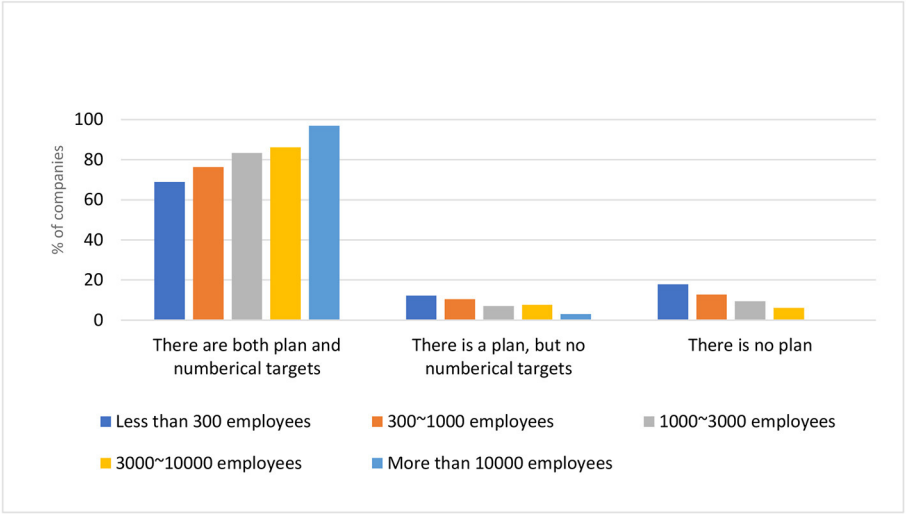

FIGURE 8
Plan and numerical targets for improvement.

Plan and goals

When asked if they set plans and target figures based on the challenges and situation in the previous year, most companies responded positively, with all portfolio companies, 96.9% of the largest companies, and 68.9% of the smallest companies saying they do (Figure 8).

Performance and evaluation

The survey makes no distinction between performance management and evaluation. On average, 85.5% of companies confirm the effectiveness of specific measures, with the largest company group reaching 96.9%. Companies track changes in employees' health, job satisfaction, and engagement, turnover rate, leave rate, and external evaluation. Only 46.1% of the largest companies and 26.2% of the smallest companies evaluate absenteeism and presenteeism. Though many companies evaluate the impact of individual programs on employee health, there are only a small number of companies that evaluate the impact on medical expenses and productivity directly, which are the METI-suggested H&PM goals. Furthermore, 62.5% of portfolio companies use H&PM indicators to

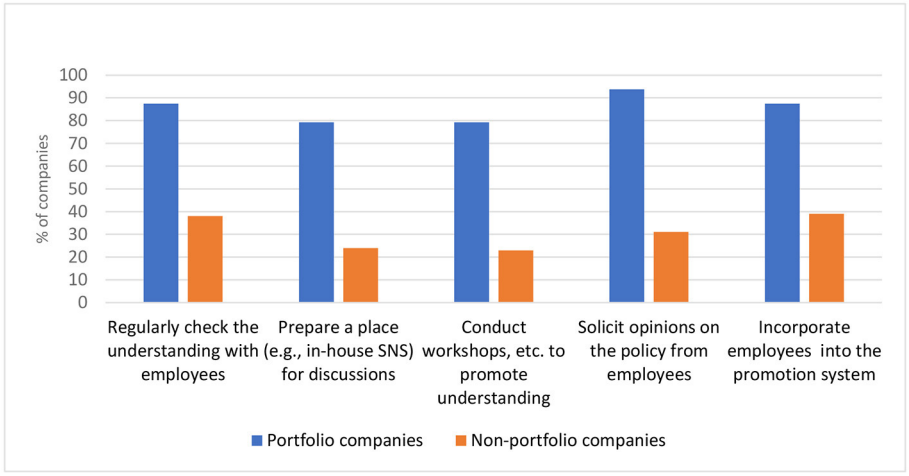

FIGURE 9
Measures to promote interactive communication.

evaluate management performance, compared to 20.1% of non-portfolio companies.

Communication

Strategic communications are intended to educate, motivate, market offerings, and build trust, all of which contribute to the development of a health culture (Kent et al., 2016). Communication is viewed as a method of revitalizing the workplace, an H&PM goal, and a way to promote employee understanding and involve them in promoting H&PM in the survey. Many companies' CEOs directly communicate H&PM policy and measures to their employees; health-related information is provided to both management and employees through documents, traditional morning assemblies, and periodic training. However, both small and large businesses frequently use one-way communication. The largest company group, on average, sends more documents and uses SNS than the smallest company group. Furthermore, there is a significant difference between portfolio companies and other companies. The former invests more in interactive communication (see the following Figure 9).

Rewards (motivation) and learning

Rewards (motivation)

There is no data on the rewards used by companies to motivate management to implement H&PM and employees to continue participating in company programs. What is known is that companies offer incentives to encourage employees to manage their working hours, even though detailed information is not included in the survey.

Learning

In the original model, learning is a process of adjusting the system to adapt to changes in the environment while maintaining a balance of stability and flexibility. There are no questions about learning in the METI survey. It is, however, an implicit item. Firstly, the recognition system itself provides feedback to the applicant companies that participated in the survey for evaluation and improvement. Secondly, the survey sheet has been revised each year to reflect policy changes and applicant company responses. Thirdly, most businesses have both improvement plans and goals (refer to Figure 8). Most companies understand the relationships between the challenges, the specific measures, and the impact of H&PM. However, there is a significant disparity between the largest and smallest businesses. In general, the learning process in Japan is more focused on improvement through evaluation and feedback, both of which are critical in implementing the PDCA cycle within the system and renewing the P&HM system. Feedback from government evaluators or investors is an outside factor that can help with learning.

Disclosure of H&PM information

The model does not include *disclosure*. However, it is a factor that will be considered when determining portfolio companies. The investigation data also shows that some investors request information on H&PM policy and KPI, and companies make efforts to provide them with more explanations. Figure 10 compares portfolio companies, listed companies, and non-portfolio companies, demonstrating that

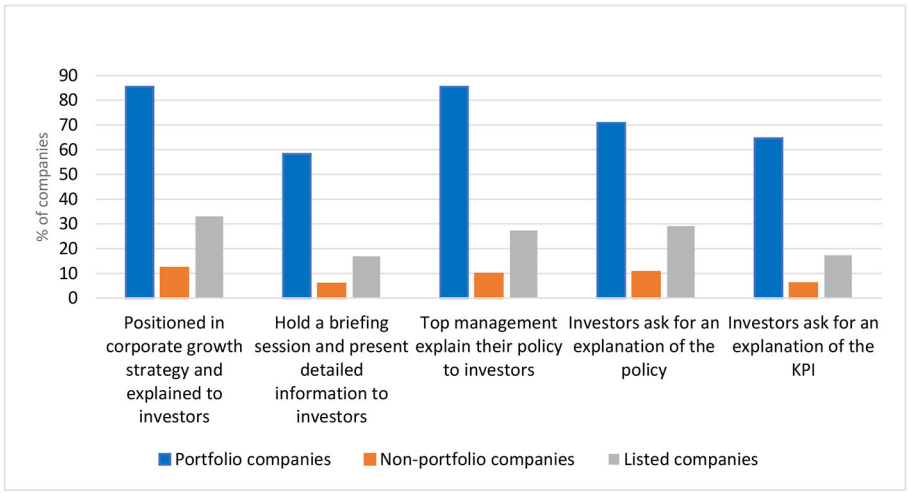

FIGURE 10
Communication with investors.

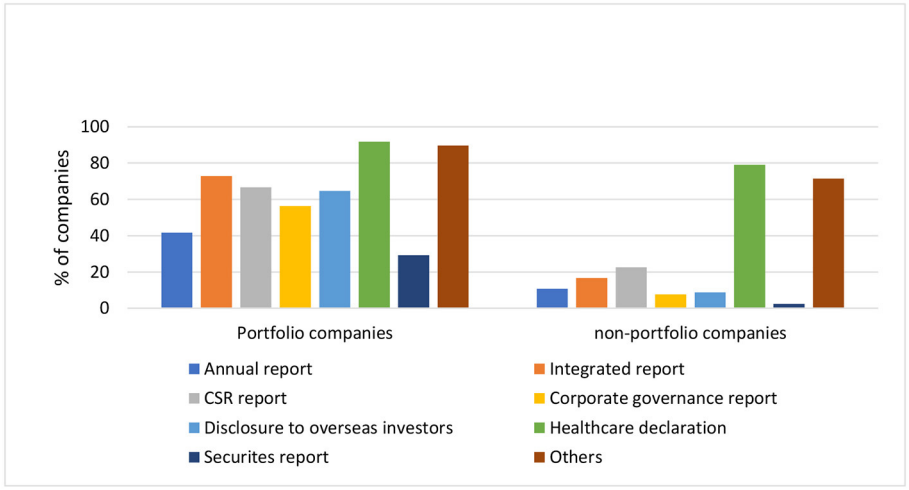

FIGURE 11
Disclosure through different media by portfolio and non-portfolio companies.

portfolio companies are more desired by investors and are responding to this demand.

METI encourages companies to share H&PM information with stakeholders, including investors. Companies disclose information in a variety of media, as illustrated in Figure 11. Though most companies disclose information in the Health Declaration, other reports such as integrated reports, annual reports, and CSR reports are also tools used by companies to communicate and measure their policy. While there are some differences between smaller and larger companies, there is a significant difference between the portfolio and non-portfolio companies. Furthermore, most companies use other media to disseminate information. Investigating portfolio companies, particularly those chosen more than once, reveals that H&PM are more frequently disclosed in sustainability reports or SDG ESG booklets, in addition to integrated reports and CSR reports. KPMG discovered that 49% of Nikkei 225 companies publish integrated and sustainability reports (KPMG 2021b). Reporting in an integrated report or sustainability report may demonstrate how the company integrates employee health into its business model or strategy for both management and reporting purposes.

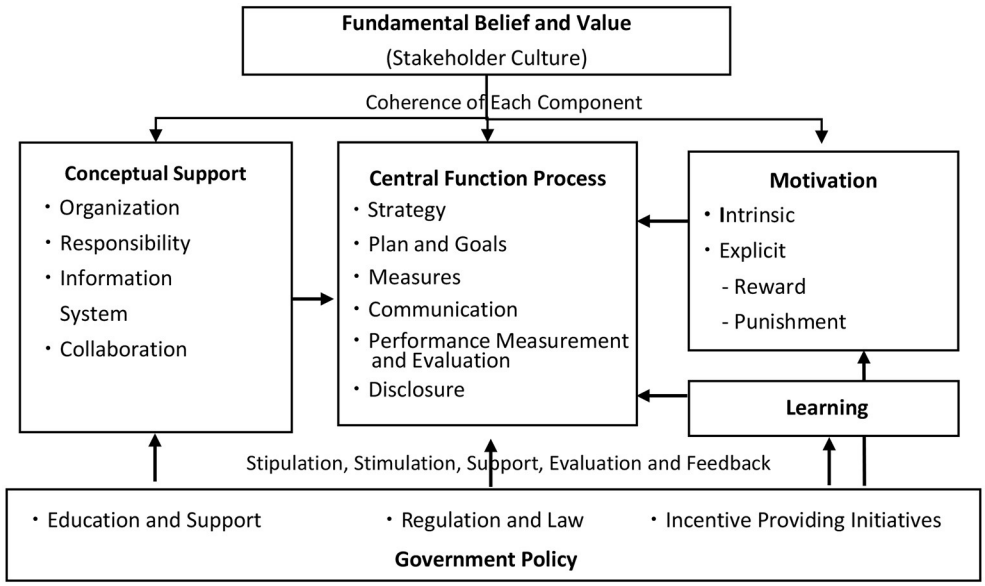

FIGURE 12
The government-led H&PM model.

Others

Companies were asked whether they promote H&PM to group companies and assist stakeholders involved in H&PM, such as customers, local communities, business partners, and employees' families, in the survey. Most portfolio companies claimed to have done so. There are also questions about whether companies use health management to generate revenue in the form of products or other forms. This was done by more than half of the portfolio companies. Furthermore, the survey investigated whether companies consider H&PM issues when dealing with business partners. There is a significant difference between the portfolio and non-portfolio companies in terms of transaction decision-making, with the former being more sensitive to these issues.

Putting all together

Based on our analysis of Japanese practice, we propose a government-led H&PM model (Figure 12), with a modified Johanson and Aboagye (2020) model at its core. The following changes are included in the revision:

1) Elements added to and removed from the central functional process: The *vision* of a company tells people what kind of company it wants to be. Whether or not H&PM is specified in the vision, taking care of employees, including their health, has been critical. The survey results show no mention of documenting H&PM in the company vision. Meanwhile, we regard *critical factors and risk analysis* (in the survey, understanding health issues) as an implicit component of strategy formulation rather than a separate functional process. As a result, we removed these two elements.

Specific measures, on the other hand, demonstrate a company's understanding of the concept of workplace health. Specific measures are required to implement H&PM. Furthermore, *disclosure* should be included because it not only helps companies meet the expectations of external stakeholders such as ESG investors, but it also allows for feedback for future improvements. As a result, we enhanced the model with measures and disclosure.

2) Additional contextual support elements: H&PM is an area where professional knowledge and information sharing are required. Healthcare professionals are involved in designing and implementing H&PM in the best practices of portfolio companies to ensure quality. Cooperation with insurers and other related parties also facilitates implementation. As a result, *collaboration* became an important contextual support component. Meanwhile, though METI did not survey the *information system*, we kept it in the model because a solid information system is required if the company is to understand health issues, evaluate its performance, and share information with other parties.

3) Element shift: In Johanson and Aboagye's (2020) model, *communication* occurs outside the central functional process. It plays a vital role in avoiding rigid management structures and gaining a mutual understanding of the performance management design. In Japan, the design of H&PM heavily

TABLE 3 H&PM of portfolio and non-portfolio companies.

		Portfolio companies (best practices)	Non-portfolio companies
Basic belief and value		• Propensity to incorporate H&PM in the corporate code of conduct or corporate norms	• Less propensity to stipulate H&PM in the corporate code of conduct or corporate norms
Contextual support	Organization	• Either an Independent dedicated department or HR department supervise the promotion of H&PM	• Department that supervise H&PM exists in fewer companies; the responsibility is more on a specific manager than a department.
	Responsibility	• H&PM issues are discussed more in board meetings and management meetings. • CEO take the overall responsibility of H&PM.	• Less discussed in both levels of meetings • Lower level management takes the overall responsibility
	Information system	• Not included in the survey	• Not included in the survey
	Collaboration	• Health professionals take part in almost all the H&PM processes • More collaboration with healthcare insurance associations and labor unions	• Less involvement of health professionals • Less collaboration with other parties
Central functional process	Strategy	• Most of them regarded H&PM as a part of sustainability strategy	• Very few companies explain H&PM in their sustainability strategy
	Plan and goals	• The majority of companies have integrated H&PM into the management plan	• Half of the companies integrated H&PM in the mid-term plan
	Measures	• More support and programs to employees to tackle health risks	• Fewer health risks tackled and fewer measures
	Communication	• More two-way communication	• More one-way communication
	Performance measurement and evaluation	• Regularly carry out quantitative surveys to measure work enthusiasm, engagement. • Measure the improvement in employees' health conditions, job satisfaction, engagement, turnover rate, and leave rate. • H&PM indicators are used for managers' performance indicators	• Over half of the companies do so. • Most companies do so. • A few companies do so.
	Disclosure	• Disclose H&PM information through various media like the integrated report, etc.	• Less disclosure through fewer media
Motivation (this is less known than other perspectives)		• There is little information on how portfolio companies take measures to motivate managers and employees except a little on working hours: - Setting a penalty for long working departments - Encouragement to take consecutive vacations	• Little information
Learning		• All have both plans and targets for improvement based on prior year performance and feedback	• Most of companies have both plans and targets for improvement

relies on management and the cooperation of healthcare professionals (the element of collaboration). Communication has been identified to improve health awareness and health literacy, both of which METI places a high value on. Meanwhile, improving workplace communication is another goal of H&PM. As a result, we move it from external components to central functional processes.

4) Others: in the original model, learning is an adaptation to a changing environment. The interpretation of learning differs from the original in Japanese practice. Based on the evaluation and feedback from evaluators and other stakeholders, learning assists companies in improving H&PM design and implementation. Though it is implicit in the system's PDCA cycle, we see learning based on external feedback as an independent element that can help establish a coherent H&PM system. Other issues, such as promoting H&PM to other stakeholders, like business partners, and integrating H&PM in revenue generation, are not addressed in the model because the former is outside the scope of the company, and the latter concerns business model innovation.

According to the survey data analysis, both listed and non-listed Japanese organizations are increasingly participating in H&PM, which has adopted a broader definition of health that includes working hours, psychological stress, communication, and other work-related issues. Furthermore, employee participation in the company's H&PM program increased from less than 50% to more than 70%. Meanwhile, two obvious gaps have been discovered. The first is the disparity between smaller and larger businesses, which is understandable given that smaller businesses have fewer resources, time, staff, know-how, and budget to engage in H&PM. However, when compared to previous years, 2020 has seen improved indicators at all levels of business. The second is the difference between the portfolio and non-portfolio companies. While portfolio companies demonstrate best practices in various sectors, many non-portfolio companies continue to face challenges. They are on their way to accepting the broader concept of health and incorporating sustainability into their operations. Table 3 summarizes the practices of portfolio companies vs. non-portfolio companies.

The Johanson and Aboagye (2020) model emphasizes the coherence between the functional process, contextual factors, communication, motivation, and learning to integrate the diverse elements into a system, which is critical for OHS implementation success (Ferreira and Otley, 2009; Johanson et al., 2019; Johanson and Aboagye, 2020). To be more specific, the H&PM consideration should be embedded in the company's values and fundamental beliefs; the H&PM strategy should be supported by specific goals and plans, measures, measurements, and other management issues, with measurements matching goals and plans. The system's effectiveness is determined by the degree of consistency of each element, which has received little attention in the PM literature (Schleicher et al., 2018). The companies in the H&P portfolio companies are good examples of coherence. They incorporate H&PM into the company code or norm, establish a solid organizational structure, clarify responsibility to support the central function, communicate with employees to revitalize the workplace, improve health literacy, collaborate with healthcare professionals and health insurance associations for improvement, and use the PDCA cycle.

Non-portfolio companies, on the other hand, while doing well in some areas, lack a cohesive system. Though the effectiveness of H&PM and its direct causal relationship with long-term business performance and corporate value must still be proven by companies and policymakers, research shows that the H&PM portfolio outperforms the TOPIX index, with a 30% excess return in 5 years (beginning in 2014) (METI, 2020). Furthermore, H&P portfolio companies have a lower turnover (4.6%) than the average investigated company (5.5%), which is lower than the total company average.

Discussion

So far, METI's initiatives have been successful in increasing participation and thus increasing the concept's penetration in the business world. In response to stakeholder expectations on employee health, more companies are incorporating H&PM into their CSR or sustainability reports. However, some points concerning the mechanism that promotes or obstructs the popularity and quality of H&PM must be discussed based on the government-led H&PM model (Figure 12).

What drives the diffusion of the H&PM practice

Policy and the coherence of each H&PM element

Individual OHS practice is mandated by law and regulations. METI published guidelines and provided education to encourage companies to build a comprehensive H&PM system with the concept of coherence implicitly incorporated. While the portfolio companies have a consistent system, there is a significant disparity between these best practices and the average surveyed company. In non-portfolio companies, there is a lack of coherence between different parts of the framework. Approximately half of the non-portfolio companies did not include H&PM in their corporate code, management policy, or plan. They disclose less H&PM information in integrated reports and CSR reports, which is often interpreted as a lack of clarity in the positioning of H&PM in the business model or strategy, which may be due to those companies' lack of experience, as coherence cannot be established in one day. From the best practice, we can see a continuous process lasting several years.

Companies begin the health management practice by doing what the law requires and then experimenting with additional actions to promote healthy behavior, such as revising the corporate code, company policy, and evaluation system. For example, when the Health Insurance Act was revised in 2008, many pioneer companies such as KAO and Daiwa Securities Group announced health management initiatives before the METI initiatives. The early programs primarily focused on implementing specific health screenings and providing counseling guidance, such as metabolic syndrome counseling. These companies, on the other hand, gradually progress to online health data management, sports campaigns, quitting smoking challenges, eating habits campaigns, Red Case Support Programs (for severely ill people), working hour control, and organizational culture rebuilding. Companies build their H&PM systems step by step. Companies develop their H&PM systems in stages, as the saying goes: a journey of a thousand miles begins

with a single step, and many small streams combine to form a large river. The METI guidelines instruct the companies to construct a coherent system, but true coherence can only be achieved after a lengthy trial-and-error process.

Stakeholder culture, Japanese style of management, and social expectations

Another important factor in implementing H&PM is the culture of its stakeholders. According to theoretical and empirical cross-cultural research on CSR dissemination, cultural (particularly value) and institutional factors have a significant impact on stakeholder management culture and practice (Jones et al., 2007; Kumar et al., 2017, 2019). Japanese companies have long been perceived to have a distinct stakeholder culture, known as peoplistic or employee-sovereign, from those of Europe and the United States, particularly the United States (Itami, 1987, 2000). Corporate management is centered on people who provide human capital rather than shareholders who provide financial capital. Companies exist to make places for people and to improve people's lives, and the energy of the working people is the source of the company's vitality. This type of stakeholder culture did not change over time. The Japanese Association of Corporate Executives (JACE) published the 17th Corporate White Paper in 2013, before METI launched the H&PM programs, demonstrating that 76% of companies regard employees as important stakeholders. This rate is even higher than that of customers and shareholders, who are frequently regarded as the most important in Western countries (JACE, 2013). The outcome is similar to the early survey results, for example, Yoshimori (1993).

Within this stakeholder culture, Japanese companies established community-based human resource management characterized by "bulk recruitment of new graduates, seniority ranking, and long-term employment." Though the seniority system has gradually crumbled, long-term employment is still sustained (Ikeda et al., 2022). Even during the COVID-19 pandemic, the unemployment rate remains low in comparison to the major Western countries[6]. Many companies sacrificed economic profit to protect their employees' jobs and health, implementing a variety of anti-infection measures. Long-term employment ensures the long-term utilization of human resources in economic activities and lays the groundwork for a stable lifestyle by closely connecting personal life and the company. When a long-term relationship is established between the employee (including their family) and the company, it is natural for the company to take action to help employees improve their health and wellbeing. Even in industries with a higher turnover, many businesses practice proactive health management. For example, Daiwa Securities Group, one of Japan's leading securities firms, states that "we believe that we must make our employees happy as we improve our productivity, based on the idea that the source of the Group's competitiveness lies in the capabilities of its employees"[7]. It began health promotion in 2008 and believes it is the right path to take.

In general, the employee-centered stakeholder culture and management made the concept of H&PM easier to grasp. METI, interestingly, connects health management and productivity to encourage corporate participation. The perceived benefits of health management include organizational vitalization, improved productivity, increased corporate value, and the financial soundness of the association's health insurance, while a large portion (63.5%) of companies (compared to 59% the previous year) believe H&PM is required to address the business challenge of sustainable growth, which is a long-term perspective other than more short-term productivity and stock price.

The rapid adoption of SDGs and ESG in Japan over the last 3 years may have contributed to increased awareness of the importance of H&PM to sustainable growth. Since 2019, the topics of SDGs and ESGs have skyrocketed in major business newspapers such as Nikkei. Employee health is evaluated by ESG investors and ESG rating agencies such as the FTSE and MSCI as both an SDG objective and a corporate sustainability issue (MSCI, 2019; FTSE RUSELL, 2021). However, many non-listed organizations (62.3%) show a positive attitude toward SDGs even though they are not directly affected by ESG investors and rating agencies and have no obligation to report to shareholders. They believe that organizations (including corporations) should help to solve social problems. The traditional Japanese stakeholder culture and the new social awareness of employee health in sustainability fit well to integrate H&PM.

What is overlooked and needs further effort

Incentive and motivation

Many government-led initiatives, on the other hand, have failed to achieve their objectives, such as the intellectual capital (IC) management and reporting initiative in Japan and many other countries. Following the publication of the first IC guideline by METI in 2005, Japan saw a slow increase in participants in the early years, followed by a dramatic drop after 2011 (Yao and Bjurström, 2014). In 2012, Dumay (2016) declared the end of IC reporting in European countries. There are many parallels between how IC management and H&PM are promoted. While pioneer companies joined, the

6 Data are collected from https://www.jil.go.jp/kokunai/statistics/covid-19/f/f01.html.

7 Daiwa Securities Group Inc. (2022). Health Management. https://www.daiwa-grp.jp/english/about/work/health.html.

government provided guidelines, training, and established recognition systems. As a result, a discussion of what is behind is required to assist policymakers in avoiding the H&PM ending as a one-time boom.

The factors mentioned in the preceding section can influence company incentives and motivation, but this needs to be discussed further. The Japanese government offers several political incentives to companies, such as recognition and awards. Meanwhile, private programs such as the "DBJ (The Development Bank of Japan, a 100% government-owned financial institution) Employees' Health Management Rated Loan Program"[8] were established to include health management ratings in loan decisions. However, research indicates that incentives such as rewards or punishment are effective at motivating employees or organizations to make simple behavioral changes or temporarily comply. They are not, however, intended to produce long-term changes in attitudes and behavior.

Long-term engagement occurs when an organization or its employees have the desire or motivation to do so. For many years, motivation has been a central focus of industrial and organizational psychology (Steers et al., 2004), guiding the direction, intensity, and persistence of performance behaviors (Kanfer et al., 2008; Cerasoli et al., 2014; Deci et al., 2017). Motivation can be classified into two types: intrinsic and extrinsic (Pinder, 2011). The desire or intrinsic motivation stems from internal core values and beliefs that align with how the organization views its purpose and how its employees want to live their lives. As the Johanson and Aboagye (2020) model suggests, it determines both organizations' and employees' ongoing efforts and H&PM quality. While incentives, also known as extrinsic motivators by psychologists, engage participants and improve performance, they do not change the attitudes that underpin behaviors. Incentive programs are only effective if carefully chosen, implemented, and monitored (Stolovitch et al., 2002). Incentives programs may not function optimally due to a lack of intrinsic motivation, knowledge, and skill, a lack of challenging but achievable goals, or environmental barriers (Cerasoli et al., 2014). To overcome the potential obstacles listed above, METI has implemented several measures, including training, promoting company collaboration with health professionals and health insurance associations, and supplementing digitalization. However, it does not completely address the issue of intrinsic motivation, which is difficult to observe. This raises the possibility of H&PM becoming a one-time phenomenon. According to the model used in this paper (Johanson and Aboagye, 2020), long-term behavioral changes are dependent on coherence with several elements. It is worthwhile for the government to incorporate the concept of improving intrinsic motivation into the evaluation system, as well as for companies to reconsider their implementation system to improve intrinsic motivation.

Furthermore, most Japanese companies take a moralist approach to CSR, viewing "supporting the broad interests of society as a primary obligation, demonstrating concern for all stakeholders, and attempting to take stakeholders' interests into account regardless of economic considerations." Many companies still exhibit an instrumental stakeholder culture (Kumar et al., 2017), in which managers manage stakeholder relationships in an opportunistic but strategic manner, recognizing that maintaining the appearance of moral behavior is critical to the company's long-term financial wellbeing (Jones et al., 2018). We do not even know whether the participation is motivated by moral or instrumental considerations based on the survey data. We do not really know whether the companies' claims reflect genuine desire or are just for show. Further research is required to answer this question.

Furthermore, health behavior is difficult to maintain from the perspective of employees. Unfortunately, few questions have been raised about how and how well companies motivate their employees to participate in various company activities. The government survey appears to have overlooked motivation. Worse, the government and corporate executives may overlook it when promoting the practice. We do not have any specifics on this. Neither is there enough research on the subject. Rewards can be effective in the short term, but it is difficult to sustain a long-term effect that determines the success of a company's program (Kohn, 1993; Henningsson et al., 2015). As a result, more behavioral economics research is required at both the organizational and individual levels.

In addition to the challenges, this study is based on survey data provided by METI, which has some limitations. Firstly, there is no guarantee that companies' self-declarations are free of error and fraud, which is a common issue in the survey. Secondly, the questionnaire contains very few open-ended questions that cannot provide details for further research. Researchers can create a new questionnaire with more open-ended questions or conduct interviews to learn more about motivation and other aspects of H&PM.

Concluding remarks

This paper examined H&PM policy and practice in Japan, testifying and modifying the theoretical model based on portfolio companies' best practices. The large sample of data shows that, despite differences in company size and between portfolio and non-portfolio companies, more and more Japanese companies are adopting the broad concept of health. Portfolio companies have established a comprehensive and coherent H&PM system, resulting in lower turnover and higher business

8 Development Bank of Japan Sustainability Bond Framework chrome-extension: https://efaidnbmnnnibpcajpcglclefindmkaj/viewer.HTML?pdfurl=%3A%2F%2Fwww.dbj.jp%2Fen%2Fpdf%2Fir%2Fcredit%2Fsri%2Fframework.pdf&clen=850568&chunk=true.

performance. Based on Japanese practice, a government-led H&PM model with the modified Johanson and Aboagye (2020) model at its core is proposed.

Based on the model, this paper discussed why government-led initiatives have been successful thus far and what needs to be improved. Traditionally, Japan has more "implicit CSR" [often interpreted as corporate principles and policies (Fukukawa and Teramoto, 2009)], which is based on the company's role within the larger formal and informal institutions for society's interests and concerns (Matten and Moon, 2008; Kumar et al., 2019). Japan has more OHS-related laws and guidelines than many other countries (Kajiki et al., 2020). Furthermore, the current international reporting regime has influenced the explicit disclosure of information on OHS and other human-related elements, compelling companies to incorporate H&PM into value creation storytelling. Employee health, previously regarded as a personal issue, is now regarded as a corporate social responsibility issue by an increasing number of Japanese companies and integrated into their sustainability strategies. Companies' responsibility for employee health is defined by formal, mandatory, and codified rules or regulations that specify the minimum actions. Furthermore, METI's initiatives contributed to the societal agreement on the importance of employee health. All these together form the social institution that encourages, mandates, and legally requires H&PM in the aggregate. Meanwhile, the employee-centered stakeholder culture makes it easier for many Japanese companies to introduce H&PM management.

Motivation, a critical component in the theoretical model, is an understudied area in H&PM that requires further research and attention from both government and management. Government-led initiatives and practices, on the other hand, rarely address intrinsic motivation. Regardless of increasing participation and best practices in excellent companies, deficiencies in the H&PM system in most companies may be caused by a lack of experience and know-how or an instrumental approach to CSR. The former can be improved through training and consulting, whereas the latter can be more aligned with the values, culture, and intrinsic motivation of the company. Japanese businesses are moving toward a coherent H&PM system, embracing the evolved OHS concept. To avoid this being just window dressing or a one-time boom, policymakers and corporate executives must work together. To prevent this only being window dressing or a one-time boom, policymakers and corporate executives must work harder, taking psychological factors into account. Academia can also contribute by investigating mechanisms and providing evidence and implications.

In the future, we hope to see similar studies from other countries that use the modified framework that we proposed in Figure 12. A replication of the current study, as well as a study using different approaches, such as interviews, would be interesting for the same reasons we have. Specifically, (1) understanding the existence and types of OHS management initiatives and (2) further development of a framework useful for investigating OHS management.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

Author contributions

JY contributed to the design of the study, organized the data, performed the analysis, and wrote the first draft of the manuscript. UJ contributed to manuscript revision, read, and approved the submitted version. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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