[Review]

Health Management of Workers with Presenteeism is a New Challenge in Occupational Health

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Abstract **:** There has been a growing interest in presenteeism in recent years in both the occupational health and management fields. However, the term "presenteeism" was introduced in Japan relatively recently, and only limited knowledge on the subject has since been accumulated. This review will outline the current knowledge on presenteeism and discuss the significance of addressing presenteeism in occupational health in Japan. A common definition of presenteeism is the state that showing up at the office while having health problems, and some have added a decline in productivity. Several methods have been proposed to convert a degree of presenteeism into monetary value in terms of a health economics perspective, but there is no consistent method. A new approach is needed to evaluate and support workers who are experiencing presenteeism.

Keywords **:** presenteeism, absenteeism, work productivity.

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Introduction

There has been a growing interest in presenteeism in recent years in both the occupational health and management fields. The Japanese Ministry of Economy, Trade and Industry, for example recommends addressing presenteeism for the promotion of health and productivity management, so called "kenko-keiei". However, the term "presenteeism" was introduced in Japan relatively recently [1], and only limited knowledge on the subject has since been accumulated. Therefore, "presenteeism" is currently used in Japan without sufficient understanding of its definition, significance, or previous standing in academic fields. This review will outline the current knowledge on presenteeism and discuss the significance of addressing presenteeism in occupational health in Japan.

Definition of presenteeism

The word "presenteeism" was first used by the American Auren to mean the opposite of "absenteeism" [2, 3]. According to a review by Johns, the word "presenteeism" was subsequently used with varying definitions [4]. Recently, two main definitions have been used. While some argue that presenteeism is defined as going to work despite feeling unhealthy [5, 6], others argue that presenteeism means reduced productivity at work due to health problems [7]

There are two main trends in presenteeism research[4, 8, 9]. One is to study presenteeism in terms of labor productivity, and has been led by researchers in the United States. This research defines presenteeism as "a state of decreased productivity due to poor physical or health condition" [10, 11], and emphasizes decreased productivity. "A guidebook for health and

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productivity management for companies" [12] published by the Japanese Ministry of Economy, Trade and Industry states that "presenteeism is to go to work with some diseases or symptoms that results in a state of decreased performance and productivity", which is reflective of the definition adopted by research in the United States. However, it has recently been argued that the cause, that is, being at work in poor physical condition, should be considered separately from the result, decreased productivity [13], and that the definition of presenteeism should be simplified to "work in poor health condition".

The second trend in presenteeism research, separate from that in the United States, has been led by European researchers, who termed the phrase "sickness presenteeism (or presence)", which means being at work or going to work when it is better to be absent because of poor physical condition [14]. In sickness presenteeism research, "the number of days in the previous year in which a worker goes to work when it is better to be absent because of poor health condition" is often used as an indicator to measure sickness presenteeism. Different from presenteeism research in the United States where the main interest is in labor productivity, sickness presenteeism examines presenteeism as a type of health risk behavior. The concern in sickness presenteeism research is that continued sickness presenteeism may result in lost opportunities for proper treatment or recovery, which is detrimental to a person's future health, or can lead to a long-term leave or resignation. Because factors influencing sickness presenteeism include not only symptoms and severity but also motivation to work, stability of employment, the right to take annual leave with pay, and morale, discussions of sickness presenteeism also include problems associated with health disparities.

Presenteeism and productivity

Here I will discuss how presenteeism addresses labor productivity in the United States. Reports mainly from the United States suggest that costs due to presenteeism are higher than direct health care costs (costs to go to the hospital and for treatment) and costs due to absenteeism (sick leave), and accounts for the majority of the cost to companies for their workers' health [15, 16]. This type of research arose from the fact that most companies in the United States pay for their employees' health care costs. In addition, health promotion costs are regarded as a necessary cost for continuous management. Therefore, calculation of not only direct health care costs but also indirect costs, including those due to presenteeism, is important for companies to determine the cost of illness for their employees.

Another key motivation for this research is in the recent development of expensive pharmaceuticals and medical devices. Companies developing expensive pharmaceuticals such as biological products must perform cost-effectiveness analysis. Accounting for presenteeism in addition to conventional direct health care costs and absenteeism in the analysis allows for greater cost-effectiveness [17, 18]. Therefore, it is important to be cautious when monetized values estimated using these methods, known as "costs (consumed resources) for presenteeism", are used in the context of improving companies' productivity.

Methods of cost estimation due to presenteeism

Calculating the cost burden due to presenteeism consists of three main processes: measurement, conversion, and translation [13]. The first process uses various questionnaires that have been developed to measure presenteeism. Most of these are self-report questionnaires and were developed based on different concepts or theories. Currently, more than 20 types of questionnaires have been developed to measure presenteeism. Although most of these were developed overseas, the validity of the Japanese versions of Work Limitation Questionnaire (WLQ) [19], Stanford Presenteeism Scale (SPS) [20], Work Productivity and Activity Impairment Questionnaire (WPAI) [21], Health and Work Performance Questionnaire (HPQ) [22], and Health Assessment Questionnaire (HAQ) [23, 24], has been verified. Detailed comparisons of these tools have been described previously [9, 25–27]. In addition, work functioning impairment scale (WFun) has been developed as an original Japanese questionnaire to assess presenteeism [28].

The second process in calculating the cost burden due to presenteeism involves converting the output from questionnaires into parameters for quantifying work loss, such as "working time lost due to presenteeism per week". The units of these parameters after conversion vary depending on the tools used, such as in time due to work lost per 2 weeks and time due to

work lost per year. To perform the conversion, some questionnaires directly ask, "how much working time was lost for health reasons in a week", while in other cases, time due to work lost is calculated based on measurements obtained from questionnaires.

The third process is to translate the values obtained in the second process into monetary amounts. Although there are various approaches for conducting this translation, the human capital approach is generally used. In the human capital approach, the monetary amount is calculated by multiplying the amount of time lost (days) by the mean hourly wage (daily wage). This method is frequently used because the calculation is easy and it is accepted as a conventional approach in economics. However, this approach is sometimes criticized because several of its assumptions are not consistent with reality. Moreover, monetary amounts obtained using the human capital approach should be interpreted with caution because they are often overestimated. Aside from the human capital approach, the cost friction approach is also used. This approach is considered superior to the human capital approach in accuracy, but is generally difficult to use because it requires information that is hard to obtain.

Health management and presenteeism

Addressing presenteeism in Japan may lead to the development of a new occupational health paradigm. In recent years, various labor market conditions have arisen that cannot be managed using conventional occupational health paradigms, such as safety consideration and prevention of departures. The rise of conditions such as non-regular employment, employment mobility, elderly workers, and workers with diseases (assisting in balancing work and treatment) have increased the need to assist workers with health problems. These workers correlate with those experiencing presenteeism. Determining how to assist workers experiencing presenteeism and how to manage their health constitute new challenges in occupational health. However, there are currently no established approaches for managing the health of workers experiencing presenteeism, although it is hoped that various approaches will be trialed. In the establishment of effective approaches, it should be noted that those that monetize presenteeism alone are insufficient for managing health. Instead, what is needed is to establish a health management approach to properly identify workers experiencing presenteeism, assess the effects of presenteeism on their work ability, and determine appropriate clinical interventions and actions for workers. A health management approach established from a presenteeism perspective may form a new health management paradigm.

In an effort to establish such an approach, Fujino and his colleague have been developing a questionnaire WFun to measure presenteeism from the perspective of impaired work function [28]. A characteristic of WFun is that it was developed based on a test theory called the Rasch model. Moreover, the validity and reliability of WFun have been verified according to consensus-based standards for the selection of health measurement instruments, namely COSMIN, guidelines for assessing self-report indicators of outcomes [29, 30]. WFun measures the degree of difficulty associated with work performance due to health problems in a manner that is not specific to any particular disease or symptom. Nagata *et al* demonstrated that the use of WFun for determining whether workers had difficulty in their work due to health problems produced findings that were consistent with those determined by experienced public health nurses through detailed interviews with the workers [31]. Along these lines, I think that future evaluations of workers regarding presenteeism should assess the degree of difficulty workers feel in completing their work, in addition to disease names, examination results, and treatment status, and make efforts to optimize workloads.

There is also currently no established methodology describing how to respond to workers who are experiencing presenteeism. However, many problems in presenteeism are considered solvable by utilizing the experience and technologies accumulated in the occupational health field. For example, while musculoskeletal disorders are the main disorders responsible for presenteeism, it is estimated that many workers with musculoskeletal disorders do not receive proper treatment. Early intervention, including medical interventions like analgesics, is expected to improve these conditions. Moreover, optimizing the devices used is often effective for relieving difficulties felt by workers experiencing presenteeism. Providing large screen displays to workers with poor vision is one example.

Additionally, Providing headsets instead of handheld phones to hemiplegic workers is another. Such measures do not require in-depth knowledge associated with disease names and examination results. Instead, it is important to focus on the specific difficulties experienced by each worker. Thus, evaluating workers by assessing the underlying factors of presenteeism may form a paradigm that is different to conventional paradigms associated with disease names and examination results.

Conclusion

There is a growing interest in presenteeism in Japan for improving labor productivity. Novel ways of assessing workers with presenteeism may constitute new health management paradigms. To realize this, future studies should establish methods to identify workers with presenteeism and approaches to manage the health of these workers and to improve their working conditions.

Conflict of Interest

The authors declare no conflicts of interest associated with this manuscript.

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プレゼンティーズムを抱える労働者の健康管理：産業保健における新しい課題

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要　　旨：近年, 日本において, プレゼンティーズムへの関心が産業保健分野のみならず, 経営分野においても急速に広がりつつある．しかしながら, プレゼンティーズムという用語が国内に紹介されたのは比較的最近であり, 日本におけるプレゼンティーズムに関する知見の蓄積も限られている．本稿では, プレゼンティーズムに関する知見を整理するとともに, 日本の産業保健におけるプレゼンティーズムへの取り組みに関する意義について考察する．プレゼンティーズムとは, 健康上の問題を抱えたまま出社している状態というのが共通した定義であり, 労働生産性の低下を追加するものもあった．医療経済的な観点からプレゼンティーズムによる労働生産性低下を貨幣換算する方法について複数の方法が提案されているが, 統一した方法はない．労働者の健康状態を, プレゼンティーズムの観点から評価し, 支援するための新しい方法が必要である．

キーワード：プレゼンティーズム, アブセンティーズム, 労働生産性.

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