

# Correlation of Management Commitment Regarding Occupational Safety and Health and Personal Protective Equipment Compliance in Production Unit Workers of PT. Nitama Galvanizer

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## Abstract

**Introduction:** Personal protective equipment (PPE) compliance is the behavior of workers to obey or be disciplined in using PPE. PPE compliance can be influenced by management commitment regarding occupational safety and health (OSH). The aim of this study is to analyze the correlation of management commitment regarding OSH and PPE compliance in production unit workers of PT. Nitama Galvanizer.

**Methods:** This research was observational with quantitative approach and cross-sectional design. The total population is 47 workers in production unit workers of PT. Nitama Galvanizer and sampling method is all populated sampling. The variables studied were management commitment regarding OSH and PPE compliance. Data were analyzed using Spearman correlation test ( $\alpha = 0.05$ ).

**Result:** Most of respondents assessed that management commitment regarding OSH at PT. Nitama is adequate (63.8%) and most of respondents did not comply to use PPE (83%). The result showed that management commitment regarding OSH and PPE compliance had a weak and direct relationship ( $r = 0.298$ ).

**Conclusion:** Management commitment regarding OSH and PPE compliance had a weak and direct relationship.

**Key words:** Management Commitment Regarding OSH, PPE Compliance

## Introduction

2.78 million workers die from occupational accidents and work-related diseases (of which 2.4 million are disease-related) and an additional 374 million workers suffer from non-fatal occupational accidents each year.<sup>1</sup> One form of worker protection against work accidents is the use of personal protective equipment at work. Personal protective equipment (PPE) is equipment that will protect the user against health or safety risks

at work.<sup>2</sup> It can include items such as safety helmets, gloves, eye protection, high-visibility clothing, safety footwear, safety harnesses, and also includes respiratory protective equipment (RPE).<sup>1</sup> Although this effort is at the last level in the control hierarchy, the application of personal protective equipment is highly recommended.<sup>3</sup> According to Puspitasari's research, there is a significant relationship between PPE compliance and the incidence of work accidents.<sup>4</sup>

PPE compliance is the degree or effort of a person in following the rules that have been regulated by the organization in using a set of safety equipment to protect part or all of the body from the dangers of accidents and occupational diseases. It is proven that PPE compliance is most influenced by the dimensions of management commitment.<sup>5</sup>

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PT. Nitama is a manufacture industry engaged in metal coating services (galvanizing) using hot-dip galvanizing techniques. The Production Unit is the unit that plays the most important role in the entire production process and workers are always exposed to hazards during the production process, such as dust and other flying metal particles, splash of molten metal, splash of chemical solutions, fumes from zinc oxide or magnesium oxide, and welding archs and laser lights. In consequence, workers had to comply the adequate protections based on the guidance to against the hazards.<sup>6</sup>

This study aims to analyze the correlation of management commitment regarding OSH and PPE compliance in production unit workers of PT. Nitama.

## Materials and Methods

This research was observational with quantitative approach and cross-sectional design. The population in this study was 47 workers in PT. Nitama Madiun. Samples were taken using all populated sampling resulted 47 respondents. Data was collected in April 2020.

The measurement of management commitment regarding OSH used a questionnaire according to Cooper's theory.<sup>7</sup> The measurement PPE compliance used a questionnaire according to Barizqi.<sup>8</sup>

## Result and Discussion

### Management Commitment Regarding OSH

**Table 1. Distribution of Respondents Based on Management commitment regarding OSH**

Management Commitment Regarding OSH	n	%
Good	8	17
Adequate	30	63,8
Insufficient	9	19,1
Total	47	100

Management commitment regarding OSH is categorized into three groups, which are good, adequate, and insufficient. Table 1 shows that most of the workers assessed the management commitment regarding OSH at PT. Nitama was adequate with a percentage of 63.8% (30 workers).

### PPE Compliance

**Table 2. Distribution of Respondents Based on PPE Compliance**

PPE Compliance	n	%
Compliance	8	17
Non-compliance	39	83
Total	47	100

PPE compliance is categorized into two groups, which are compliance and non-compliance. Table 2 shows that most of the production unit workers of PT. Nitama did not comply in the use of PPE, which was 39 workers with a percentage of 83%.

**Correlation of Management commitment regarding OSH with PPE Compliance**

**Table 3. Correlation of Management commitment regarding OSH and PPE Compliance**

Management commitment regarding OSH	PPE Compliance				Total		Correlation Coefficient
	Compliance		Non-compliance				
	n	%	n	%	N	%	
Good	3	37,5	5	62,5	8	100	0,298
Adequate	5	16,7	25	83,3	30	100	
Insufficient	0	0	9	100	9	100	

Table 3 shows that the less workers’ attitudes towards management commitment, the less likely workers are complying PPE. The correlation coefficient value obtained from the Spearman correlation test of 0.298 means that the relationship between management commitment regarding OSH and PPE compliance has a weak relationship. The relationship between management commitment in OSH and PPE compliance has a positive (direct) relationship, which means that the higher management commitment regarding OSH, the higher the level of PPE compliance of PT Nitama Production Unit workers.

There is no research result that uses a correlation coefficient which states the strength of the relationship between management commitment regarding OSH and PPE compliance yet. However, according to Setiawan’s research, workers’ perceptions of management commitment regarding OSH have a significant relationship with safety behavior while working with OR 2.172, which means that workers with negative perceptions of management commitment have a 2,172 times chance to behave unsafe compared to workers who have positive perceptions.<sup>9</sup> Setiawan’s research is in line with this research which has a positive or direct relationship. In addition, Raodhah’s research states that there is a relationship between good management commitment and the use of PPE for PT. Semen Bosowa Maros.<sup>10</sup>

Companies must commit sound management practices and resources to appreciate safety and health controls of the known risks and hazards.<sup>11</sup> Strong support from management is essential for an effective safety and health program.<sup>12</sup> To start a work safety program, management can formulate a policy that shows a commitment to work safety issues. This initial step will determine the next policy making in terms of work safety.

**Conclusion**

This study aims to analyze the correlation of management commitment regarding OSH and PPE compliance on production unit workers of PT. Nitama. Based on the research that has been done, management commitment related to OSH and PPE compliance has a weak relationship and direct relationship which means if the level of management commitment regarding OSH is increased, there will be an increase in PPE compliance level.

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