

Presenteeism in Cigarette Workers in the Light of Job Insecurity and Job Demands

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Abstract

This study aims to examine the relationship between job insecurity, job demands, and presenteeism among cigarette factory workers. Presenteeism refers to employees' tendency to remain physically present at work despite experiencing physical or psychological health problems that may reduce work effectiveness. This study employed a quantitative correlational design involving cigarette factory workers selected through accidental sampling. Data were collected using three validated measurement scales, namely the presenteeism scale, job insecurity scale, and job demands scale. The data were analyzed using Pearson correlation and two-predictor regression analysis. The results showed a significant positive relationship between job insecurity, job demands, and presenteeism, with a correlation coefficient of 0.647 and a significance level of $p < 0.01$. Job insecurity and job demands jointly contributed 41.8% to presenteeism. Further analysis indicated that job insecurity had a positive relationship with presenteeism ($r = 0.629$; $p < 0.01$), while job demands were also positively associated with presenteeism ($r = 0.546$; $p < 0.01$). These findings indicate that workers who experience higher job insecurity and greater job demands are more likely to continue working despite being in poor physical or psychological condition. Practically, the results suggest that organizations need to reduce excessive job demands, improve perceived job security, and strengthen employee well-being policies to minimize presenteeism and maintain workplace productivity.

I. INTRODUCTION

Presenteeism is a phenomenon in which employees remain at work despite experiencing physical or psychological health issues that significantly impair their ability to perform effectively. This issue has gained increasing attention in recent years, especially in sectors where the work environment is demanding, and employees feel pressure to remain at work even when unwell. In industries like cigarette manufacturing, where work stressors are often high, presenteeism can exacerbate the negative impacts on both individual health and overall organizational performance. This study employs a quantitative approach to examine the relationship between job insecurity (the fear of job loss), job demands (workload and pressure), and presenteeism among cigarette factory workers. The quantitative design was selected to

enable the collection of numerical data, which can be statistically analyzed to draw objective and measurable conclusions. This approach, alongside the use of reliable and valid measurement tools, allows for a clearer understanding of how job insecurity and job demands contribute to presenteeism in a high-stress work environment like a cigarette factory. Understanding these dynamics is crucial, as presenteeism in such settings can lead to both personal health deterioration and reduced productivity, making it an urgent issue for both employees and organizations.

Presenteeism is a condition in which an employee remains present at the workplace despite experiencing illness or physical or psychological disturbances that reduce their work effectiveness. This phenomenon was first explained by (Aronsson et al., 2000), who described that although employees are physically present, they do not function optimally. This is the opposite of absenteeism, or absence from work, which clearly indicates an inability to work. Presenteeism is more complex because, although employees come to work, their productivity declines significantly and may even worsen their health condition in the long term.

The decline in productivity caused by presenteeism can have major negative impacts, both on the employees themselves and on the organizations where they work. (McGregor et al., 2014) identified that presenteeism contributes to reduced employee productivity, which in turn affects overall organizational output. Employees who engage in presenteeism often experience decreased concentration, increased errors at work, and a higher risk of worsening their physical condition. As a result, this phenomenon has become a significant issue in human resource management and employee well-being.

In addition, presenteeism can serve as an indicator of an imbalance between employees' economic needs and personal health. Many employees feel compelled to continue working despite being unwell because of fear of losing their jobs, threats to their positions, or negative impacts on their performance evaluations (J.-H. Kim et al., 2020). In many cases, employees in the private sector with high workloads, such as those found in Bangkok, show significant levels of presenteeism due to economic uncertainty and fear of termination.

This phenomenon not only affects individuals directly but also influences overall organizational performance. Stated that employees who attend work despite being ill tend to experience a decline in the quality of their work, including reduced ability to focus, a greater potential for making mistakes, and, ultimately, a worsening of their physical condition. On the other hand, presenteeism can create an additional financial burden for organizations because they must continue to pay employees who are unable to deliver maximum results (Hongsa & Polyong, 2024).

In this context, the phenomenon of presenteeism is highly relevant for further study, particularly in relation to the factors that influence employees' decisions to continue attending work despite being in less-than-optimal condition. Factors such as job insecurity and high job demands are often the main drivers of this behavior. Job insecurity can worsen anxiety and stress, which in turn increases the likelihood of presenteeism.

Cigarette factory work is characterized by manual labor, repetitive production activities, strict production targets, time pressure, and limited flexibility in task execution. Workers are often required to maintain consistent speed, accuracy, and physical endurance throughout the working day. In addition, many cigarette factory workers depend economically on their employment as a primary source of household income, making them vulnerable to employment insecurity and fear of job loss. These working conditions may increase psychological pressure and reduce workers' willingness to take sick leave, even when they experience physical or psychological discomfort.

Consequently, cigarette factory workers may be at greater risk of presenteeism, as they continue attending work despite being unwell in order to maintain income, job stability, and compliance with workplace expectations.

Job insecurity refers to uncertainty regarding an individual's future employment. Found that employees who feel insecure about their jobs are more likely to continue attending work even when they are unwell because they fear losing their jobs (J.-H. Kim et al., 2020). This indicates that job insecurity can be a strong factor that drives presenteeism as a survival strategy. In addition, high job demands, whether in terms of workload, time pressure, or expectations from supervisors, can increase workplace stress and further strengthen the tendency toward presenteeism. According to the Job Demands-Resources (JD-R) theory proposed by (Demerouti et al., 2009), high job demands without sufficient resources to cope with them can lead to exhaustion, stress, and eventually presenteeism. Therefore, employees who experience employment uncertainty while also facing excessive workloads and limited control over their work may be more likely to continue working despite being in poor physical or mental condition.

II. LITERATURE

Research on presenteeism is largely driven by work stress theories that identify how job insecurity and job demands affect employee behavior. The Job Demands-Resources (JD-R) theory by (Demerouti et al. (2009) suggests that employees facing high job demands and a lack of resources to cope with them are more likely to experience stress, which in turn increases the likelihood of them engaging in presenteeism. According to this theory, presenteeism is a response to the imbalance between job demands and an individual's ability to cope with those demands.

The Job Demands-Resources (JD-R) theory introduced by Bakker and Demerouti provides a useful conceptual framework for understanding the relationship between job demands and the resources available to manage those demands. According to this theory, high job demands, such as excessive workload and pressure to meet targets, can lead to stress and decreased employee well-being. At the same time, a lack of resources, such as social support or control over one's work, can exacerbate this condition, ultimately leading to presenteeism (Bakker & Demerouti, 2007). Further research has shown that when employees feel they lack sufficient resources to cope with their job demands, they are more likely to experience a decline in performance even while remaining present at work.

Job insecurity also plays a significant role in driving presenteeism. Employees who fear losing their jobs tend to remain present even when they are in less-than-optimal conditions. Job insecurity can increase psychological stress and reduce employees' emotional well-being, which then contributes to a decline in their performance and health. High job insecurity, in turn, increases the likelihood that employees will engage in presenteeism, as they feel compelled to remain present to avoid the risk of job termination.

Previous studies have examined presenteeism in healthcare, education, and office-based work settings; however, limited empirical attention has been given to manual factory workers, particularly cigarette factory workers who face repetitive physical tasks, production targets, time pressure, and employment insecurity. This gap is important because manual factory workers may experience presenteeism differently from professional or office-based workers due to their limited task autonomy, economic dependence on daily work continuity, and higher vulnerability to job loss. Therefore, examining presenteeism among cigarette factory workers provides a more

specific understanding of how job insecurity and job demands operate in labor-intensive industrial settings.

Additionally, the Conservation of Resources (COR) theory offers an additional relevant perspective for understanding presenteeism. According to this theory, individuals strive to maintain and manage important resources such as physical energy, time, social support, and control over their work. When employees feel that their resources are threatened or depleted by high job demands or job insecurity, they may choose to remain present even when their physical or mental condition is compromised. Research supporting the COR theory indicates that work stress related to job insecurity and excessive job demands can damage an individual's well-being and increase the likelihood of presenteeism.

III. RESEARCH METHOD

This study employed a quantitative correlational design because the main objective was to examine the statistical relationships among measurable psychological and work-related variables, namely job insecurity, job demands, and presenteeism. Quantitative research is appropriate when researchers aim to test relationships among variables using numerical data collected through structured instruments and analyzed with statistical procedures (Lim, 2025). Respondents were recruited using accidental sampling, which is a form of non-probability convenience sampling in which participants are selected based on accessibility, availability, and willingness to participate during the data collection period (Etikan, 2016). The use of validated measurement scales was intended to ensure that each construct was assessed using theoretically grounded and psychometrically acceptable indicators, since validity and reliability are essential requirements in scale-based behavioral and health-related research (Boateng et al., 2018). Before hypothesis testing, the dataset was screened to identify incomplete responses, missing answers, patterned responses, and other forms of low-quality or careless responding, because such responses may threaten the accuracy of statistical estimates and reduce the credibility of survey-based findings (Curran, 2016; Goldammer et al., 2020). Therefore, the exclusion of invalid responses was conducted as a data-quality control procedure rather than as an attempt to manipulate the distribution of the data or force the fulfillment of normality assumptions.

To collect the necessary empirical data, this study employed three psychological measurement scales that had previously undergone validity and reliability testing to ensure their suitability for measuring the constructs examined in the research. The use of validated and reliable instruments was considered essential because the study focused on psychological and work-related variables that cannot be observed directly, namely job insecurity, job demands, and presenteeism. Each scale was designed to capture specific aspects of workers' perceptions, experiences, and behavioral tendencies in the workplace, particularly within the context of cigarette factory workers who are exposed to repetitive tasks, production targets, and employment-related uncertainty.

The first instrument used in this study was the job insecurity scale. This scale was developed to measure the extent to which workers experience uncertainty, anxiety, and concern regarding the continuity and stability of their employment. The indicators in this scale reflect workers' fear of losing their jobs, uncertainty about future employment, perceived threats to job continuity, anxiety about employment status, and concern over possible income loss due to unstable work conditions. The job insecurity scale obtained a Cronbach's Alpha reliability coefficient of 0.904, which indicates excellent internal consistency. This means that the items within the scale

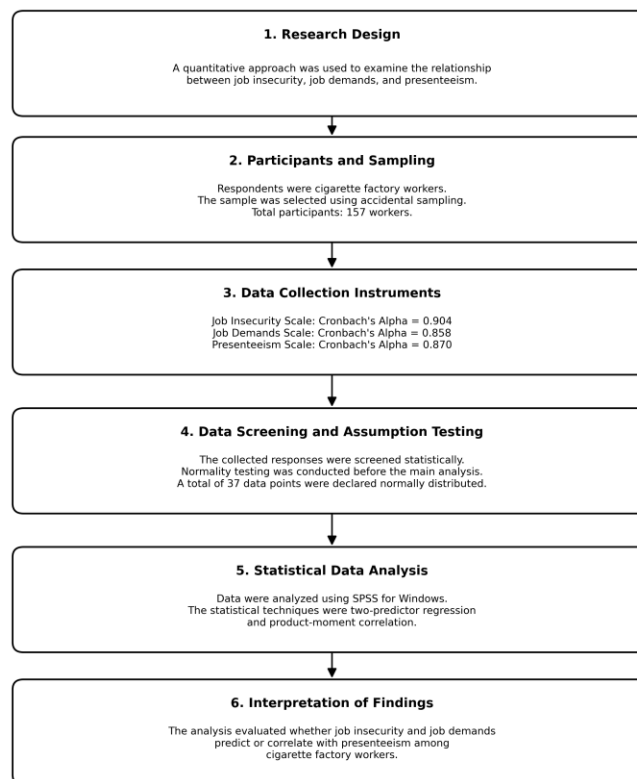
consistently measure the same construct and are highly reliable for assessing workers' perceived job insecurity.

The second instrument was the job demands scale, which was used to assess the level of work demands perceived by cigarette factory workers. This scale measures various forms of occupational pressure, including workload, time pressure, pressure to achieve production targets, physical demands, repetitive work activities, and psychological pressure related to job responsibilities. In the context of factory work, job demands are particularly relevant because workers are often required to maintain speed, accuracy, endurance, and consistency throughout the working day. The job demands scale showed a Cronbach's Alpha value of 0.858, indicating good reliability. This reliability value suggests that the items in the scale are sufficiently consistent in measuring workers' perceptions of the demands imposed by their jobs.

The third instrument used in this study was the presenteeism scale. This scale was designed to measure the tendency of workers to remain physically present at work despite experiencing physical or psychological health problems that may reduce their work effectiveness. The indicators of presenteeism include reduced work performance, difficulty concentrating, physical or psychological discomfort while working, decreased productivity, and the tendency to continue working even when unwell. The presenteeism scale obtained a Cronbach's Alpha reliability coefficient of 0.870, which also indicates good internal consistency. Therefore, this scale can be considered reliable for measuring the extent to which workers engage in presenteeism behavior.

Research Methodology Flowchart

Presenteeism among Cigarette Factory Workers in relation to Job Insecurity and Job Demands



Variables: Job Insecurity (X1) and Job Demands (X2) → Presenteeism (Y)

Figure 1. Research Step

Data collection was conducted using a structured questionnaire administered to selected cigarette factory workers who met the study criteria. Before questionnaire distribution, respondents received standardized information regarding the purpose of the study, voluntary participation, and instructions for completing each item accurately. The questionnaire was organized into three sections measuring job insecurity, job demands, and presenteeism. Job insecurity was conceptualized as workers' perceived threat to the continuity and stability of employment, while job demands referred to work-related conditions requiring sustained physical, cognitive, or psychological effort. Presenteeism was defined as the tendency to remain present at work despite health-related limitations or reduced functional capacity. This operationalization is consistent with contemporary occupational health research, which links perceived employment insecurity, demanding work conditions, and attendance behavior under impaired health or reduced work capacity (Lohaus & Habermann, 2019; Shoss, 2017).

The collected data were analyzed using SPSS for Windows through a sequential statistical procedure. First, data screening was performed to ensure that the responses were complete, consistent, and appropriate for inferential analysis. The normality assumption was examined using the Kolmogorov–Smirnov test, supported by inspection of distributional patterns where necessary, while linearity testing was conducted to confirm whether the relationships among job insecurity, job demands, and presenteeism followed a linear pattern. After the assumptions were considered acceptable, Pearson's product-moment correlation was applied to examine the direction and strength of the bivariate relationships between each independent variable and presenteeism. A two-predictor regression analysis was then conducted to determine the simultaneous contribution of job insecurity and job demands to presenteeism. The interpretation of the results was based on the correlation coefficient, coefficient of determination, and significance level, with $p < 0.01$ indicating a statistically significant relationship. This analytical procedure is consistent with recommendations for correlational and regression-based research, particularly when the aim is to examine the magnitude, direction, and predictive contribution of relationships among continuous variables (H.-Y. Kim, 2019; Knief & Forstmeier, 2021; Pallant, 2020; Schober et al., 2018).

Data were collected using three self-report psychological scales measuring presenteeism, job insecurity, and job demands. The presenteeism scale was developed to assess workers' tendency to remain at work despite experiencing physical or psychological health problems that could impair their work functioning. Conceptually, presenteeism refers to attending work while ill and has been associated with consequences for individual well-being and organizational productivity. Therefore, the scale indicators included reduced work effectiveness, difficulty maintaining concentration, physical or psychological discomfort while working, decreased productivity, and the tendency to continue working despite being unwell.

The job insecurity variable was measured using a psychological scale designed to assess workers' perceived uncertainty regarding the continuity and stability of their employment. Job insecurity is commonly understood as a perceived threat to the continuation and stability of one's current employment, involving both cognitive evaluations of employment uncertainty and affective concerns about possible job loss (Shoss, 2017). In this study, the indicators included fear of job loss, uncertainty about future employment, perceived threat to job continuity, anxiety regarding employment status, and concern about potential income loss due to employment instability. A higher score indicated a higher level of perceived job insecurity among cigarette factory workers.

The job demands variable was measured using a scale constructed to assess workers' perceived workload and occupational pressure. In line with the Job Demands–Resources theory, job demands refer to aspects of work that require sustained physical, psychological, or cognitive effort and may therefore create physiological or psychological strain when demands are excessive. The indicators of this scale included workload, time pressure, pressure to meet production targets, physical demands, repetitive work activities, and psychological pressure arising from work responsibilities. A higher score indicated that workers perceived greater occupational demands in their daily work.

Each item in the three scales was scored using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The total score for each variable was obtained by summing all item scores within the corresponding scale. Higher total scores indicated higher levels of presenteeism, job insecurity, and job demands. The possible score range for each scale depended on the number of valid items retained after the item validity test. Therefore, the score range was calculated by multiplying the number of valid items by the lowest and highest Likert scores. For example, if a scale consisted of 20 valid items, the possible total score range would be 20–100.

Table 1. Research Instruments

Variable	Instrument	Indicators	Number of Items	Score Range	Reliability
Presenteeism	Presenteeism scale	Reduced work effectiveness, difficulty concentrating, discomfort while working, decreased productivity, working while unwell	18 items	18–90	$\alpha = 0.870$
Job insecurity	Job insecurity scale	Fear of job loss, employment uncertainty, perceived threat to job continuity, anxiety about employment status	17 items	17–85	$\alpha = 0.904$
Job demands	Job demands scale	Workload, time pressure, production target pressure, physical demands, repetitive tasks	16 items	16–80	$\alpha = 0.858$

The presenteeism scale consisted of 18 items with a possible score range of 18–90. The job insecurity scale consisted of 17 items with a possible score range of 17–85. Meanwhile, the job demands scale consisted of 16 items with a possible score range of 16–80. All items were scored using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Higher scores indicated higher levels of presenteeism, job insecurity, and job demands. The reliability coefficients showed that all instruments had good to excellent internal consistency, with Cronbach's Alpha values of 0.870 for presenteeism, 0.904 for job insecurity, and 0.858 for job demands.

Before the instruments were used for hypothesis testing, item validity and reliability were examined. Item validity was assessed using corrected item-total correlation to determine whether each item adequately represented the construct being measured. An item was considered valid when the corrected item-total correlation coefficient was greater than 0.30. Items with coefficients below this criterion were reviewed and excluded from the final scale when necessary. Reliability was examined using Cronbach's Alpha, with a coefficient of 0.70 or higher

considered acceptable for psychological measurement. The reliability analysis showed that the job insecurity scale had a Cronbach's Alpha coefficient of 0.904, the job demands scale had a Cronbach's Alpha coefficient of 0.858, and the presenteeism scale had a Cronbach's Alpha coefficient of 0.870. These values indicate that all three instruments had good to excellent internal consistency.

The reliability and validity of the instruments were assessed before hypothesis testing to ensure the adequacy of the measurement model. Reliability was examined using Cronbach's Alpha, which is commonly used to evaluate the internal consistency of multi-item research instruments (Taber, 2018). The results showed that the job insecurity scale obtained a Cronbach's Alpha value of 0.904, the job demands scale obtained a value of 0.858, and the presenteeism scale obtained a value of 0.870. These values indicate satisfactory to strong internal consistency, suggesting that the items within each scale consistently measure their respective constructs. However, because internal consistency alone does not establish construct validity, the validity assessment was also conducted by examining whether the items were theoretically aligned with the conceptual dimensions of job insecurity, job demands, and presenteeism (Clark & Watson, 2019). The job insecurity items were developed to reflect cognitive and affective concerns regarding employment continuity, consistent with contemporary psychometric validation of the Job Insecurity Scale (Llosa et al., 2023). The job demands items were aligned with psychosocial work-environment measurement principles, particularly the assessment of workload, work pace, and occupational pressure within validated psychosocial risk instruments (Berthelsen et al., 2020; Dutheil et al., 2022). Meanwhile, the presenteeism items were constructed to capture the condition of attending work despite health-related limitations that may reduce work functioning and productivity, consistent with recent conceptual and empirical work on the health-performance perspective of presenteeism (Biron et al., 2022; Karanika-Murray & Biron, 2020).

Overall, the statistical procedure was designed to ensure that the analysis was conducted systematically and in accordance with the assumptions of parametric testing. The use of normality and linearity tests strengthened the appropriateness of Pearson's product-moment correlation and multiple regression analysis. Furthermore, the high Cronbach's Alpha values provided evidence of strong internal consistency, while the validity assessment ensured that the measurement items were conceptually grounded in established theoretical and psychometric frameworks. These procedures provide a stronger methodological basis for interpreting the relationships between job insecurity, job demands, and presenteeism among cigarette factory workers.

IV. RESULTS AND DISCUSSION

Item validity was examined using corrected item-total correlation. An item was considered valid when its corrected item-total correlation coefficient was greater than the minimum criterion of 0.30. Items with coefficients below 0.30 were reviewed and, if necessary, excluded from the final analysis. Reliability was assessed using Cronbach's Alpha, with a coefficient of 0.70 or higher considered acceptable for psychological measurement. The reliability analysis showed that the job insecurity scale had a Cronbach's Alpha of 0.904, the job demands scale had a Cronbach's Alpha of 0.858, and the presenteeism scale had a Cronbach's Alpha of 0.870, indicating good to excellent internal consistency.

Pearson product-moment correlation was used because the study aimed to examine the direction and strength of the linear relationship between two continuous variables, namely job insecurity and presenteeism, as well as job demands and presenteeism. This analysis was

considered appropriate because the data met the assumptions of normality and linearity. Furthermore, two-predictor regression analysis was used to examine the simultaneous contribution of job insecurity and job demands to presenteeism. This method was selected because the study involved two independent variables and one dependent variable, allowing the researchers to determine the extent to which both predictors jointly explained variance in presenteeism.

A total of 157 questionnaires were distributed to cigarette factory workers. After data screening, only 37 responses were included in the final analysis because they met the predetermined eligibility criteria for complete and consistent responses. Responses were excluded when they contained missing answers, patterned responses, incomplete scale sections, or response errors that could reduce data quality. The exclusion process was conducted before hypothesis testing and was not performed solely to force the data to meet normality assumptions. After the final dataset was obtained, assumption testing was conducted, including normality and linearity tests, to determine the appropriateness of parametric analysis.

The results of the normality calculation test on the presenteeism variable (Y) showed a value of $P = 0.051$ ($p > 0.05$) and $K-SZ = 0.144$. Then, on the job insecurity variable, a value of $p = 0.125$ ($p > 0.05$) was shown, and the result of $K-SZ = 0.129$, while the normality test on the job demands variable (X2) obtained $p = 0.200$ ($p > 0.05$) and the result of $K-SZ = 0.144$.

The normality test showed that all research variables were normally distributed. The presenteeism variable obtained a significance value of 0.051 with $K-SZ = 0.144$, job insecurity obtained a significance value of 0.125 with $K-SZ = 0.129$, and job demands obtained a significance value of 0.200 with $K-SZ = 0.114$. Since all significance values were greater than 0.05, the data were considered normally distributed. Furthermore, the linearity test indicated that the relationship between presenteeism and job insecurity was linear ($F = 1.669$; $p = 0.148$), and the relationship between presenteeism and job demands was also linear ($F = 1.968$; $p = 0.090$). Because the significance values were above 0.05, both relationships met the linearity assumption and were suitable for further parametric testing.

The connection between presenteeism and job insecurity is linear, as evidenced by the significance of $p = 0.148$ ($p > 0.05$) and the linear F value of 1.669. Similarly, the connection between presenteeism and job demands is also linear, with a significance of $p = 0.090$ ($p > 0.05$) and the linear F value of 1.968. After completing the linearity test, the researcher proceeded with a two-predictor regression analysis to test the main hypothesis. The results of the main hypothesis test are as follows.

Table 2. Analysis Hypothesis Tests

No.	Relationship Between Variables	R	R ²	Sig. (p)
1	Job Insecurity and Job Demands with Presenteeism	0.647	0.418	0.000
2	Job Insecurity with Presenteeism	0.629	0.396	0.000
3	Job Demands with Presenteeism	0.546	0.298	0.000

After the assumptions were fulfilled, hypothesis testing was conducted using two-predictor regression analysis and Pearson product-moment correlation. The regression analysis showed that job insecurity and job demands jointly had a significant relationship with presenteeism, with a multiple correlation coefficient of $R = 0.647$ and a coefficient of determination of $R^2 = 0.418$ ($p < 0.001$). This result indicates that job insecurity and job demands together explained 41.8% of the variance in presenteeism among cigarette factory workers.

The first minor hypothesis test showed that job insecurity had a significant positive relationship with presenteeism ($r = 0.629$; $p < 0.001$). This means that the higher the workers' perceived job insecurity, the higher their tendency to engage in presenteeism. The second minor

hypothesis test revealed that job demands also had a significant positive relationship with presenteeism ($r = 0.546$; $p < 0.001$), indicating that higher job demands were associated with a stronger tendency for workers to remain at work despite being physically or psychologically unwelcome.

Based on the product-moment test results for the relationship between job demands and presenteeism, the correlation coefficient between the two variables (r_{xy}) was 0.546, with a p -value of 0.000 ($p < 0.01$). This indicates a very significant positive relationship between job demands and presenteeism. Therefore, the hypothesis stating that there is a positive relationship between job demands and presenteeism is accepted, with an effective contribution of 29.8%. These results show that the higher the level of job demands perceived by cigarette factory workers, the more likely they are to exhibit presenteeism behavior. Conversely, the lower the perceived job demands, the lower the level of presenteeism behavior.

Presenteeism refers to a work-related condition in which employees continue to attend work despite experiencing physical or psychological health problems that may justify rest or sickness absence. This condition does not merely indicate physical presence at the workplace, but also reflects reduced work functioning, impaired concentration, lower task completion capacity, and decreased productivity due to health-related limitations (Homrich et al., 2020; Karanika-Murray & Biron, 2020; Patel et al., 2023). In this sense, presenteeism can be understood as a health-performance issue, because employees remain engaged in work activities while their health (Karanika-Murray & Biron, 2020) condition constrains the intensity, quality, or effectiveness of their performance. One important work-related factor that may contribute to presenteeism is job insecurity. Job insecurity refers to employees' perceived uncertainty and concern regarding the continuity of their employment, income, and future work stability. As a psychosocial stressor, job insecurity may increase psychological strain and encourage employees to remain present at work even when they are unwell, particularly when absence is perceived as a potential threat to job continuity (Abdul Jalil et al., 2023; J.-H. Kim et al., 2020). Therefore, in the context of cigarette factory workers, job insecurity may function as an occupational pressure that strengthens presenteeism behavior by making employees feel compelled to maintain attendance despite health-related limitations.

The first minor hypothesis test, namely the correlation analysis between job insecurity and presenteeism, obtained the correlation coefficient between the two variables (r_{xy}) of 0.629 with a p value of 0.000 ($p < 0.01$), indicating that there is a very significant positive relationship between job insecurity and presenteeism, so that the hypothesis that states there is a positive relationship between job insecurity and presenteeism is accepted. High perceived job insecurity can contribute to presenteeism because employees may feel pressured to attend work even when sick to protect their employment status. Recent empirical studies show that job insecurity is positively associated with sickness presenteeism, suggesting that workers who fear job loss are more likely to remain physically present at work despite health limitations (J.-H. Kim et al., 2020; Schmidt & Pförtner, 2020).

Previous empirical findings support the assumption that job insecurity has a significant positive association with presenteeism. In a study examining the effects of job insecurity, job demands, and health issues on presenteeism among employees in a Malaysian government-linked company, job insecurity was found to have the strongest and most significant relationship with presenteeism compared with the other predictors. The study reported a strong positive correlation between job insecurity and presenteeism, with a correlation coefficient of $r = 0.703$ and $p < 0.01$, indicating that higher perceived job insecurity was associated with a greater

tendency among employees to continue attending work despite being in a suboptimal health or functional condition (Sharkawi, 2021). This finding is consistent with broader evidence showing that employees who perceive their employment as insecure are more likely to engage in sickness presenteeism, partly because workplace attendance may be viewed as a strategy to protect job continuity and avoid negative employment consequences (J.-H. Kim et al., 2020; Schmidt & Pförtner, 2020).

Second minor hypothesis test, namely the relationship between job demands and presenteeism, shows a result (r_{xy}) of 0.546 with a p value of 0.000 ($p < 0.01$), indicating that there is a very significant positive relationship between job demands and presenteeism, so that the hypothesis stating that there is a positive relationship between job demands and presenteeism is declared accepted. The results indicate that higher perceived job demands among cigarette factory workers are associated with higher levels of presenteeism. Conversely, when perceived job demands are lower, employees are less likely to engage in presenteeism behavior. In the Job Demands–Resources perspective, job demands refer to physical, cognitive, and emotional aspects of work that require sustained effort and may produce physiological or psychological costs when they exceed employees’ available resources (Bakker & Demerouti, 2017). In the context of cigarette factory workers, these demands may include repetitive tasks, production targets, time pressure, physical workload, and sustained concentration during work activities. High job demands may increase fatigue, reduce recovery opportunities, and encourage workers to remain present despite health limitations, particularly when work tasks are perceived as urgent or difficult to postpone. Empirical evidence shows that job demands are associated with sickness presenteeism and that increased job demands may correspond with higher presenteeism even when sickness absence decreases (Aronsson et al., 2021). This finding is also consistent with research based on the job demand-control-support model, which shows that job-demand profiles are significantly related to presenteeism among wage workers (Min & Hong, 2023). Therefore, high work demands can be understood as an occupational pressure that increases the likelihood of presenteeism by intensifying fatigue, workload pressure, and the perceived obligation to continue working despite suboptimal health conditions.

Empirical evidence supports a significant positive relationship between job demands and presenteeism (Aronsson et al., 2021; McGregor et al., 2016). Higher job demands may increase the likelihood that employees continue working despite illness because heavy workloads, time pressure, and role responsibilities can create a perceived obligation to remain present at work (Aronsson et al., 2021; Gillet et al., 2020). This finding is consistent with the Job Demands–Resources perspective, which explains that excessive work demands may deplete employees’ physical and psychological resources and increase the risk of health-related work impairment (McGregor et al., 2016). Therefore, in the context of cigarette factory workers, high job demands may strengthen presenteeism behavior by increasing fatigue, work pressure, and the perceived difficulty of being absent from work despite illness.

Descriptive analysis related to job insecurity, job demands in presenteeism, and cigarette workers working in factories was analyzed by grouping into five assessment categories, including very high to very low.

Table 3. Categorization of Presenteeism Variables

Variable	Category	Interval	Frequency	Percentage
Presenteeism	Very High	$X \geq 88$	4	10.8%
Presenteeism	High	$86 \leq X \leq 72$	16	43.2%
Presenteeism	Moderate	$84 \leq X \leq 86$	14	37.9%
Presenteeism	Low	$82 \leq X \leq 84$	3	8.1%

Presenteeism	Total		37	100%
Job Insecurity	Very High	$X \geq 83$	4	10.8%
Job Insecurity	High	$80 \leq X \leq 83$	14	37.9%
Job Insecurity	Moderate	$78 \leq X \leq 80$	9	24.3%
Job Insecurity	Low	$75 \leq X \leq 78$	10	27.0%
Job Insecurity	Total		37	100%
Job Demands	Very High	$X \geq 80$	4	10.8%
Job Demands	High	$77 \leq X \leq 80$	14	37.9%
Job Demands	Moderate	$74 \leq X \leq 77$	13	35.1%
Job Demands	Low	$72 \leq X \leq 74$	4	10.8%
Job Demands	Very Low	$X \leq 74$	2	5.4%
Job Demands	Total		37	100%

Based on the calculation results presented in the table, the categorization of the presenteeism variable among 37 respondents showed that 4 respondents (10.8%) were in the very high category, 16 respondents (43.2%) were in the high category, 14 respondents (37.9%) were in the moderate category, and 3 respondents (8.1%) were in the low category. These findings indicate that the level of presenteeism among cigarette workers was predominantly in the high category, represented by 16 respondents, or 43.2% of the total sample.

Based on the categorization results for the job insecurity variable, 4 respondents (10.8%) were classified in the very high category, 14 respondents (37.9%) in the high category, 9 respondents (24.3%) in the moderate category, and 10 respondents (27.0%) in the low category. Therefore, it can be concluded that job insecurity among cigarette workers was mostly found in the high category, with 14 respondents, or 37.9% of the sample.

Furthermore, the categorization results for the job demands variable showed that 4 respondents (10.8%) were in the very high category, 14 respondents (37.9%) were in the high category, 13 respondents (35.1%) were in the moderate category, 4 respondents (10.8%) were in the low category, and 2 respondents (5.4%) were in the very low category. These results suggest that job demands among cigarette workers were also predominantly in the high category, with 14 respondents, or 37.9% of the total respondents.

Table 4. Summary of Main Statistical Results

Analysis	Variables	Coefficient	R ² / Contribution	Sig.	Interpretation
Multiple Regression	Job Insecurity + Job Demands → Presenteeism	R = 0.647	0.418 (41.8%)	p < 0.001	Significant positive relationship
Pearson Correlation	Job Insecurity → Presenteeism	r = 0.629	0.396 (39.6%)	p < 0.001	Significant positive relationship
Pearson Correlation	Job Demands → Presenteeism	r = 0.546	0.298 (29.8%)	p < 0.001	Significant positive relationship

Table 4 presents the summary of the statistical analysis examining the relationship between job insecurity, job demands, and presenteeism. The multiple regression analysis showed that job insecurity and job demands were jointly associated with presenteeism, with a correlation coefficient of R = 0.647 and a coefficient of determination of R² = 0.418. This indicates that both predictors collectively explained 41.8% of the variance in presenteeism, while the remaining 58.2% may be influenced by other factors not examined in this study. The significance value of p < 0.001 indicates that this relationship was statistically significant. Further Pearson correlation analysis showed that job insecurity had a significant positive relationship with presenteeism (r = 0.629; R² = 0.396; p < 0.001), suggesting that workers with higher levels of perceived job insecurity were more likely to engage in presenteeism. Similarly, job demands were also positively and significantly related to presenteeism (r = 0.546; R² = 0.298; p < 0.001), indicating

that higher perceived job demands were associated with a greater tendency to continue working despite poor physical or psychological conditions. Overall, these findings demonstrate that job insecurity showed a stronger relationship with presenteeism than job demands, although both variables were significant predictors of presenteeism among cigarette factory workers.

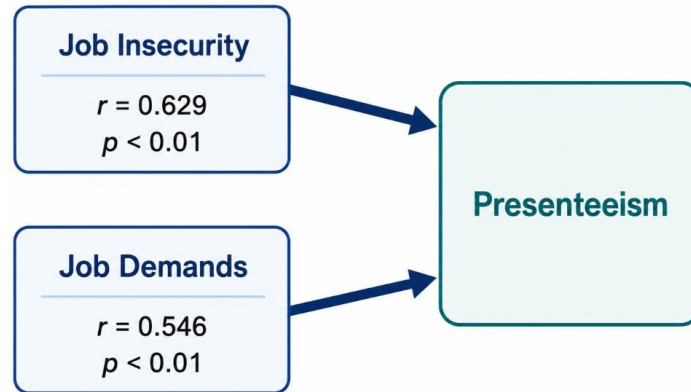


Figure 2. Visual Model of the Relationship Between Job Insecurity, Job Demands, and Presenteeism

The Results section has been reorganized into a more structured format consisting of assumption testing, hypothesis testing, descriptive findings, and visual interpretation. In addition, a summary table and a visual model have been added to clearly illustrate the relationships between job insecurity, job demands, and presenteeism, thereby improving the clarity and readability of the findings.

Overall, the three research variables presenteeism, job insecurity, and job demands show a dominant tendency toward the high category. These findings indicate that most cigarette workers in this study experience a high level of work attendance that is not optimal, job insecurity, and relatively high job demands.

V. CONCLUSION

This study aimed to examine the relationship between job insecurity, job demands, and presenteeism among cigarette factory workers. The results indicated a significant positive relationship between job insecurity, job demands, and presenteeism. Specifically, job insecurity and job demands were found to have a substantial influence on presenteeism behavior. The analysis showed that workers experiencing high levels of job insecurity and job demands were more likely to exhibit presenteeism, with a significant percentage of respondents reporting higher levels of presenteeism behavior. These findings emphasize the need for organizations to address these factors to improve employee well-being and reduce presenteeism.

Moreover, the study found that job insecurity and job demands were predominantly categorized as high among the respondents, which directly contributed to increased presenteeism. As most of the workers experienced high job insecurity and high job demands, it became evident that these conditions lead to suboptimal work attendance and performance, which can eventually harm both individual and organizational productivity. Therefore, organizations need to implement strategies that mitigate job insecurity, such as enhancing job security and providing more control over job demands to reduce the negative effects on employee performance and health.

However, this study also has limitations that should be considered. First, the sample size of 37 respondents, while sufficient for the analysis, may not fully represent the larger population of cigarette factory workers, which limits the generalizability of the results. Second, the research

relied solely on self-reported data, which may introduce response biases. Future studies could benefit from using a larger and more diverse sample, as well as incorporating additional methods such as interviews or observational data to gain a more comprehensive understanding of presenteeism in the workplace. Lastly, the cross-sectional nature of this study limits the ability to draw conclusions about causal relationships between the variables, suggesting the need for longitudinal studies to explore these relationships over time.

This study also has methodological limitations. The use of accidental sampling limits the generalizability of the findings because respondents were selected based on availability and willingness to participate rather than through random sampling. Therefore, the results should be interpreted cautiously and may not fully represent all cigarette factory workers. Future studies are encouraged to use probability sampling, larger sample sizes, and longitudinal designs to strengthen external validity and causal interpretation.

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VII. SUPPORTING INFORMATION

Additional supporting information for this study is provided in the [Appendix](#) section. The supplementary materials are intended to strengthen the transparency, traceability, and reproducibility of the research process. These materials serve as complementary documentation and do not alter the main findings, statistical results, interpretations, or conclusions presented in this article. All essential information related to the research design, variables, instruments, data analysis procedures, and findings has been presented in the main body of the manuscript.

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