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THE EFFECT OF WORK SAFETY CLIMATE ON WORK SAFETY BEHAVIOR THROUGH WORK SAFETY MOTIVATION

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ABSTRACT

This study aims to analyze the influence of work safety climate on work safety behavior through work safety motivation as mediation. The study was conducted at the Asy-Syifa Sambi Boyolali General Hospital. The sample for this study was 130 respondents who worked at the hospital. Data collection uses a questionnaire. The analysis method used is path analysis with the stages of the inner and outer models on the Smart PIs analysis tool. The results of the final research questionnaire are valid and reliable. Based on the results of the analysis found, it can be explained that work safety climate has a significant positive effect on work safety behaviour directly. While indirectly work safety motivation mediates between work safety climate on work safety behaviour. Finally, work safety motivation has a significant positive effect on work safety behaviour.

Keywords: *work safety climate, work safety behavior, work safety motivation*

1. Introduction

The ability of a company to successfully achieve its goals depends greatly on its human resources (Heryati et al., 2019). In the process of achieving goals, the company must implement policies that can empower its employees. Poor occupational health and safety management can lead to occupational accidents. In addition to causing fatalities, occupational accidents also cause material losses, disrupt the service process, and damage the environment which will have a bad impact on society.

Hospitals are included in the criteria of workplaces with various hazards that have an impact on health. Not only for health workers who work in hospitals, but also for patients and hospital visitors. According to the World Health Organization (WHO, 2019), it is estimated that around one in ten hospital patients will be affected by medical negligence. The results of the report from the National Safety Council (NSC) in 2018 explained that the prevalence rate of accidents in hospitals was 41% higher than other industries.

The existence of good safety culture practices not only improves working conditions but also positively influences employee attitudes and behaviors related to safety. (Vinodkumar & Bhasi, 2010). In particular, a person's behavior is also at risk of causing accidents at work (Panuwatwanich et al., 2017). Behavior is an action shown by a person that can be compared with other people and the surrounding environment in general. The term *work safety behavior* is an action taken by people in an organization that is related to safety. Adi et al., (2021) said that work safety behavior is a representative welfare effort in the work environment through activities to build

and improve welfare in the workplace. *Work safety behavior* is a way for an individual not to cause problems in the work environment. Bad work behavior can trigger accidents in the workplace (Chen et al., 2021). So work safety behavior in the right individuals will improve work safety (Shen et al., 2017). According to Griffin and Neal in Kim et al. (2021) mentions several forms of *work safety behavior*, including the need to maintain safety and participation in safety at work.

Herno Della et al., (2020) explained that individuals who can comply with the rules or guidelines made by an organization can prevent work accidents and create a comfortable workplace by complying with safety rules. Safety participation refers to employee voluntary behavior in safety activities, such as helping coworkers when health problems occur, reminding each other to pay attention to safety while working, and avoiding activities that can endanger work safety (Kim et al., 2021). Therefore, improving work safety behavior is very important for every employee. The increase in *work safety behavior* explained by Mazzetti et al., (2020) is influenced by the presence of a *work safety climate*.

According to Adi et al., (2021) *work safety climate* is the result of observations and experiences related to policies, practices and procedures which then form behavior that prioritizes work safety values in a company or organization. *Work safety climate* represents general opinion regarding the rules, procedures and performance of the organization related to safety (Schwatka et al., 2019). Xue et al., (2020) said that developing a *work safety climate* in an organization will support the implementation of safety and

reduce work accidents. In addition, work safety climate also mediates worker safety motivation towards work safety behavior. Safety motivation can influence perceptions of safety climate, and perceptions of safety climate can influence safety behavior (Alhaadir et al., 2013) . Workers who perceive their workplace as safe and are motivated to comply with mandated safety regulations will experience fewer accidents (Kim et al., 2021) .

In its implementation, safety management practices are policies, strategies, procedures, and activities implemented or followed by the management of an organization that targets the safety of its employees. This is an important element that enables effective safety management (Vinodkumar & Bhasi, 2010) . According to Lisnanditha (2012), with the existence of a safety climate,

on workers' This triggers workers can

The author chose RSU Asy-Syifa Sambi Boyolali which is one of the public health service institutions that has tried to form work safety behavior for medical and non-medical personnel. However, the results of a survey of the director of RSU Asy-Syifa Sambi Boyolali, there are still workers who do not implement the safety standards that have been made and determined together. This is due to the lack of awareness of workers towards work safety behavior. This problem can result in work accidents or work-related diseases which will ultimately reduce the quality of welfare of workers at RSU Asy-Syifa Sambi Boyolali.

This study was conducted to determine the effect of work safety climate on work safety behavior with work safety motivation as an intervening variable at RSU Asy-Syifa Sambi Boyolali. Based on the literature review and

ts, the conceptual n be described as

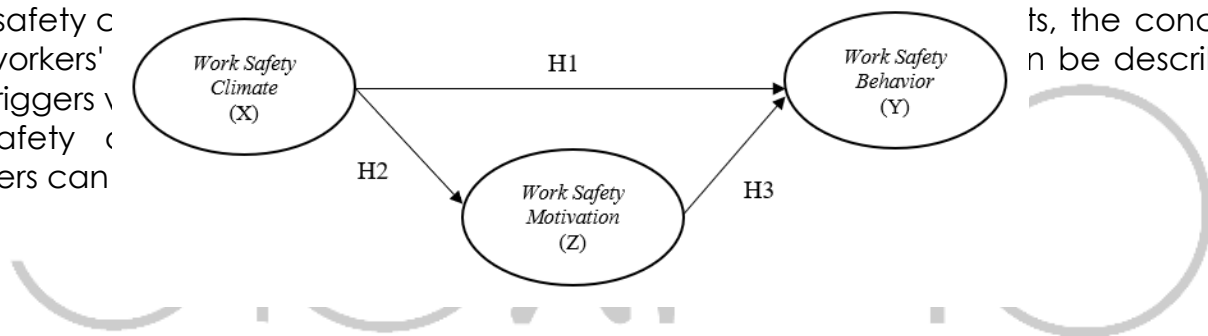


Figure 1 Conceptual Framework of Research

2. Literature Review / Theoretical Study

The Influence of Work Safety Climate on Work Safety Behavior

Safety climate is defined as employee safety perceptions that reflect their beliefs about safety priorities (Zohar & Polachek, 2014) . Perceptions influenced by safety climate are a reflection of employee behavior towards work safety (Hussainy, 2022) . The

emergence of employee perceptions of safety is influenced by safety climate . (Djastuti et al., 2020) . If the organizational safety climate is going well, employees will also show a commitment to safety which is indicated by individual safety behavior in the workplace (Hadi, 2020) .

The statement above can be proven by several previous researchers who discussed the effect of safety

climate on safety behavior. Mazzetti et al., (2020) proved that work safety climate can influence the increase in work safety behavior. In line with Nosary & Adiati (2021) who concluded that "Safety climate has a significant effect on safety behavior". In addition, Kim et al. (2021) also concluded that safety climate has a positive relationship with safety behavior. Based on the statement above, the researcher hypothesizes that:

H₁: Work safety climate berpengaruh positif terhadap work safety behavior
Pengaruh Work Safety Climate Terhadap Work Safety Motivation

Work safety climate represents the general opinion regarding the rules, procedures, and performance of an organization related to safety (Schwatka et al., 2019). Xue et al., (2020) said that developing a work safety climate in an organization will support the implementation of safety and reduce work accidents. In addition, work safety climate also mediates worker safety motivation towards work safety behavior. Safety motivation can influence perceptions of safety climate, and perceptions of safety climate can influence safety behavior (Alhaadir et al., 2013). Workers who perceive their workplace as safe and are motivated to comply with mandated safety regulations will experience fewer accidents (Kim et al., 2021).

Several previous researchers have found empirical evidence that there is a relationship between safety climate and safety climate. In 2000, Neal et al. concluded that safety climate has an effect on safety motivation. He also explained that safety climate can create worker perceptions of the climate and

conditions of work safety in the company that can be used as motivation for worker behavior so that they can work safely (Neal et al., 2000). In addition, Barbaranelli et al. (2015) also explained that safety climate can affect a person's motivation for safety. Based on the statement above, the researcher hypothesizes that:

H₂ : Work safety climate berpengaruh positif terhadap work safety motivation
Pengaruh Work Safety Motivation Terhadap Work Safety Behavior

Work safety behavior refers to an individual's behavior related to safety and compliance with safety regulations (Lee et al., 2019; Chen et al., 2021). While work safety motivation refers to an individual's willingness to do so and the values associated with the behavior (Barbaranelli et al., 2015). Referring to the theory of Neal & Griffin (2006) on safety motivation and safety behavior, Vinodkumar & Bhasi (2010) argue that safety compliance and participation (safety behavior) are created because of safety knowledge and safety motivation. However, according to Alhaadir et al. (2013) motivation alone does not produce change unless there is a safety climate that comes from good leadership to create safe behavior.

There is empirical evidence that has been found by previous researchers regarding the relationship between safety motivation and safety behavior. The results of Panuwatwanich et al.'s (2017) study concluded that safety motivation can positively influence safety behavior. In addition, Akbar's (2020) study concluded that there is a positive influence between safety motivation and safety behavior. Workers who have

safety motivation will comply with work safety procedures and contribute to a safe work environment (Heryati et al., 2019) . Based on the statement above, the researcher hypothesizes that:

H₃ : Work safety motivation has a positive effect on work safety behavior.

3. Research methods

The sampling technique used was *purposive sampling* with quota sampling as a sample determinant in each department based on the organizational structure at RSU Asy-Syifa Sambi Boyolali. The sample taken was the amount considered to represent the entire population .

The sampling technique used was *purposive sampling* with quota sampling as a sample determinant in each department based on the organizational structure at RSU Asy-Syifa Sambi Boyolali. The sample taken was the amount considered to represent the entire population. Determining the sample size in this study used the Slovin formula calculation as follows:

$$n = \frac{N}{1 + N (\epsilon)^2}$$

Information:

n: Number of respondents

N: Population size

e: Confidence level (5%)

The minimum sample that can be used as a population reference based on the formula above is:

$$n = \frac{192}{1 + 192 (0,05)^2} = 129,729$$

The calculation above shows that the reference sample in this study was 129,729 and rounded up to 130 respondents. Furthermore, determining the sampling quota based on the 130 respondents with the division of departments based on the organizational structure at RSU Asy-Syifa Sambi Boyolali using the following formula.

$$Sampel_{RSU\ Asy-Syifa} = \frac{Populasi\ Departemen\ RS}{Total\ Populasi} \times Sa$$

Table 1 Definition and Measurement of Indicators Variables

Variables	Dimensions	Indicator	Source	Scale
Work Safety Climate	Management Safety Priority and Ability	Management ensures that everyone receives the information they need regarding safety.	Kines et al. (2011) NOSACQ-50 developed by Nordic researchers.	Likert
		Management puts safety before production		
		We who work here believe in the management's ability to handle safety issues.		
		Management immediately handles any OHS issues found during inspections/audits.		
	Management Safety Empowerment	Management ensures that everyone can implement safe working practices in their work.		
		Management encourages workers here to participate in decision making that impacts their safety.		
		Management involves workers in decision making related to safety.		

	<i>Management Safety Justice</i>	Management strives to ensure that everyone has high competence in relation to safety and risk.		
		Management collects accurate information in accident investigations		
		Management listens carefully to everyone involved in an accident.		
		Management looks for the cause of an accident, not the person at fault, when an accident occurs.		
	<i>Worker's Safety Commitment</i>	We who work here are responsible for always maintaining the cleanliness and tidiness of the workplace.		
		We continue to work safely even though the work schedule is busy		
		Those of us who work here are willing to take dangerous risks while working.		
		Those of us who work here can speak freely and openly about safety.		
	<i>Worker Safety Priority and Risk of Non-Acceptance</i>	We who work here consider the risk of danger as something that cannot be avoided in our work.		
		We who work here consider minor accidents as a normal part of our daily work		
		We who work here learn from experience to prevent accidents from happening.		
		Those of us who work here always discuss safety issues as they arise.		
	<i>Peer Safety Communication, Learning, and Trust Safety Ability</i>	We who work here help each other to work safely.		
		We who work here together strive to achieve a high level of work safety		
		We who work here feel safe when working together.		
		We who work here take seriously the suggestions and opinions of others regarding safety.		
	<i>Worker's Trust in the Efficacy of Safety Systems</i>	People who care about safety play an important role in preventing accidents.		
		We who work here assume that safety assessments/audits do not impact safety.		
		We who work here believe that safety training is a good thing to prevent accidents from happening.		
		We who work here believe that safety assessments/audits help in finding serious hazards		
<i>Work Safety Behavior</i>	<i>Safety Compliance</i>	I do my job in a safe way	(Neal & Griffin, 2006 ; Ningtyas, 2019)	
		I use all the safety equipment necessary to do my job.		
		I know how to use safety equipment and follow standard work procedures.		
		I prioritize safety when I do my job		
	<i>Participation Safety</i>	I make extra efforts to improve safety in the workplace		
		I encourage my coworkers to work safely		
<i>Work Safety</i>	<i>Participation</i>	I feel it is important to maintain safety at	(Vinodkumar & Bhasi,	

<i>Motivation</i>	<i>Motivation</i>	all times	2010)	
		I believe that workplace safety is a very important issue.		
	<i>Compliance Motivation</i>	I feel it is important to encourage others to use safe practices.		
		I feel it is important to promote safety programs.		

4. Results and Discussion

Based on the results of demographic analysis in this study, the majority of employees at Asy-Syifa Hospital are aged 20-30 years, reaching 51.5% and the number of employees over 50 years is only 5.4%. The number of respondents when viewed from their gender, the majority are female employees, namely 63.8%. Then, the majority of employees have an educational history up to

Diploma (D3) level with a percentage of 44.6%. The results of this analysis also show that the largest number of positions that are respondents in this study are medical personnel, namely 60%. In addition, the length of service of employees at this hospital is mostly 4-6 years with a percentage of 63%. The results of the demographic analysis can also be seen in the table below.

Table 2 Demographic Analysis Results

Category	Respondents	Percent
Age (Years)		
20 – 30	67	51.5%
31 – 40	40	30.8%
41 – 50	16	12.3%
> 50	7	5.4%
Total	130	100%
Gender		
Man	47	36.2%
Woman	83	63.8%
Total	130	100%
Education		
SENIOR HIGH SCHOOL	24	18.5%
Diploma (D3)	58	44.6%
Diploma (D4)/ Bachelor (S1) and/or Profession	45	34.6%
Postgraduate (S2)	3	2.3%
Total	130	100%
Position		
Doctor	14	10.8%
Medical personnel	78	60%
Management Staff	20	15.4%
Field Staff	15	11.5%
Leader	3	2.3%
Total	130	100%
Length of Service (Year)		
0 – 2	31	23.8%
2 – 3	17	13.1%
4 – 6	82	63%
Total	130	100%

From the results of the demographic description above, further analysis was carried out to determine the validity and reliability tests as follows:

Table 3 Results of Loading Factor Analysis

Indicator	Work Safety Behavior (WSB)	Work Safety Climate (WSC)	Work Safety Motivation (WSM)
WSB1.1	0.834		
WSB1.2	0.811		
WSB1.3	0.834		
WSB1.4	0.834		
WSB2.1	0.901		
WSB2.2	0.898		
WSC1.1		0.797	
WSC1.2		0.790	
WSC1.3		0.822	
WSC1.4		0.833	
WSC2.1		0.859	
WSC2.2		0.812	
WSC2.3		0.872	
WSC3.1		0.764	
WSC3.2		0.831	
WSC3.3		0.822	
WSC3.4		0.821	
WSC4.1		0.818	
WSC4.2		0.837	
WSC4.3		0.832	
WSC4.4		0.838	
WSC5.1		0.807	
WSC5.2		0.823	
WSC5.3		0.798	
WSC5.4		0.788	
WSC6.1		0.807	
WSC6.2		0.806	
WSC6.3		0.811	
WSC6.4		0.834	
WSC7.1		0.823	
WSC7.2		0.833	
WSC7.3		0.828	
WSC7.4		0.866	
WSM1.1			0.892
WSM1.2			0.896
WSM2.1			0.893
WSM2.2			0.883

Based on the results of the loading factor analysis above, it can be seen that all

items are valid because they have a loading factor value > 0.7. This shows that

the items used in this study have good ability to explain the construct.

Table 4 AVE Values for Each Variable

Variables	Dimensions	Average variance extracted (AVE)
Work Safety Behavior	WSB1	0.686
	WSB2	0.809
Work Safety Climate	WSC1	0.657
	WSC2	0.719
	WSC3	0.656
	WSC4	0.691
	WSC5	0.646
	WSC6	0.664
	WSC7	0.702
Work Safety Motivation	WSM1	0.799
	WSM2	0.789

The table above shows that all AVE values obtained values > 0.5, which means that all dimensions contained in each variable are declared valid.

Table 5 Reliability test results

	Cronbach's alpha	Composite reliability
Work Safety Behavior	0.826	0.920
Work Safety Climate	0.954	0.962
Work Safety Motivation	0.762	0.894

The results of the reliability test in the table above show that the composite reliability value of all variables has a result of 0.7. It can be interpreted that the variables in this study meet the criteria for composite reliability or can be considered to have a

high level of reliability. In addition, the Cronbach's alpha values are all greater than 0.6. Therefore, the variables in this study meet the Cronbach's alpha criteria and can be considered reliable.

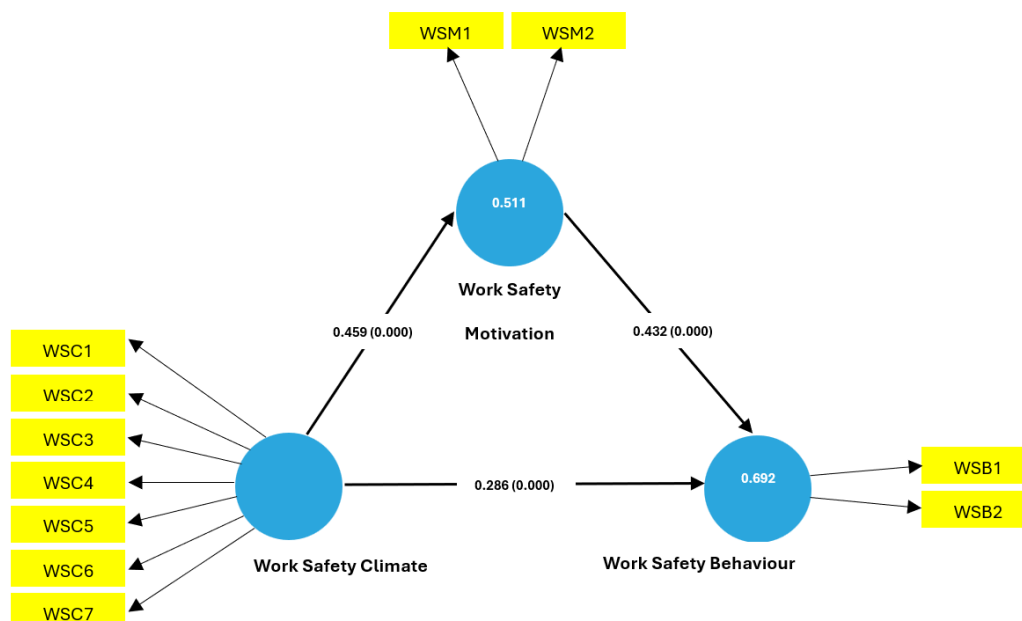


Figure 2 Hypothesis Analysis Model
Table 6 Results of Direct Hypothesis Testing

Hypothesis	T statistics (O/STDEV)	P values
Work Safety Climate -> Work Safety Behavior	3,757	0.000
Work Safety Climate -> Work Safety Motivation	4.488	0.000
Work Safety Motivation -> Work Safety Behavior	5,553	0.000

Based on the results of the hypothesis test above, it shows that;

1. *Work safety climate* has a positive and significant effect on *work safety behavior* , this is because the t statistics value is 3.757 which is greater than the t table = 1.96 and also the p values are 0.000 which is less than 0.05.
2. *Work safety climate* has a positive and significant effect on *work safety motivation*, this is because the t statistics value is 4.488 which is greater than the t table = 1.96 and also the p values are 0.000 which is less than 0.05.
3. *Work safety motivation* has a positive and significant effect on *work safety behavior* , this is because the t statistics value is 5.553 which is greater than the t table = 1.96 and also the p values are 0.000 which is less than 0.05.

Table 7 Results of Indirect Hypothesis Testing

Hypothesis	T statistics (O/STDEV)	P values
Work Safety Climate -> Work Safety Motivation -> Work Safety Behavior	3,942	0.000

Based on the results of the mediation test in the table above, it shows that;

1. *Work safety motivation* mediates the effect of *work safety climate* on *work safety behavior* because the t statistics value of the specific indirect effect is 3.942 which is greater than the t table = 1.96 and also the p values are 0.000 which is smaller than 0.05.
2. *Work safety motivation* partially mediates between *work safety climate* and *work safety behavior* . This is because work

safety climate has a significant positive effect on *work safety behavior* , as well as *work safety climate* which has a significant positive effect on *work safety motivation* .

5. Conclusion

Based on the findings of this study, several conclusions can be drawn as follows.

1. *Work safety climate* has a positive and significant effect on *work safety behavior* and is declared accepted.
2. *Work safety climate* has a positive and significant influence on *work safety motivation* and is stated to be accepted.
3. *Work safety motivation* has a positive and significant influence on *work safety behavior*, which is stated to be accepted.
4. *Work safety motivation* significantly mediates the relationship between *work safety climate* and *work safety behavior*, which is stated to be accepted.

The author realizes that this research is still far from perfect due to limited time, references, and knowledge. Based on the conclusions that have been put forward above, the author tries to provide the following suggestions.

1. Further research should take samples from all research objects with predetermined sampling criteria.
2. This research is based on existing reference sources, most of which use hospitals as the object of research and has not been carried out on other research objects.

3. Adding or replacing variables according to company problems as research objects related to work safety behavior.
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