

# The Impact of the Covid-19 Pandemic on Work Stress of Employees

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**Abstract:** This study aims to determine the extent to which employees experience Work Stress, coupled with the Covid-19 Pandemic that is hitting Indonesia. To find out and control the employee's Work Stress, use an online workshop on Stress Management caused by the Covid-19 Pandemic. The research method used in this research is experimental research using 20 subjects for the experimental group and 20 employees for the control group. Data collection using a questionnaire designed using Google Form and experimental research using online. The data analysis technique in this study used covariance analysis (Ancova), which combines comparative and correlation tests. The results of testing the difference in the average work stress before and after training were carried out using a pair sample t-test (Stress Score 1) that in the experimental group the sig. (0.976) > 0.05, which means that the Stress Score1 before and after being given training was statistically not significant (significant). From the average value of the stress score2, the experimental group only showed a very low increase in stress scores, namely 0.05. Likewise, the control group shows a sig value (0.055) > 0.05, which means that statistically there is no significant (significant) difference in the average stress score2 in the Control group.

**Keywords:** *Covid-19 Pandemic and Work Stress*

## I. INTRODUCTION

### Background and Problems

In relation to the handover of human resources authority, aspects of human resource development are an important part of efforts to manage human resources as a whole. In essence, human resource development has a broad dimension aimed at increasing the potential of human resources, as an effort to increase professionalism in organizations.

Guided and planned human resource development accompanied by good management will be able to save other resources or at least the processing and use of organizational resources can be efficient and effective. On the other hand, work is what most people expect. Nothing is meaningless in this life, including the existence of work. By working, people can socialize and communicate with other people. However, by working, someone can apply their knowledge and work skills.

Specifically, in human resource development, which involves increasing all the internal potential of human

abilities, it is based on the fact that an employee will need a range of knowledge, skills and developing abilities to work well in a succession of positions encountered during a career. In this case it is a person's long-term career preparation (16). So that the scope of further human resource development is related to the career system applied by the organization and how existing human resources can access the existing system in order to support their work expectations (16).

Research (14) states in the results of his research that the risk of accidents and work safety can only occur in glass making, namely the extreme risk associated with open electrical panels and scattered cables that endanger employees, in addition to high risks. Similarly, research (11) on safety and Occupational Health (K3) in the implementation of the project, that K3 is greatly influenced not only by *human error* but by structure.

Many K3 cases occur not only in companies, even in organizations. Elphiana's research (2017), for example, examines K3 in relation to the performance of the service section, where 3 work safety has a significant influence on employee performance with a large influence of 47.20%, while the remaining 52.80% is influenced by other factors such as leadership style, organizational culture, motivation, compensation and other factors that influence performance, apart from that in this study also does not discuss occupational health factors but only work safety. So it can be concluded that it is true, the performance that is in the high category at PT. PLN (Persero) Bandung Network Distribution Area, 47.20% is influenced by work safety factors.

The key to competitive advantage (*competitive advantage*) of any organization depends on human resources. Therefore, organizations that are among the leading in the world always prioritize human resources, among others by increasing the capabilities of these human resources, which of course takes a long time for the impact on the organization.

This research will take the research object, namely the employees of the State Electricity Company (PLN) distribution of Central Java and Yogyakarta. The reason is that PLN distribution is a company owned by the state and in the framework of providing electricity procurement services to the community.

This research has a starting point from the phenomenon of the problem of employee work stress which is the result of the first year research related to the K3 System,

Motivation for OHS management and HR Development Performance. Thus the formulation of the problem is: How can work stress be controlled, coupled with the conditions during the Covid-19 Pandemic.

**The objectives of this study are**

- a. To find out whether there is a difference between the experimental group and the control group before and after being given treatment
- b. Knowing the extent to which employees of PT. PLN. UPD Central Java and DIY are experiencing Work Stress, coupled with the Covid-19 Pandemic that is hitting Indonesia.

## II. LITERATURE REVIEW

### Job Stress

Robbins (2) suggests that stress is a dynamic condition in itthere is an opportunity for confrontation in order to desire thatperceived by

4.

person's Meanwhile, Handoko, (9) conveyed that stress is a condition of tensionaffects one's emotions, thoughts, and condition. The stress is more in the presence of symptomsphysiological, namely that stress can create changes in metabolism, increasing the rateheart rate and respiration, increases blood pressure, causes headaches, andcausing a heart attack; Psychological symptoms, such as depression, anxiety, tension, anxiety,irritable ,, and procrastinate; and behavioral symptoms, including productivitydecreased, absenteeism increased, turn over increased (20) and (13) that caused work stressby environmental work stress, organizational work stress and work stress as well as personality, defining work stress as a process that causes people to feel sick, uncomfortable or tense due to work, workplace or certain work situations (12).

This study uses an indicator, namely Stress Symptoms, which is closer to the symptoms shown at work or during the Covid-19 Pandemic. Stress symptoms include 3 aspects, namely: Physiological, Psychological and Behavior (16), namely:

1. **Physiological** indicators, namely: there are changes in body metabolism, increased heart rate and breath rate, increased blood pressure, headaches and causing heart attacks .
2. **Psychological** indicators, namely: there is work relationship dissatisfaction, tension, anxiety, anxiety, irritability, boredom and often postponing work.
3. **Behavior** has indicators, namely: there are changes in

## III. RESEARCH METHODOLOGY

### Research Locations and Participants

This research was conducted at the PT. PLN Regional Central Java DIY. Furthermore, the participants in this study were determined based on purposive, namely determining the sample with certain considerations (Sugiyono, 2013). Participants are employees of the Regional State Electricity Company (PLN) Central

productivity, absenteeism in work schedules, changes in appetite, increased consumption of cigarettes and alcohol, speaking with fast intonation, easily agitated and having trouble sleeping

Causes of work stress which is a stressor which can eventually lead to a lack of focus employees even on employee work productivity, among others:

### 1. Organizational external

stressors Stressors outside the organization are related to negative effects and feelings on work, including:

- a. Social / technological changes have a major effect on the lifestyle carried on at work
- b. Family, such as; bad relationships, sick family members, quarrels, family crises
- c. Moving place (relocation) as a family due to promotion
- d. Life changes, such as getting older, losing a spouse due to death or divorce.
- e. Sociological variables such as; race, gender, social class

### 2. Internal organizational:

stressorsPotential organizational stressors include:

#### a. Organizational Policies and Strategies

*Examples of; employee depreciation, work shift rotation, bureaucratic regulations, advanced technology*

#### b. Organizational Structure and Design

*Examples: centralization and formalization, line-staff conflicts, role ambiguity, no chance of advancement*

#### c. Organizational Process

*Examples: close supervision, one-way communication, little feedback, lack of participation*

#### d. Working Conditions

*Example: work area is noisy, hot, cold, smelly, unsafe, unhealthy, poor lighting*

### 3. Group

stressors Group stressors are categorized into;

- a. Lack of group cohesiveness / togetherness
- b. Lack of social supportsocial

Ifsupport is lacking in individuals, this situation will be stressful.

### 4. Individual stressors

At the individual level, the situation dimensions and individual dispositions can affect stress a. Personality traits

- b. Perceptions of personal control, such as how people feel about their ability to control situations

6

- c. Learned helplessness, the person who gives up on the situation even though he can actually fight it,
- d. Psychological endurance, resistance to provocation, pressure

Java and DIY, totaling 30 employees, 20 as the experimental group and 10 other employees as control. Participants in this study were determined by criteria; (a) Field employees who are at high risk, (b) permanent employees with a minimum service period of 1 year. Employees who are participants in the experimental group must attend every meeting where treatment is carried out

### 3.2. Research

Methods Experimental methods will be used in this study. The experimental method is a research method carried out by manipulating which aims to

determine the effects of manipulation on the observed individual behavior (Latipun, 2010). The manipulation in question can be in the form of a situation or action (treatment) given to an individual or group, which further affects the effect. Thus the experimental method can be interpreted as a research method that can be used to find the effect of certain treatments / actions on individuals or groups in controllable conditions (Gulo, 2005).

**3.3 Research**

Design The research design is a strategy to obtain the data needed to test hypotheses or answer research statements and as a tool to control variables that have an influence in research (Sugiyono, 2013). Based on the objectives and research problems, the research design used in this research is a *Quasi Experiment* (quasi-experimental), which is an experimental design that has treatment, impact measurement, experimental units, and participant selection without randomization but still using a control group or *Non-Randomized Pretest - Post-test Control Group Design* (Campbell, Cook & Shadish, 2002).

The quasi-experimental design allows the researcher to control as many variables as possible from a particular situation as well as the existence of a control group as a comparative group to understand the effects of behavior. This design does not fully control the variables as in the actual experiment (*true experiment*), but the researcher can take into account which variables are impossible to control. Researchers used this experimental design based on a group of participants who were already available and determined not randomly, namely that the experimental group was selected according to the possibility that the employee could attend each meeting. This design is an experimental research design that is carried out with a *pre-test* before the treatment is given and a *post-test* after the treatment is given, as well as an experimental group (to be given treatment) and a control group. The experimental design in this study was as follows:

Pre-test Treatment

(Treatment) Post-test

Experiment group  $O_1$  X  $O_2$  Control

group  $O_1 - O_2$  Description:

$O_1$ : pre-test (*Pretest*) Job Stress before being given treatment

$O_1$ :test (*Pretest*) Work Stress of the control group before being given treatment Pretest treatment (treatment)

$O_2$ : Final test (*Posttest*) Work Stress after being given treatment

| Kelompok  | N  | Stres     |         |           |         |
|-----------|----|-----------|---------|-----------|---------|
|           |    | Pre-test  |         | Post-test |         |
|           |    | Rata-rata | SD      | Rata-rata | SD      |
| Esperimen | 20 | 31.550    | 3.34782 | 31.000    | 5.33114 |
| Kontrol   | 20 | 34.550    | 7.60523 | 27.800    | 5.88128 |
| Total     | 40 | 66.000    | 10.9530 | 58.800    | 11.2124 |
|           | 0  | 0         | 5       | 0         | 2       |

Table 1

$O_2$ : the final test (*Posttest*) Work stress in the control group after being given treatment

**3.4 Operational definition**

-treatment / treatment

-work stress

**3.5 Research**

Instruments Instruments or measuring instruments to be used in this study are

**3.6 Test Validity and Reliability of the Instrument**

An instrument is stated valid if it can be used to measure what should be measured. The validity test can be done by correlating the answer items with the total score of all items with valid criteria if the correlation is significant and invalid if the correlation is not significant. The instrument declared reliable is an instrument that, if used several times to measure the same object, will produce the same data (Sugiyono, 2013). Reliability test in this research this researcher by looking at the coefficient of *Cronbach Alpha*. Instruments that are declared reliable have a *Cronbach Alpha* > 0.7.

**3.7 Research Procedure**

This experimental research will be carried out by giving a *test* pre-, namely giving a questionnaire to 30 employees of PT PLN Regional Central Java DIY, 20 employees are the experimental group and 10 employees are the control group. Employees who belong to the experimental group are pegawai who allow them to attend every meeting. The *treatment* will be given by experienced trainers in their fields. After that, the experimental and control group employees were given a *posttest*. The implementation plan has the following details:

**3.8 Data Analysis Techniques Data**

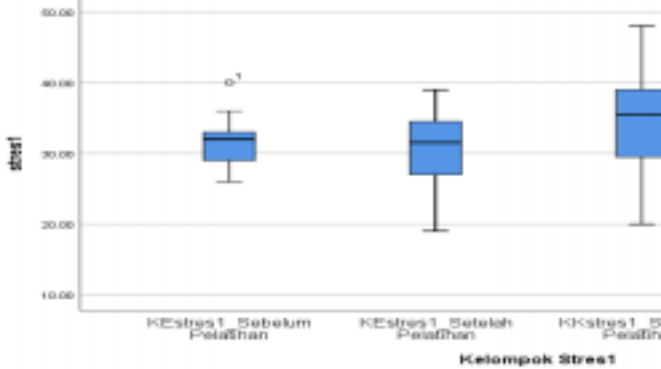
analysis will be carried out using statistical formulas using quantitative data analysis, to find out whether the treatment can reduce the work stress of PT. Regional PLN of Central Java DIY. The data analysis technique used in this study was covariance analysis (Anacova), which combines the comparative and correlation tests (Gulo, W. 2005). Ancova is a statistical technique that allows researchers to control various potential interaction effects after conducting experiments (Dempsey, 2002). The advantages of data analysis using anacova are to reduce *group error variance* and eliminate confounding variables that can affect the main variable.

**Results of Statistical Analysis**

**4.1 Descriptive Descriptive of Research Data Stress1 Stress1**

Based on the table 1, it can be explained that the average *pre-test* in the experimental group was 31.55 and the average *post-test* was 31.00. It can be interpreted that the experimental group experienced a decrease in work stress score by 0.55. The mean *pretest* in the control group was 34.55 and the mean *posttest* was 27.80, which means that the control group experienced a decrease in stress scores by 6.75.

Figure:  
Boxplot  
Stress1



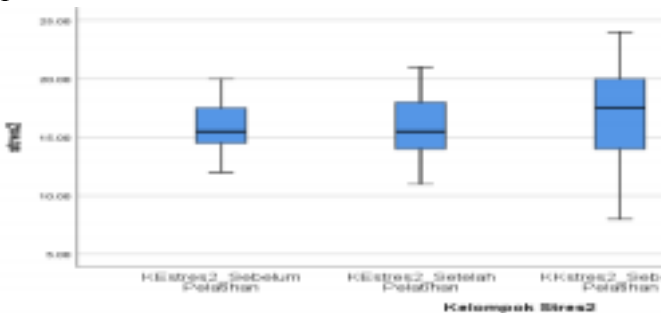
Picture 1

| Kelompok   | N  | Stres1    |        |           |        |
|------------|----|-----------|--------|-----------|--------|
|            |    | Pre-test  |        | Post-test |        |
|            |    | Rata-rata | SD     | Rata-rata | SD     |
| Esperime n | 20 | 16.050    | 2.1392 | 15.650    | 2.6212 |
| Kontrol    | 20 | 17.000    | 4.2426 | 13.900    | 4.3637 |
| Total      | 40 | 31.700    | 6.3818 | 30.950    | 7.0517 |

Table 2

Based on the table 2, it can be explained that the average pre-test in the experimental group was 16.05 and the average post-test was 15.65. It can be interpreted that the experimental group experienced an increase in stress score2 by 0.6. The mean pretest in the control group was 15.65 and the mean posttest was 13.95, which means that the control group experienced a decrease in stress score of -1.75

Figure:  
Boxplot  
Stress2  
11



Picture 2

From the picture 2, it can be seen that the median point of stress score2 between the experimental group before and after training is located on a parallel horizontal line which shows the average stress score is not different. Meanwhile, the stress score in the confrontation group before training was higher than the stress score in the control group after being given training. This indicates that there is a difference in the stres1 score in the control group before and after training.

From the picture 1, it can be seen that the median point of stress score1 between the experimental group before and after being given the training lies on a parallel horizontal line which shows that the average stress score is not different. Meanwhile, the stress score1 in the confrontation group before training was higher than the stress score in the control group after being given training. This shows that there is a difference in the stres1 score in the control group before and after being given the training

**Descriptive fo Stress 2 Research Data.**  
Stress1

4.2 Normality Test

Before the analysis is carried out, the data normality test is conducted to determine the appropriate test instrument. Data can be analyzed statistically using a parametric test if it is proven to be normally distributed and homogeneous (Sani & Todman, 2006). The normality test was performed using the techniques One Sample Kolmogorov-Smirnov and Shapiro-Wilk. The results of the data normality test can be seen in the following:

**Table Table 3 Data Normality Test**

| Kelompok                   | Kolmogorov-Smirnov <sup>a</sup> |    |        | Shapiro-Wilk |    |       |
|----------------------------|---------------------------------|----|--------|--------------|----|-------|
|                            | Statistic                       | df | Sig.   | Statistic    | df | Sig.  |
| <b>STRES1</b>              |                                 |    |        |              |    |       |
| KEstres1_Sebelum Pelatihan | 0.188                           | 20 | 0.062  | .944         | 20 | 0.283 |
| KEstres1_Setelah Pelatihan | 0.115                           | 20 | 0.200* | .974         | 20 | 0.827 |
| KKstres1_Sebelum Pelatihan | 0.131                           | 20 | 0.200* | .980         | 20 | 0.928 |
| KKstres1_Setelah Pelatihan | 0.100                           | 20 | 0.200* | .973         | 20 | 0.820 |
| <b>SETRES2</b>             |                                 |    |        |              |    |       |
| KEstres2_Sebelum Pelatihan | 0.147                           | 20 | 0.200* | .960         | 20 | 0.539 |
| KEstres2_Setelah Pelatihan | 0.163                           | 20 | 0.170  | .958         | 20 | 0.496 |
| KKstres2_Sebelum Pelatihan | 0.125                           | 20 | 0.200* | .973         | 20 | 0.823 |
| KKstres2_Setelah Pelatihan | 0.181                           | 20 | 0.086  | .937         | 20 | 0.212 |

Based on the table 3, testing using the Kolmogorov Smirnov and Shapiro Wilk all groups gave a sig value. > 0.05, which means that the data used in this study were normally distributed so that the paired sample t-test parametric statistical test could be performed.

### 4.3 Different

tests The results of testing the differences in the average work stress before and after training using a paired sample t-test can be seen in the following table:  
12

**Table of Results for Pair Sample t-test Score Stress1**

| Kelompok   | Mean   | T     | Sig.  |
|------------|--------|-------|-------|
| Eksperimen | 0.5500 | 0.371 | 0.715 |
| Kontrol    | 6.7500 | 4.001 | 0.001 |

Table 4

Based on the table 4, it shows that in the experimental group the sig. (0.715) > 0.05, which means that the stress score1 before and after being given training was not statistically significant (significant). From the average value of the stress score1, the experimental group only showed a very low reduction in stress scores, namely 0.55. Meanwhile, the control group shows a sig value (0.001) < 0.05, which means that statistically there is a significant (significant) difference in the average stress score1 in the Control group before and after training. Thus there was a decrease in the average stress score1 in the control group by 6.75 even though they were not given training. This shows that the training conducted to reduce employee stress levels has not been effective. In addition, the current pandemic condition also affects employee stress levels.

## IV. DISCUSSION

The results of research conducted in conjunction with the Covid-19 pandemic that is currently hitting the whole world, including in Indonesia, we can see from the results of the study that that the impact of Stress Management training not much different from what was experienced when the study subjects did not receive Stress Management training. This means, although the researcher tries to see the differences experienced by the research subjects before and after being given training, it appears that there is no significant difference. So that the Covid-19 Pandemic period is thought to have also influenced the research subjects.

In addition, after the research team visited three substations in the Central Java environment, namely the Purbalingga Substation, Kalibakal Substation, and Substation Ajibarang, there was information that can complement the results above, that basically the operators feel stress. chronic work. This is because the operating hours of these operators are 24 hours. This means that operators are required to pay attention to announcements about problems that arise regarding the flow of electricity in their respective areas 24 non-stop, without shifts. In addition, in the Purbalingga Substation area there is also maintenance from Jakarta, so that concerns about Covid-19 also inevitably increase their stress conditions for operators in the field.

## V. CONCLUSIONS AND SUGGESTIONS

### Conclusions.

In this study, it can be concluded that there is no significant difference between the research subjects before and after the stress management training was held. This is due to two things, namely the absence of a shift work system for operators and the Covid-19 condition.

### Suggestions

#### A. Related to Science

1. There are new findings related to experimental research, especially research on different tests on employee Job Stress variables, that it is not certain that when the subject group is given treatment, the results will be different.
2. In general, environmental conditions that are being hit by problems, should be suspected to have an effect on employee work stress.
3. In the experimental study, the control group and the experimental group did not always produce the same results in every condition, but maybe the results would be the opposite as in this study, namely, the control group was not subjected to treatment, the results actually decreased their level of work stress.

#### B. Related to PT. PLN UP2D Central Java and DIY

1. There needs to be an evaluation at the management level of PT. PLN. UP2D, in order to reduce the level of work stress of the Operators.
2. There needs to be an evaluation from the management, related to the work system of the operators, by implementing a shift system
3. There needs to be a refreshing for the operators so that their stress levels do not become psychosomatic support
4. There needs to be an evaluation from the management, that compensation will not always reduce the level stress of the operators.

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