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Assessing Psychosocial Factors on Maintenance Employees with Safety Perspective: A Case Study of an Electrical Service Company



Abstract: - The increasing number of employees continuously exposed to psychosocial hazards can result in high absenteeism, employee turnover, low productivity, and increased work accidents. Efforts to improve occupational safety have typically focused on developing policies, equipment, and training to minimize physical risks; however, in recent years, attention has also shifted to psychosocial factors. This research was conducted to comprehensively analyze the psychosocial conditions of maintenance workers from electrical service companies in Indonesia. An online survey with 93 questions from COPSOQ III was conducted on 314 respondents who had worked for at least one year and were permanent employees at company X. The collected data will be tested for validity and reliability before being analyzed using descriptive statistics with the help of SPSS V25 software. It will then be classified by level using the gap analysis method. It was found that there were six psychosocial factors included in the mid-gap category, namely Cognitive Demands (X9), Work Pace (X12), Illegimate Task (X25), Role Conflict (X26), Work-Life Conflict (X31), and Insecurity over Working Condition (X32). Meanwhile, two psychosocial factors fall into the high-gap category, namely Control over Working Time (X17) and Job Insecurity (X33). Psychosocial factors in the high-gap category need to be a priority for improvement or intervention, considering that these factors can have a negative impact on work safety behavior, which can increase the number of work accidents.

Keywords: Psychosocial, Safety Behavior, COPSOQ III, Gap Analysis.

Introduction

On a global scale, the International Labor Organization (ILO) has been attentive to issues concerning psychosocial conditions, particularly in the workplace, since the 1980s. Its inauguration publication resulted from collaboration with the World Health Organization (WHO) in 1986, and it focused on identifying and controlling the losses that could be caused by the psychosocial conditions of employees in the workplace, more commonly known as psychosocial hazards.

Psychosocial hazards are described as having harmful impacts on employees' well-being through their observations and work experiences. Psychosocial factors refer to the psychological and social aspects of the work environment that influence workers' emotional and mental well-being. Factors related to psychosocial conditions in the workplace consist of work demands, work organization and work content, personality, interpersonal relations and leadership, individual and work interactions, social capital, offensive behavior, and health and well-being [1].

Psychosocial factors are still rarely considered as an essential aspect that influences the performance of organizations and companies, even though identifying related psychosocial factors is essential to know objectively what happens and is felt by employees in each company. In Indonesia itself, the Republic of Indonesia Minister of Manpower Regulation no. 5 of 2018 [2], also states that psychological factors are one of the factors needed to measure and control a healthy work environment along with other factors such as physical, chemical, biological, and ergonomics. However, there are still some companies that do not include psychological factors as one of the essential factors that need to be considered to create a healthy work environment, whereas, the more employees experience psychological problems, such as experiencing unresolved pressure and stress due to their work, the lower the company performance, this condition can occur because employees with high levels of stress can result in high employee absenteeism and turnover, low employee productivity, decreased customer service, and increased work accidents [3]. This is supported by a study conducted by Kocatepe & Parlak [4], which states that employees who experience work accidents perceive psychosocial factors as crucial contributing elements to those accidents. Additionally, a study by Dwi Septerini & Erwandi [5] asserts that 51.8% of workplace accidents at Company PT. Y occurred due to the impact of psychosocial factors. Ginting and Febriansyah [3] also convey that a high level of workplace accidents indicates psychosocial stress within a company. Psychosocial factors are considered as a significant risk in the workplace, although occupational health and safety (K3) best practices continue to develop, accidents and health problems remain a major problem for management and employees [6].

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Efforts to improve occupational safety have typically focused on developing policies, equipment, and training to minimize physical risks, however, in recent years, attention has also shifted to psychosocial factors. Geller [7] said that if management wants to improve work safety in their company, they also need to identify external factors that influence the behavior of their workers, such as whether there is bullying in the workplace, which is included in the psychosocial hazards in the work environment.

This research was conducted on companies operating in the electricity sector in Indonesia. The selection of companies refers to the statement from an international standard, ISO 45003 [8], which states that one of the signs that workers or groups are exposed to psychosocial hazards is an increase in the number of work accidents in a company. It has been recorded that in the last ten years, work accidents at company X have tended to increase.

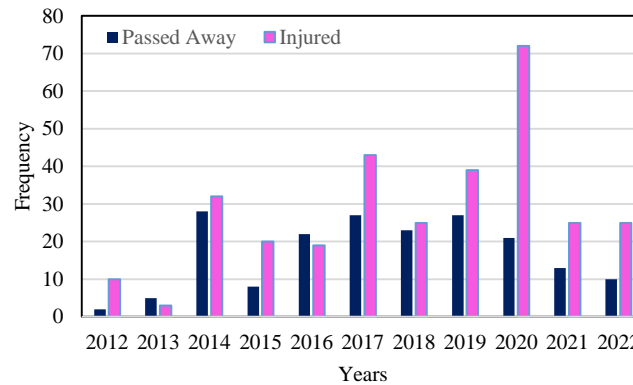


Fig. 1. Work accidents at company X in the last decade.

Based on the workplace accident data from the company's reports spanning from 2012 to 2022, accidents have occurred consistently each year, resulting in minor to severe injuries or even fatalities among employees and partner workers whose work is supervised by employees from Company X. In fact, these workplace accidents not only cause severe physical and/or mental harm to the workers but also have significant impacts on the company's management performance. These impacts include compensation costs for the victims, production halts, a decline in the company's reputation, and other factors that influence the company's growth in the medium and long term [9]. Moreover, the analysis concerning the working environment at Company X has yet to consider psychological factors as one of the elements to be identified, as stipulated in the Regulation of the Minister of Manpower of the Republic of Indonesia No. 5 of 2018. Consequently, the existing analysis of workplace accidents' causes needs to consider psychosocial factors as contributors to these accidents. Thus far, the identified workplace factors concerning the workers have been limited to physical elements such as radiation, vibration, noise, lighting, and biological factors. The execution of this research can serve as an initial step for the company to begin identifying the working environment with psychological factors as one of the considerations. Additionally, within academia, this research will contribute to a more comprehensive and holistic analysis of psychosocial factors among maintenance workers in the electrical service company, resulting in a sustainable, safe, and healthy working environment.

I. LITERATURE REVIEW

A. Occupational Safety and Health

Poor performance in maintaining occupational safety and health within a company can lead to financial and non-financial consequences. This phenomenon is related to the high number of lost working days, resulting in compensation expenses due to decreased company productivity. The total costs companies face due to accidents also include the costs of care, treatment, training to replace affected workers, and so on. Therefore, prioritizing occupational safety and health is not only an ethical obligation but also a good investment for the long-term development of a company. Companies can prevent potential financial and non-financial losses through policies and practices that support a safe working environment. According to Government Regulation of the Republic of Indonesia Number 50 of 2012 [10], Occupational Safety and Health (OSH) are all activities that guarantee and protect occupational safety and health through efforts to prevent work accidents and work-related diseases.

Meanwhile, according to the ILO [11] OSH is the science of anticipating, recognizing, evaluating, and controlling hazards arising in or from the workplace that may impair the health and well-being of workers, considering their potential impact on the surrounding community and the environment in general. OSH is a crucial aspect that must be managed and sustainably implemented across all companies. According to the Republic of Indonesia Law Number 1 of 1970 [12], there are three main objectives for implementing OSH:

- 1) Protect and ensure the safety of every worker and other people in the workplace.
- 2) Ensure that every production resource can be used safely and efficiently.
- 3) Enhancing national welfare and productivity.

The implementation can be achieved by creating programs that support the establishment of sustainable OSH conditions. OSH programs represent a system devised for workers and employers as a preventive effort to forestall workplace accidents and work-related illnesses. This involves recognizing potential factors that could lead to work accidents and illnesses due to the employment relationship within the work environment and taking anticipatory actions should such circumstances arise [13].

B. Psychosocial

Etymologically, the concept of psychosocial comprises two words: psycho and social. According to the Kamus Besar Bahasa Indonesia (KBBI), "psycho" or "psychic" pertains to matters related to the soul, spirit, and spirituality. Meanwhile, the term "social" refers to aspects associated with society. The word "social" depicts an individual's relationship with external entities (other individuals) in their surroundings. According to the Oxford English Dictionary [14], "psychosocial" is also defined as pertaining to the influence of social factors on an individual's thoughts or behavior, as well as the interconnection

The theoretical definition of psychosocial has also developed widely. Baron and Byrne [15] stated psychosocial as an approach to understanding the factors influencing individual behavior and thinking in certain social situations. On the other hand, psychosocial is an interaction of the work environment, organizational content, workers, abilities and needs, culture, and the work environment [16]. Therefore, a company's work and organizational environment must be physically, emotionally, and psychologically safe to form a positive psychosocial environment. In other words, stable psychosocial behavior can support individuals in optimizing their ability to think and manage emotions so they can behave positively and productively [3].

C. Psychosocial at Work Environment

The high dynamics in the workplace lead to changes in the work environment that employees must adapt to. Employees who can adapt effectively will experience the impacts of these environmental changes, such as technological advancements and numerous innovations. Conversely, employees who need help to adapt to a changing work environment may encounter obstacles and a decline in work productivity. Therefore, although changes in the work environment (such as technological advancements) are intended to streamline existing tasks, psychosocial issues still arise.

Factors such as restructuring, changes in job nature, workload, unsafe working conditions, and technological advancements can deteriorate employees' health, reduce organizational performance and motivation, increase dissatisfaction, or result in job turnover. The Ministry of Health of the Republic of Indonesia [17] states that symptoms resulting from psychosocial disturbances may include respiratory system disorders (such as asthma and bronchial spasms), skin issues (acne), endocrine gland disorders (hyperthyroidism, diabetes, and infertility), nervous system disorders (neurasthenia), eye disorders (glaucoma), gastrointestinal disorders (gastritis, peptic ulcers, diarrhea), and genitourinary disorders (menstrual disorders). Psychosocial hazards and their impacts are not always immediately apparent. Some psychosocial hazards, when occurring at low levels over an extended period, can accumulate and significantly affect psychological health. Other psychosocial hazards can lead to more immediate effects, such as a single event causing stress. In many instances, psychosocial hazards interact and combine, thereby creating risks of more severe hazards [18]. According to the Regulation of the Minister of Manpower of the Republic of Indonesia Number 5 of 2018 concerning Occupational Safety and Health in the Workplace [2], psychosocial hazards present in the work environment include:

- 1) Ambiguity/uncertainty of roles.
- 2) Role conflict.
- 3) Excessive qualitative workload.
- 4) Excessive quantitative workload.
- 5) Career development.
- 6) Responsibility for others.

Workers who experience stress or depression can also experience cognitive reactions such as decreased concentration or work focus, limited perception, forgetfulness, low effectiveness in thinking, low ability to solve problems, and learning ability. As for behavioral changes, stress that occurs in workers can reduce work productivity, increase human error and work absenteeism [3]. If left unchecked, these impacts can certainly influence safety behavior and will result in work accidents. On the other hand, poor social relations between workers and work groups can reduce the level of team solidarity, allowing the company to fail to achieve the goals or targets that have been determined.

D. COPSOQ III

This study utilized the Copenhagen Psychosocial Questionnaire (COPSOQ) version III as a measurement instrument to identify existing psychosocial conditions. COPSOQ is a measurement tool designed to assess and develop psychosocial conditions in the workplace. COPSOQ can be used for two purposes: to assess work-related risks and health in the workplace. From 1995 to 2007, the Danish National Research Centre led by Tage S. Kristensen and Vilhelm Borg developed COPSOQ, and it continues to be further developed by the International

COPSOQ Network. Presently, COPSOQ has become one of the widely utilized measurement models for assessing psychosocial risks and has been cited in several key documents published by the World Health Organization (WHO) and the International Labour Organization (ILO). Additionally, COPSOQ has been recognized as a best practice by the European Union Occupational Safety and Health Agency (EU-OSHA) based on international-scale measurement outcomes. [19]. The COPSOQ instrument has been translated into 25 languages and has been used in over 40 countries worldwide. The psychosocial factors contained within COPSOQ are continuously evaluated and developed. Its development is based on changes occurring in the work environment, with COPSOQ III being the latest version. In summary, the latest version of COPSOQ (COPSOQ III) encompasses the operationalization of prominent workplace-related theories such as job demand-resources, demand-control, effort-reward, work-family conflict, and vitamin theory. The core items of COPSOQ cover psychosocial dimensions with a high overall level of acceptability. The items within COPSOQ III have been scientifically tested and proven capable of measuring psychosocial factors in the workplace, correlating with the health conditions of employees, both physical and mental. Furthermore, from an operational perspective, COPSOQ III provides valuable information for identifying workplace risk priorities and preventive measures.

According to the COPSOQ International Network (2021), COPSOQ III is divided into three versions: the short, middle, and long versions.

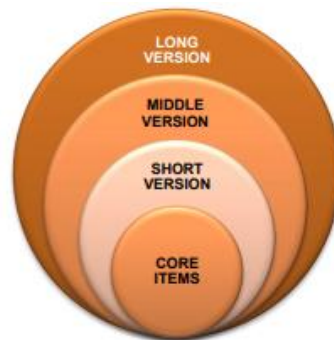


Fig. 2. COPSOQ III Configuration.

It should be noted that the core items are mandatory when adopting COPSOQ III, enabling the comparison of analysis results obtained internationally and longitudinally. Therefore, the core items within COPSOQ III cannot stand alone, and the addition of several other items is necessary for the use of the short, middle, or long versions. The rules for item usage in COPSOQ III can be seen in Table I.

TABLE I. COPSOQ III STRUCTURE.

Version	Scale and Items to be Used
Short	At least all core items are combined with several middle or long items.
Middle	At least, all core items and as many relevant middle and long items as possible are combined.
Long	At least all core items and as many intermediate items as possible along with long items that are relevant to the national context.

The short and middle versions of COPSOQ III differ in their scope of assessing workplace risks and organizational development objectives. Additionally, both versions can be used for scientific research purposes if desired. On the other hand, the long version of COPSOQ III is specifically designed to meet research needs and offers the opportunity for national-scale utilization as required within the national context. Therefore, the international COPSOQ network emphasizes the importance of validity studies that support the factors used in the national version. Typically, each national version will vary according to the conditions of companies within each country. Issues of validity and reliability of COPSOQ III on a national scale become considerations for each country to determine one version from each short, middle, and long version to clarify the relevant factors or items in COPSOQ III used on a national scale in their respective countries. This research utilized the long version of COPSOQ III as recommended by the COPSOQ International Network for research purposes and improvements within nationally scaled companies. COPSOQ III has been translated into Indonesian and has undergone validity and reliability testing involving 4091 employees from state-owned enterprises and private companies. Furthermore, the Indonesian version of COPSOQ III was discussed with members of the COPSOQ International Network in 2019, yielding results indicating its capability to measure expected psychosocial factors in line with the

international COPSOQ III across various business sectors.[3]. On the other hand, COPSOQ III has also undergone validation and reliability testing for the Malay language version [20]. According to their findings, COPSOQ III is deemed usable and reliable for identifying psychosocial conditions in the workplace in Malaysia as well as in other countries within the Asian region.

II. METHODS

The main objective of this study was to assess the psychosocial conditions among maintenance workers in a company operating in the electrical services sector. To evaluate these psychosocial conditions, the researcher employed a survey questionnaire method utilizing the COPSOQ III measurement instrument, comprising 45 psychosocial factors. A total of 93 questionnaire items were distributed online to employees of Company X, using a 5-point Likert scale, targeting respondents who have been employed for over a year and hold permanent positions within Company X.

This study employed descriptive statistical analysis using SPSS V.25 software, including the validation and reliability testing of the questionnaire used. Subsequently, the average values of each psychosocial factor will be categorized into three condition categories. The categorization was based on the reference from [21], initially comprising six categories, which were then simplified into three range categories following the recommended actions provided within those six-scale ranges. The assessment ranges are detailed in Table II.

TABLE II. PSYCHOSOCIAL CONDITION GAP ANALYSIS VALUE RANGES.

Range	Category	Action
< 1.5	Low	Maintained
1.6 - 2	Mid	Improved
2.1 - 4	High	Revamp

The conditions of the investigated psychosocial factors will be categorized into low, middle, and high categories to determine priorities in formulating and defining improvement measures.

III. RESULTS AND DISCUSSION

Based on the questionnaire distribution over ten days (in November 2023), a total of 357 respondents were collected. Out of the 357 respondents, 43 were excluded from this study for failing to correctly answer three confirmation questions that were given in the three sections of the online questionnaire, resulting in a total of 314 respondents used in this research. Before measuring and assessing the existing psychosocial conditions, validity and reliability tests were conducted to assess the instruments concerning the research subject.

A. Descriptive Statistics

Before filling out the provided questionnaire, respondents were asked to provide personal or demographic information such as gender, age, job position, and tenure.

According to Table III, most of the respondents were male, totaling 265 employees (84.4%), while 49 employees (15.6%) were female. Based on their job positions, 204 respondents (65%) held staff positions, 89 respondents (28.3%) were supervisors, and 21 respondents (6.7%) were managers. The most prevalent tenure among the respondents was 11-20 years, with 99 respondents (31.5%), followed by employees with a tenure of 6-10 years, comprising 73 individuals (23.2%) as the next most frequent group. Conversely, the least represented respondents had a tenure of 21-30 years, totaling 35 individuals (11.1%).

A total of 111 respondents (35.4%) were under 30 years old, while 71 employees (22.6%) were aged 31-35. Additionally, 34 employees (10.8%) were aged 36-40, 12 individuals (3.8%) were in the 41-45 age group, 24 employees (7.6%) were aged 46-50, and finally, respondents over 50 years old totaled 62 individuals (19.7%).

TABLE III. SUMMARY STATISTICS OF DEMOGRAPHIC PROFILE.

Respondent Profile	Category	N	%
Gender	Male	265	84.4
	Female	49	15.6
Age	< 30 years	111	35.4
	31-35 years	71	22.6

	36-40 years	34	10.8
	41-45 years	12	3.8
	46-50 years	24	7.6
	> 50 years	62	19.7
Job Position	Staff	204	65
	Supervisor	89	28.3
	Manager	21	6.7
Tenure	< 5 years	55	17.5
	6-10 years	73	23.2
	11-20 years	99	31.5
	21-30 years	35	11.1
	> 30 years	52	16.6

B. Validity and Reliability Test

The validity test was conducted to assess how accurately the measurement tool used (questionnaire) performed its measuring function or measured what it was supposed to measure [22]. If items in the questionnaire were invalid, they needed to be removed as they were deemed irrelevant, or the researcher could take corrective action by altering the meaning and sentence structure. A measurement tool is considered valid when the r -count $>$ r -table. The r -table value is determined based on the level of significance (α) used and the sample size (n) as the calculation of degrees of freedom (df) ($n-2$). In this study, there were 314 employees in the sample, and a significant level of 5% was used, resulting in a r -table of 0.1107. The validity test in this study utilized the Pearson correlation method. Reliability testing using the Cronbach Alpha (α) method is performed to assess the consistency of the measurement tool when the measurements are repeated over time on the same subjects. A measurement tool is considered reliable when the Cronbach Alpha (α) value $>$ 0.6 [22]. This aligns with the reference utilized by Ginting et al. [23] in their reliability study conducted across several companies in Indonesia. The validity and reliability tests conducted on 45 variables concerning psychosocial factors yielded a summary of results as presented in Table III.

TABLE III. RANGE OF GAP ANALYSIS IN PSYCHOSOCIAL CONDITION ANALYSIS.

Test	Number of Variables Passing the Test	Number of Variables Failing the Test	Variables Failing the Test
Validity	45	-	-
Reliability	43	2	- Demands for Hiding Emotions - Variation of Work

Table III shows that the validity and reliability tests conducted on 45 psychosocial factors revealed that most of the questionnaire items passed the assessment, indicating that the measurement tool is consistent and reliable. However, two variables did not pass the reliability test ($\alpha <$ 0.6), namely the Demands for Hiding Emotions (X11) and Variation of Work (X16) variables, with values of 0.476 and 0.183, respectively, signifying that the measurement tool for these dimensions lacks reliability and will be excluded from this study.

On the other hand, nine dimensions could not be reliably measured because each dimension only consisted of one question item. These dimensions include Illegitimate Task (X25), Unpleasant Teasing (X37), Threat of Violence (X38), Sexual Harassment (X39), Physical Violence (X40), Harassment in Social Media (X41), Gossip and Slander (X42), Conflict and Quarrels (X43), and Bullying (X44).

TABLE IV. PSYCHOSOCIAL CONDITION AT PT. X.

Dimensi	Variable	Mean	Reference	Gap	Category
Self-rated Health	X1	3.8	5	1.2	Low

Cognitive Stress	X2	2.3	1	1.3	Low
Somatic Stress	X3	2	1	1.0	Low
Sleeping Troubles	X4	2.1	1	1.1	Low
Stress	X5	2.2	1	1.2	Low
Burnout	X6	2.3	1	1.3	Low
Depressive Symptoms	X7	2.1	1	1.1	Low
Quantitative Demands	X8	2.1	5	1.1	Low
Cognitive Demands	X9	3	1	2.0	Mid
Emotional Demands	X10	2.5	1	1.5	Low
Work Pace	X12	3.1	1	1.9	Mid
Possibilities for Development	X13	3.9	5	1.1	Low
Meaning of Work	X14	4.3	5	0.7	Low
Influence at Work	X15	3.5	5	1.5	Low
Variation at Work	X17	2.9	5	2.1	High
Recognition	X18	3.8	5	1.2	Low
Leadership Quality	X19	3.9	5	1.1	Low
Predictability	X20	3.8	5	1.2	Low
Role Clarity	X21	4.3	5	0.7	Low
Social Support from Supervisors	X22	3.9	5	1.1	Low
Social Support from Colleagues	X23	3.9	5	1.1	Low
Sense of Community at Work	X24	4.2	5	0.8	Low
Illegimate Task	X25	2.8	1	1.8	Mid
Role Conflicts	X26	2.8	1	1.8	Mid
Job Satisfaction	X27	4	5	1.0	Low
Quality at Work	X28	4	5	1.0	Low
Work Engagement	X29	4.1	5	0.9	Low
Commitment to the Workplace	X30	4.3	5	0.7	Low
Work-Life Conflicts	X31	2.6	1	1.6	Mid
Insecurity over Working Condition	X32	3	1	2.0	Mid
Job Insecurity	X33	3.4	1	2.4	High
Horizontal Trust	X34	2.3	1	1.3	Low
Vertical Trust	X35	3.8	5	1.2	Low
Organizational Justice	X36	3.7	5	1.3	Low
Unpleasant Teasing	X37	4.4	5	0.6	Low
Threat of Violence	X38	4.9	5	0.1	Low
Sexual Harassment	X39	5	5	0.0	Low
Physical Violence	X40	5	5	0.0	Low
Harassment in Social Media	X41	5	5	0.0	Low
Gossip dan Slander	X42	4.8	5	0.2	Low
Conflicts and Quarrels	X43	4.9	5	0.1	Low
Bullying	X44	3.7	5	1.3	Low
Self-Efficacy	X45	4	5	1.0	Low

C. Psychosocial Condition

The psychosocial conditions among employees of Company X are portrayed through the calculated average values of each psychosocial factor. Subsequently, the gap values will be determined to classify them into three categories as shown in Table 4.3. The existing gap signifies the disparity between the actual and ideal conditions that should prevail. Sexual Harassment, Physical Violence, and Harassment in Social Media show a gap value of 0, indicating that these psychosocial hazards at Company X can be considered absent. Conversely, there are six psychosocial factors with gap values falling into the Middle category: Cognitive Demands (X9), Work Pace (X12), Illegimate Tasks (X25), Role Conflict (X26), Work-Life Conflict (X31), and Insecurity over Working Conditions (X32). Meanwhile, two psychosocial factors fall into the High Gap category: Control over Working Time (X17)

and Job Insecurity (X33). Factors categorized as high gaps need particular attention as they pose a higher risk of impacting the employees.

The first psychosocial factor in the high gap category is Control over Working Time (X17). In COPSOQ III, Control over Working Time is defined as an employee's ability to influence the surrounding work environment, such as determining break times, the length of workdays, or work schedules [1]. Several experts argue that quantity and control over working time are increasingly critical for employees to integrate, balance, or align work and non-work life [24], [25]. The lack of control over work timing could lead to the failure to complete assigned tasks. Moreover, if employees cannot schedule breaks during their work, it may make them feel trapped in their work and increase the likelihood of experiencing stress or depression [3]. Several studies have indicated that low control over work timing can increase the risk of workplace accidents [26], [27]. When employees lack sufficient autonomy in managing work schedules or tasks, leading to increased stress levels, fatigue, and lack of focus, this can contribute to decreased alertness and increased errors, impacting unsafe work behavior and ultimately elevating the risk of accidents in the workplace [28], [29]. Therefore, it is crucial to maintain adequate Control over Working Time among employees, as empowered or more in-control workers tend to exhibit better safety behaviors, engage more in safety management, and attempt to influence safety behaviors among their colleagues [30]. Control over Working Time shows a significant positive correlation with organizational justice [1], meaning it is determined not only by internal factors like individual abilities and authority but can also be influenced by external factors such as company policies and regulations.

The second high-gap psychosocial factor is Job Insecurity, which holds the highest gap value compared to other factors. In COPSOQ III, Job Insecurity is defined as an employee's psychological condition concerning job safety aspects, explaining the psychological state of employees characterized by anxiety about the risk of being terminated or the uncertainty of being re-employed if terminated [1]. Job insecurity negatively impacts psychological well-being, physical and mental health, employee engagement in the workplace, and overall company productivity [3]. Llosa et al. [31] also mentioned that job insecurity can significantly increase the risk of anxiety and depression disorders among employees. According to the Conservation of Resources (COR) theory, employees consistently try to maintain, protect, and build what they perceive as valuable resources. The potential or loss of these resources is considered a threat to them [32]. Consequently, employees tend to expend more resources in coping with feelings of threat [33], depleting their psychological resources [34]. In the context of diminished psychological resources, employees may struggle to cope with complex and changing work environments and hazardous events, reducing their compliance with safety regulations [35]. They also tend to decrease behaviors beneficial to the organization [36], such as safety behaviors. One of the initial field studies that specifically examined the relationship between job insecurity and safety, conducted by [37], found that employees' safety knowledge and motivation to comply with safety policies and procedures decrease as job insecurity increases. Consequently, reported safety compliance is adversely affected. Therefore, it is unsurprising that workers in less secure job security experience more accidents and injuries than those in relatively secure job roles [38].

IV. CONCLUSION & RECOMMENDATION

The gap analysis conducted revealed that at PT. X, six psychosocial factors fall into the middle gap category and two psychosocial factors fall into the high gap category. Psychosocial factors with high gap values should be a priority for improvement and intervention to prevent adverse impacts on employees. These two factors are Control over Working Time and Job Insecurity. Failure to address these factors promptly may lead to increased stress levels among employees, potentially reducing employees' safety behaviors and consequently increasing the occurrence of workplace accidents.

Furthermore, future research could conduct intervention analysis to manage psychosocial hazards through longitudinal or comparative studies to complement the current study. This would enable an evaluation of the effectiveness of the interventions undertaken. It would be advantageous for subsequent research to analyze psychosocial factors based on respondent demographics. This would provide further insights into which demographic characteristics might have a more significant impact and higher risk associated with exposure to psychosocial hazards in the workplace.

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