

High-Performance Work Systems, Work Intensification, Health Harm and Well-Being: Mediation and Moderation Models

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ABSTRACT

This study aims to examine the impact of work intensification, high-performance work systems (HPWS), and workplace well-being on health harm at Bentoel Group Cigarette Factory, Malang. Using an explanatory research approach, the study explores the mediating role of HPWS as a variable that explains the relationship between work intensification and health harm, as well as workplace well-being as a moderating variable influencing the relationships between variables. Data were collected through questionnaires distributed to 128 production employees in the tobacco processing section using a saturated sampling method. The analysis was conducted using SEM techniques with the SMARTPLS 4.0 software. The results show that the descriptive values of the variables of work intensification, HPWS, health harm, and workplace well-being each have good average scores. Work intensification has a significant positive effect on health harm. Additionally, work intensification has a significant negative effect on the implementation of HPWS. HPWS has a significant negative effect on health harm, indicating that HPWS can reduce health harm. HPWS also mediates the effect of work intensification on health harm with a significant positive influence. Workplace well-being was found to have a significant moderating effect, showing that increased

workplace well-being can reduce the negative impact of HPWS on health harm.

Keywords: High-Performance Work Systems (HPWS), Work Intensification (WI), Workplace Well-Being (WWB), Health Harm (HH)

INTRODUCTION

In assessing the impact of the tobacco industry, it is essential to understand its complexity and wide-ranging implications across various aspects. The tobacco product industry (Industri Hasil Tembakau - IHT) is a strategically important sector in national manufacturing, with extensive top-down relationships. According to data published by the Ministry of Industry, this sector employs approximately 5.98 million people, and as of October 2023, tobacco tax revenue had reached Rp163.2 trillion (DPD RI, 2024). Despite its significant economic contribution, the industry is controversial due to its production of products that can harm human health and the environment (Marshall et al., 2023). Understanding this industry is important due to its complex relationship with legitimacy and stakeholders (Oh et al., 2017). For instance, the addictive nature of tobacco can lead to serious health problems such as lung cancer, heart disease, and pneumonia. The costs associated with these negative effects, including health and social impacts, are largely borne by healthcare providers,

employers, the government, and even families (Chillakuri & Vanka, 2021). According to a report by BPJS Ketenagakerjaan, Indonesia has seen an increase in the demand for workplace accident insurance (Jaminan Kecelakaan Kerja - JKK) and death insurance (Jaminan Kematian - JKM), with a 21.11% increase in JKK claims and a 17.59% increase in JKM claims from 2022 to the end of November 2023. This indicates a rise in workplace accidents, potentially due to factors such as high work pressure, fatigue, and inadequate rest (Boekhorst et al., 2017). Organizations that implement High-Performance Work Systems (HPWS) often achieve desired performance outcomes (Korff et al., 2017). In developing countries like Indonesia, designing and implementing HPWS as a practice rooted in human capability is essential, as companies face significant challenges in strategy, innovation, and competitiveness for sustainable growth (Singh et al., 2020). Research shows that HPWS enhances the value, uniqueness, and irreplaceable knowledge and skills of employees, which in turn fosters positive employee behavior and improves organizational performance (Pak & Kim, 2018). However, achieving organizational performance often means that employees suffer from extreme workloads, which affect their well-being, impacting individuals, organizations, families, and even friends (Han et al., 2020).

Recent research in business journals suggests that implementing HPWS can lead to anxiety disorders, emotional exhaustion, and the intention to resign. This is due to the disparity between what is considered beneficial at the organizational level and what is perceived as advantageous at the individual employee level (Jyoti & Rani, 2019). While HPWS facilitates employee participation, innovation, organizational commitment, and job performance, it also limits employees' ability to achieve positive health and social well-being related to work (Keith et al., 2020). This significant conflict requires attention, as organizations often

overlook the negative impacts of HPWS in pursuit of financial goals, which ultimately can threaten employee health and organizational sustainability (Marescaux et al., 2019).

While HPWS is designed to improve efficiency and productivity, there is a tendency for its implementation to also increase work intensity, raising important questions about how to balance productivity with employee well-being. According to Boekhorst et al. (2017), work intensity refers to job demands that include speed, effort, and effective energy required to complete tasks. The high levels of work intensity experienced by employees can become workplace stressors that potentially affect mental health (Doan et al., 2021).

In labor-intensive industries like the tobacco industry, long working hours and high work intensity are common (Rogovsky et al., 2021), with implications for working conditions, including work intensification and skill degradation (ILO, 2024). This prompts researchers to understand how, why, and under what conditions warrior intensification affects workers' health, posing risks to their workplace well-being. Sustainable Human Resource Management (SHRM) is a holistic approach that considers not only the development of human and social capital within an organization but also the impact of HR policies on externalities such as society, the economy, and the environment (Kramar, 2014). According to institutional theory, SHRM focuses on creating changes in institutional HRM practices while considering stakeholder well-being (G. Wood et al., 2014). Understanding controversial industries is essential because they involve organizations with complex relationships to legitimacy and stakeholders (Oh et al., 2017). The tobacco product industry is one of these controversial industries, producing products with environmental, social, or ethical issues that directly affect human health, well-being, and the environment (Marshall et al., 2023).

Given its significant contribution to employment and direct impact on human health, it is crucial for the tobacco industry to implement Sustainable Human Resource Management practices to reduce health harm and raise awareness about the negative impact of work intensification (Mariappanadar, 2010). Since East Java contributes significantly to national tobacco production (DPD RI, 2024) and plays an important role in absorbing labor and increasing national revenue, this study aims to provide empirical evidence on work intensification, HPWS, workplace well-being, and health harm in Indonesia's tobacco industry, particularly in East Java. The study also offers theoretical and practical implications for building sustainability as an HRM strategy, as work intensification (overwork) is a common phenomenon that will continue. Based on a literature review, gaps that require further investigation have been identified. Literature on Sustainable Human Resource Management practices is still evolving due to theoretical differences, tensions, dualities, and dilemmas (Ehnert, 2009). The literature provides empirical evidence on the relationship between workload and individual well-being, work-family interface, workload and work intensification, and work-family conflict (Chillakuri & Vanka, 2021). However, these findings often do not focus on well-being in high-pressure work environments (Chillakuri & Vanka, 2022) and the negative effects of the products produced. Additionally, HPWS can present challenges, such as work intensification, which negatively impacts employee health and work-life balance (Kelliher & Anderson, 2010).

Workplace well-being refers to "all aspects of working life, from the quality and safety of the physical environment to how employees feel about their jobs, work environment, workplace climate, and organizational work" (ILO, 2024). In other words, well-being is not just the absence of disease, anxiety, or depression; it is a state

in which a person feels comfortable and happy, maintaining good physical and social health (Chillakuri & Vanka, 2021). This study explores how workplace well-being reduces the negative impact of HPWS on health harm, an area that has received little attention. Additionally, this study provides contextual support for the literature by filling research gaps related to Sustainable Human Resource Management practices in developing countries, particularly concerning controversial industries.

LITERATURE REVIEW

Grand Theory

Research on work intensification and employee well-being in the tobacco industry is closely related to the **negative externalities theory** in human resource management (HRM) and **stakeholder theory**. The negative externalities theory in HRM, as proposed by Marshall et al. (2023), explains that HRM policies and practices can generate unintended negative impacts on individuals or groups not directly involved, such as employees and surrounding communities. For example, the implementation of High-Performance Work Systems (HPWS) can lead to excessive work intensification, which in turn can reduce employee well-being by increasing stress, fatigue, and other health risks (Boekhorst et al., 2017).

Stakeholder theory is also relevant in this context. According to Oh et al. (2017), organizations are not only responsible to shareholders but also to all other stakeholders, including employees, communities, and governments. In this study, stakeholder theory emphasizes the importance of considering the impact of managerial decisions on the well-being of all involved stakeholders. This is relevant in the context of the tobacco industry, which often faces dilemmas between economic gains and the negative impacts on public health and well-being. This research seeks to outline how HPWS can be implemented while balancing productivity and employee

well-being, as well as broader implications for other stakeholders.

Work Intensification

Work intensification (WI) refers to the increased demands of work, both in quantity and quality, experienced by employees in performing their tasks (Boekhorst et al., 2017). Han et al. (2020) state that WI is often associated with increased speed and volume of work, which requires more energy and effort from employees. According to Doan et al. (2021), indicators to measure WI include; (1) number of working hours, (2) targets pressure, (3) the need for multitasking, and (4) the requirement for higher skills in the job.

High-Performance Work Systems

HPWS refers to a set of management practices designed to increase organizational productivity and efficiency by enhancing employee engagement and capabilities (Korff et al., 2017). Singh et al. (2020) describe HPWS as an approach that includes practices such as intensive training, performance evaluation, and performance-based rewards. Indicators to measure HPWS, according to Pak & Kim (2018), include; (1) employee training and development, (2) employee participation in decision-making, (3) reward and incentive

systems, and (4) systematic performance evaluation.

Workplace Well-Being

Workplace well-being (WWB) refers to the physical, mental, and social well-being of employees in their work environment (Chillakuri & Vanka, 2021). According to Kramar (2014), this well-being encompasses various aspects, such as a safe work environment, work-life balance, and psychosocial support. Indicators of workplace well-being include; (1) workplace safety, (2) stress levels, (3) job satisfaction, and (4) work-life balance (ILO, 2024).

Health Harm

Health harm (HH) in the workplace context refers to risks that can endanger the physical and mental health of employees due to conditions or practices in the workplace (Mariappanadar, 2010). Chillakuri & Vanka (2021) define HH as exposure to factors such as hazardous chemicals, excessive work stress, or non-ergonomic working postures. Indicators to measure HH include; (1) rates of work-related injuries and illnesses, (2) reports of work-related health complaints, (3) exposure to hazardous materials, and (4) access to health services in the workplace (Marshall et al., 2023).

Framework

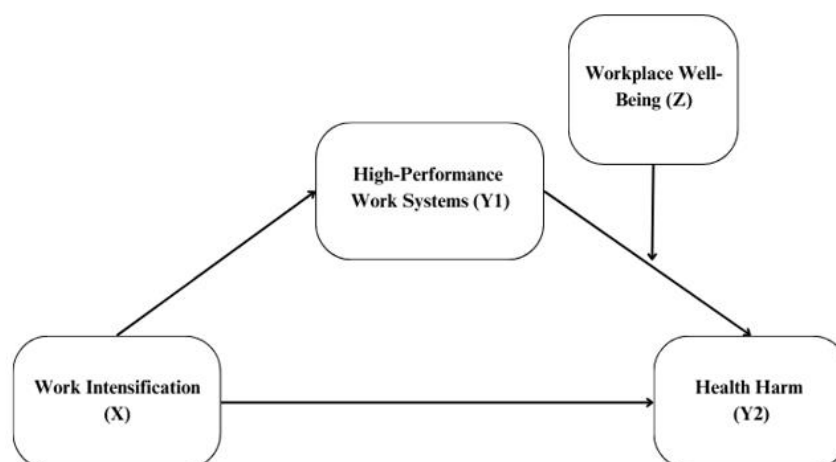


Figure 1. Framework

Positive Influence of Work Intensification on Health Harm (HH)

Organizations are increasingly escalating work intensification (WI) due to competition, global demands, globalization, and technological advancements, which physically, cognitively, socially, and emotionally drain workers. In these conditions, employees tend to work longer hours and spend extensive time within the organization, often neglecting their health (Chillakuri & Vanka, 2022). Existing literature shows a positive correlation between work intensification and health disturbances (Mariappanadar, 2012). Excessive resource consumption leads to work-related health problems, known as health harm (Mariappanadar, 2014), including those caused by harmful products (Chillakuri & Vanka, 2021). Thus, this research empirically examines the impact of work intensification on health harm, proposing the following hypothesis:

H1: Work Intensification positively affects Health Harm.

Positive Influence of Work Intensification on High-Performance Work Systems (HPWS)

Competition, global demands, globalization, and technological advancements significantly deplete workers' physical, cognitive, social, and emotional resources. Under such conditions, employees tend to work more and spend long hours at work, often neglecting their health (Chillakuri & Vanka, 2021). HPWS theory suggests that human resource management (HRM) practices designed to enhance organizational performance can influence employees' abilities, motivations, and job opportunities. This suggests that HPWS is influenced by high work intensification (Mariappanadar, 2012). In HPWS practices, employees may face excessive workloads, high work speeds, and tight deadlines, forcing them to intensify their work efforts to meet organizational goals (Fan et al., 2018). This excessive resource usage can lead to work-related health issues, referred to as health

harm (Mariappanadar, 2014), including those arising from high work pressure and extreme performance demands (Jyoti & Rani, 2019). Therefore, this research empirically examines the impact of HPWS implementation on work intensification and employee health, proposing the following hypothesis:

H2: Work Intensification positively affects the implementation of High-Performance Work Systems.

Positive Influence of High-Performance Work Systems on Health Harm

Positive Influence of High-Performance Work Systems on Health Harm

The impact of HPWS on employee health harm can be explained through the concept of work intensification and work-life balance theory. The Work-Life Balance Theory emphasizes the importance of balancing work and personal life for health and well-being. Implementing HPWS often increases work intensification, involving higher job demands, increased speed, effort, and energy required to complete tasks. This intensification can disrupt employees' work-life balance, leading to stress and various health issues (Greenhaus & Beutell, 1985). Existing literature shows that HPWS implementation often increases work intensification, positively correlating with employee health disturbances (Mariappanadar, 2012). Excessive resource consumption leads to work-related health issues, known as health harm (Mariappanadar, 2014). Research shows that high work intensification due to HPWS can result in physical and mental health problems for employees, such as stress, burnout, anxiety, and depression (Korff et al., 2017). With this explanation, the research proposes the following hypothesis:

H3: High-Performance Work Systems positively affect Health Harm.

High-Performance Work Systems Mediate the Relationship Between Work Intensification and Health Harm

It is important to study the relationship between work intensification (WI), health harm (HH), and high-performance work systems (HPWS) to understand how modern work environments affect employee well-being. WI is often linked to increased stress levels and health issues among employees, including physical and mental problems (Green, 2004). While HPWS is designed to enhance organizational performance, these systems may also increase job demands and pressure on employees, contributing to adverse health outcomes (Boxall & MacKy, 2009). Health harm in the workplace is increasingly recognized as a consequence of WI and HPWS, necessitating a balanced approach to workplace management (Kompier, 2006). Based on this explanation, the research proposes the following mediation hypothesis:

H4: High-Performance Work Systems mediate the relationship between Work Intensification and Health Harm.

Workplace Well-being Moderates the Relationship Between High-Performance Work Systems and Health Harm

Research on the relationship between workplace well-being (WW), HPWS practices, and negative health impacts is crucial to understanding how current management practices affect employee health and well-being. WW includes physical, mental, and emotional aspects that are essential for employee productivity and retention (Danna & Griffin, 1999). HPWS is designed to enhance organizational performance through practices such as intensive training, employee empowerment, and rigorous performance evaluation. However, these systems may also increase work pressure, affecting employee well-being (S. Wood & de Menezes, 2011). High work pressure and intense job demands can lead to stress, fatigue, and various physical and mental health problems. Research shows that poorly managed HPWS practices can result in detrimental health outcomes (Godard, 2001). Therefore, it is expected that workplace well-being will moderate

this relationship and mitigate health harm, leading to the following hypothesis:

H5: Workplace Well-being moderates the relationship between High-Performance Work Systems and Health Harm.

MATERIALS & METHODS

This research is associative in nature, investigating cause-and-effect relationships. The causal relationship in this study examines the influence of work intensification on health harm, with high-performance work systems (HPWS) as a mediating variable and workplace well-being as a moderating variable. The research focuses on the impact of work intensification, HPWS, and workplace well-being on health outcomes.

A quantitative approach is employed in this study, using survey data collected from workers in the tobacco processing sector. The data utilized in this research is primary data, obtained through structured questionnaires distributed to employees. The sampling method used in this research is purposive sampling, where samples are selected based on specific criteria related to the research objectives.

The population for this study consists of employees in the tobacco manufacturing sector, specifically at Bentoel Group (a subsidiary of British American Tobacco) in Malang, Indonesia. The selection of Bentoel Group is based on its status as a major tobacco manufacturer with a significant workforce, making it an ideal case study for examining the effects of work intensification in a labor-intensive industry. A total of 128 workers from the production department were selected as the sample for this research.

The criteria for sample selection include:

1. Employees working in the production department during the research period.
2. Employees with at least one year of work experience to ensure familiarity with workplace practices.
3. Employees willing to participate in the survey and provide valid responses.

Based on these criteria, a total of 128 valid samples were collected. Data were analyzed using SmartPLS 4.0, a statistical software tool for Partial Least Squares Structural Equation Modeling (PLS-SEM). This software was chosen due to its ability to assess complex cause-and-effect relationships between multiple variables.

RESULT

The research explores the mediating role of High-Performance Work Systems (HPWS) as a variable that explains the relationship between work intensification and health harm, with workplace well-being serving as a moderating variable that influences the relationships among variables. The variables are classified in **Table 1**

Table 1. Research Variables

Variable		Indicator	Reference
Work Intensification (WI)	1.	Emotional Demans	(Burke et al., 2010)
	2.	Job Demans	
	3.	Time Demans	
High-Performance Work Systems (HPWS)	1.	Employment Security	(Ghautama, 2019)
	2.	Selective Staffing	
	3.	Comprehensive Training	
	4.	Reduced Status Differentiation	
	5.	Competitive Compensation and Benefit	
Health Harm (HH)	1.	Restrictions for Positive Health	(Mariappanadar, 2016)
	2.	Risk Factors for Psychological Health	
	3.	Side Effects Harm of Work	
Workplace Well-being (WW)	1.	Work Satisfaction	(Parker & Hyett, 2011)
	2.	Organizational Respect for the Employee	
	3.	Employer Care Intrusion of Work into	
	4.	Private Life (negatif)	

Source: Processed data, 2024

The population in this study comprises all production workers in the tobacco processing department at the Bendoel Group Tobacco Factory, Malang, totaling 128 employees. The sampling method used is the census sampling method, where the entire population is used as the research sample. According to Sugiyono (2013), census sampling is a technique where all members of the population are used as samples due to the relatively small population size, allowing the entire population to be reached.

This study uses a questionnaire as the primary data collection tool. The data collection technique involves distributing questionnaires containing statements related to Work Intensification (WI), HPWS,

Workplace Well-being (WW), and Health Harm (HH). The questionnaire consists of two main sections: the first section gathers demographic information from respondents, while the second section contains several items measuring constructs using a 1-5 Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agree." The data analysis technique used is Partial Least Square-Structural Equation Modeling (PLS-SEM), employing SmartPLS 4.0 software. The measurement stages include assessing the outer model and inner model, followed by hypothesis testing.

Descriptive Statistics

Below are the respondent characteristics described in **Table 2**.

Table 2. Respondent Characteristics

	Category	Frequency	Percentage
Gender	Male	116	90.63%
	Female	12	9.37%
Age	< 25 years	4	3.13%
	25 – 34 years	45	35.16%

	35 – 45 years	72	56.25%
	> 45 years	7	5.47%
Employment Status	Contract	96	75%
	Permanent	32	25%
Job Position	Intermediate Cell Manager	1	0.78%
	Module Lead	3	2.34%
	Team Lead	7	5.47%
	Equipment Owner	19	14.84%
	Supervisor	4	3.13%
	Admin	7	5.47%
	Production Staff	2	1.56%
	Production Helper	62	48.44%
	Forklift Operator	17	13.28%
	Cleaning Service	6	4.69%

Source: Processed data, 2024

Table 2 shows that the majority of respondents are male (90.63%) and fall within the age group of 35-45 years (56.25%). Most respondents are employed on a contract basis (75%), and the largest proportion hold positions as Production Helpers (48.44%), followed by Equipment Owners (14.84%) and Forklift Operators (13.28%).

Instrument Testing

The Outer Model analysis ensures the research instrument is valid and reliable as a measurement tool. The tests performed, as outlined by (J. F. H. Hair et al., 2021), include; (1) Convergent Validity, which is ideal if the factor loading is above 0.7. (2) Discriminant Validity, which is valid if the AVE value is above 0.5. (3) Composite Reliability, which is valid if above 0.7. The Outer Model test results are shown in Table 3.

Tabel 3. Hasil Outer Model

Construct	Item	Loading Factor	AVE	Composite Reliability
Work Intensification (WI)	WI 1	0.884	0,641	0,898
	WI 2	0.916		
High-Performance Work System (HPWS)	HPWS 1	0.664	0,810	0,895
	HPWS 2	0.818		
	HPWS 3	0.801		
	HPWS 4	0.863		
	HPWS 5	0.805		
	HPWS 6	0.664		
Health Harm (HH)	HH 1	0.837	0,585	0,894
	HH 2	0.879		
	HH 3	0.780		
	HH 4	0.831		
	HH 5	0.657		
Workplace Well-being (WW)	WW 1	0.660	0,598	0,898
	WW 2	0.816		
	WW 3	0.809		
	WW 4	0.788		
	WW 5	0.746		
	WW 6	0.757		

Source: Processed data, 2024

The results show that all items have loading factors above 0.6, AVE values greater than 0.5, and composite reliability scores above

0.7, indicating that the instrument is valid and reliable.

Structural Model Evaluation (Inner Model)

The structural model evaluation stage, also known as the internal model stage, is conducted to examine the relationships between the constructs in the research model. The structural model is evaluated using R-square and F-square.

R-square (R²)

According to Hair (2017), R-square measures how well the independent variables explain the variance of the dependent variables. Values range from 0 to 1, with 1 indicating perfect prediction:

Table 4. R² Analysis

Variabel	R Square	Description of Results
Health Harm	0,502	Moderate
High-Performance Work System	0,156	Moderate

Source: Processed data, 2024

The dependent variable, Health Harm (HH), is influenced by the independent variables by 0.502 or 50.2% based on the R-square test results above. However, other factors outside the scope of this study account for the remaining 49.8%. The independent variables have an influence of 0.156 or 15.6% on the mediating variable, High-Performance Work Systems (HPWS). Other factors outside the scope of this study account for the remaining 84.4%.

F-square (f²)

Effect size (f²) in PLS-SEM is a measure of the influence of exogenous variables on endogenous variables, with effect size categories according to Garson (2016) as follows: very small (f² ≤ 0.02), small (0.02 < f² ≤ 0.15), medium (0.15 < f² ≤ 0.35), and large (f² > 0.35).

Table 5. f² Analysis

Variable	F-Square
Work Intensification -> Health Harm	0,341
Work Intensification -> High-Performance Work Systems	0,184
Workplace Well-being -> Health Harm	0,002
High-Performance Work Systems -> Health Harm	0,161
Workplace Well-being x High-Performance Work Systems -> Health Harm	0,040

Source: Processed data, 2024

Based on the analysis conducted, the effect of the Work Intensification (WI) variable on Health Harm (HH) has an f² value of 0.341, indicating a medium effect. The effect of WI on High-Performance Work Systems (HPWS) has an f² value of 0.184, also indicating a medium effect. The effect of Workplace Well-being (WW) on HH has an f² value of 0.002, indicating no effect or a

very small effect. The effect of HPWS on HH has an f² value of 0.161, indicating a medium effect. Finally, the interaction between WW and HPWS on HH has an f² value of 0.040, indicating a small effect.

Hypothesis Testing

Hypotheses were accepted if the t-statistic >1.96 and p-value <0.05.

Table 6. Hypothesis Testing Results for Direct and Indirect Effects

Construct	Original sample (O)	T statistics (O/STDEV)	P values
Intensification -> Health Harm	0,478	6,548	0,000
Intensification -> High-Performance Work Systems	-0,394	3,860	0,000
High-Performance Work Systems -> Health Harm	-0,392	4,337	0,000
Work Intensification -> High-Performance Work	0,154	3,036	0,002

Systems -> Health Harm			
Workplace Well-being x High-Performance Work Systems -> Health Harm	-0,095	2,011	0,044

Source: Processed data, 2024

DISCUSSION

From the results of hypothesis testing, all five proposed hypotheses have significant effects. Here is the explanation for each hypothesis submission:

The first hypothesis (H1), Work Intensification (WI), has a positive effect on Health Harm (HH). The research results show that WI has a significant positive impact on HH. This indicates that the higher the WI, the greater the health risks employees face.

WI, particularly in terms of time demands, causes workers to feel pressured to meet company targets in increasing productivity and efficiency. This includes longer working hours, reduced break times, increased workload, and pressure to achieve more ambitious targets. The questionnaire results reveal that workers often feel burdened by responsibilities in the production area, which is the main stressor and impacts their physical and mental health. The HH experienced can include psychological stress, physical fatigue, and even lung disease.

As a multinational company, Bentoel Group experiences high WI, especially during peak production seasons to meet market targets, which results in both physical and mental fatigue for employees. Observations show that intensification increases when tobacco does not meet standards or machinery problems occur, adding extra pressure on employees to achieve targets.

To address these negative impacts, the organization needs to implement comprehensive stress management and well-being programs, such as adequate rest periods, flexible work schedules, stress management training, and psychological support. Effective workload management is also essential to ensure that employees work in healthy and productive conditions.

In conclusion, WI has a significant impact on employee HH. Therefore, the

organization needs to focus on managing WI and providing adequate support for employees' long-term well-being and productivity, as well as the company's sustainability.

Next, in the second hypothesis (H2), the results show that WI has a significant negative impact on HPWS. This means that high WI can hinder the implementation of HPWS at Bentoel Group. HPWS includes management practices such as intensive training, performance evaluations, and reward systems designed to improve employee skills, empowerment, and motivation. However, the research shows that WI negatively affects HPWS effectiveness, contrary to the findings of Yuan & Xie (2022), which show that HPWS can enhance creativity and performance.

At Bentoel Group, high WI causes physical and mental fatigue among employees, making them less responsive to HPWS initiatives. Exhausted employees are unable to fully utilize training and empowerment opportunities, hindering innovation and creativity. Additionally, excessive pressure affects employees' psychological well-being, reducing their engagement with HPWS programs.

To address this, it is important for the company to balance WI and the implementation of HPWS. Reducing workloads, providing psychological support, and managing stress are necessary to ensure that employees can effectively benefit from HPWS. This will improve employee well-being and ensure that HPWS provides maximum benefits for the organization.

In conclusion, although HPWS has great potential, excessive WI can reduce its effectiveness. Bentoel Group management needs to pay attention to workload management and provide adequate support for the success of HPWS.

In the discussion of the third hypothesis (H3), it was hypothesized that HPWS would

positively affect HH, but the hypothesis testing shows that HPWS has a significant negative effect on HH, meaning that HPWS implemented at Bentoel Group Malang actually reduces HH, rather than increasing it as previously hypothesized.

The research results show that employees at Bentoel Group feel secure from potential layoffs, receive relevant training, are treated fairly, and receive competitive compensation. HPWS contributes positively to employee well-being, reducing stress and improving their mental health. This supports the research by Chillakuri & Vanka (2022), which states that employee empowerment in HPWS can improve their mental health, as long as they do not feel overburdened.

However, although HPWS improves psychological well-being, its impact on employees' physical health is more limited, especially due to exposure to chemicals in tobacco production. Statistics show the risk of long-term health issues, such as lung disease. Therefore, it is important for Bentoel Group to manage workloads and provide adequate support to reduce the negative impact of chemical exposure while ensuring a balance between productivity and employee well-being.

Furthermore, the fourth hypothesis (H4) states that HPWS mediates the relationship between WI and HH. The research results show that HPWS mediates the effect of WI on HH with a significant positive effect. Implementing HPWS in the context of WI at Bentoel Group can improve employee well-being by creating a more efficient and structured work system. Research shows that a well-implemented HPWS can increase employees' sense of belonging and support from management, as well as provide protection from layoffs, relevant training, equal treatment, open communication, and competitive compensation.

However, high WI without adequate management support can lead to mental and physical strain on employees, especially during peak production seasons. Therefore, management needs to adopt a more holistic

approach in implementing HPWS, including skills training, mental support, and well-being programs. This approach will help balance the need for increased productivity with maintaining employee health and well-being.

Hypothesis testing for the fifth hypothesis (H5) shows that workplace well-being moderates the relationship between HPWS and HH with a negative moderating effect. This negative value indicates that increased workplace well-being tends to reduce the negative impact of HPWS on HH.

Negative moderation means that increased workplace well-being can reduce the negative impact of WI on employees' health. Statistical data show that workplace well-being at Bentoel Group is quite high, encompassing job satisfaction, good relationships with colleagues, recognition of contributions, involvement in decision-making, and emotional support from supervisors. Nevertheless, high WI can lead to stress and fatigue.

It is important for organizations to provide support and good workload management to minimize the negative impact of HPWS. Although workplace well-being has a positive moderating effect, the strength of its effect is still relatively low, especially due to the limited support provided to contract employees. Bentoel Group needs to address this issue by providing well-being programs that include all employees, including contract workers. Strategies already implemented, such as health facilities, flexible work policies, and team-building activities, are expected to be more effective in supporting employee health and well-being and the success of HPWS in the company.

CONCLUSION

This study aims to examine the effects of work intensification, HPWS, and workplace well-being on health harm at Bentoel Group, located at Jl. Perusahaan Raya, Karanglo, Malang. The conclusions show that work intensification (WI) has a significant positive impact on health harm

(HH), where higher work intensification increases the health risks faced by employees, particularly related to stress and fatigue. Additionally, WI has a significant negative effect on the implementation of HPWS, as excessive pressure reduces the effectiveness of HPWS.

However, HPWS at Bentoel Group contributes positively to employee well-being and helps mitigate potential health harm. This is achieved through providing relevant training, treating employees fairly, and offering appropriate compensation, all of which help reduce stress and improve mental health. HPWS also mediates the effect of work intensification on health harm by creating a more efficient and structured work system, which in turn improves overall employee well-being.

Workplace well-being has a significant negative moderating effect on the relationship between HPWS and health harm, indicating that a more supportive work environment can lessen the negative impact of high job demands. However, further attention needs to be given to the uneven support provided to contract employees at Bentoel Group. To ensure the well-being of all employees, it is important for the company to expand its well-being programs to include all employees, including those with contract status. This will enable the company to more effectively minimize the negative impact of HPWS and support the health and well-being of all employees, ultimately increasing productivity and creating a better work environment.

Declaration by Authors

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