JD-R MODEL IN PREDICTING BURNOUT WITH DIFFERENCE OF AGE AMONG TEACHERS IN SENIOR HIGH SCHOOL

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ABSTRACT
Teachers as providers of educational services are required to provide attention, assistance, and support to students. If there is an unbalanced relationship between job demands and available resources it will have an impact on fatigue or burnout, and otherwise This study aims to determine how much influence the JD-R model has on burnout that occurs at different age ranges. The study was conducted in the High School Teachers in Ponorogo City who had implemented a five-day school system totaling 205 people. The analysis technique used is Partial Least Square (PLS).

KEYWORDS: Burnout, JD-R, Age, Teacher.

1. INTRODUCTION
The development of the times brought changes to a number of sectors of life, including education. The government continues to make ongoing efforts to improve the quality of education in Indonesia to match the needs of students as the next generation. One of them is the learning system in accordance with the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 23 of 2017 Regarding School Day which states that the length of the school day is five-days for a week and 8 hours a day, or in other words 40 hours for a week. This regulation applies to schools that have facilities and resources that meet and are ready to run a five-day school system.

This change in learning system seems to cause physical and mental exhaustion, especially for teachers as education service providers. At school, a teacher is confronted with students with different characters, arranging the tone of speech loud and smooth so that students understand what is conveyed. In addition to the burden of teaching hours that must be met, the teacher also still carries out additional assignments and material preparation for the following days.

Every job certainly has risks that can cause disruption to health and safety at work. If not managed properly, these hazards and risks can be a threat to workers themselves and the survival of the company itself, because they can cause losses and reduce service quality. In addition, most of our time is spent at work, so the workplace is also very influential on a person's physical and mental health.
Psychosocial factors in the workplace need to be considered, because it will be useful to improve employee welfare. Factors that describe poor working conditions, will later have an impact on employees who experience fatigue (burnout) and ultimately the productivity of these employees will decrease. This fatigue will also have an impact on absence due to illness or work accident (Schaufeli, 2017). Such conditions will often be found in the service industry. Like research (Hakanen et al, 2006) which states that compared to other professions Teachers show the highest level of burnout. This is because teachers as providers of education services must interact more often with other people or students with different characteristics and often cause a variety of reactions both physically and psychologically.

Burnout is a condition where a person experiences prolonged physical, mental and psychological fatigue experienced by many professional workers who deal directly with services or human services such as social workers, workers in the health sector, workers in the health sector such as nurses and general practitioners, police and teachers (Demerouti, et.al, 2001). Workers who are oriented towards serving others can form asymmetrical relationships between giver and recipient (Maslach & Leiter, 2008). Characteristics of burnout are the presence of emotional exhaustion (emotional exhaustion) which is characterized by too much emotional that occurs in the workplace, depersonalization (self-disturbance) which is characterized by providing a cynical response to the speaker, and reduced personal accomplishment (personal achievement reflected by already reflected reduced individual desire to excel at work (Demerouti, et.al, 2001).

The increase in work demands on the teacher triggers fatigue or burnout. Fatigue that continues to be felt will affect physical and mental health which will harm the teacher himself or the school as a place of work. Salmela-Aro & Upadyaya (2018) said that job demands are positively related to fatigue in the early stages of a career, because employees who just started their careers have not built enough resources to cope with the demands of their work. In line with the results of the Salmela-Aro study, Mc-Lean et al (2019) also mentioned that greater fatigue was felt for younger teachers early in their careers because they had to be faced with a new workplace with high job demands, whereas more teachers a little older is exhausted or more attached to his work because he has adapted to his work environment.

In the literature of Bakker & Demerouti (2007) it is mentioned, occupational health disorders due to fatigue occur due to an imbalance between job demands with job resources. Schaufeli & Bakker, (2004) states that the JD-R Model is used to predict Burnout in an organization, because the JD-R model integrates two basic psychological processes, namely the stress process, which is triggered by excessive job demands (Job Demand) and Job lack of resources, if not responded properly can lead to Burnout and lead to various negative things such as the absence of illness, poor performance, disrupted work constraints, and low company commitment. Teachers are required to carry out their teaching assignments and complete other additional tasks within a predetermined time limit, if not accompanied by adequate resources, for example, low self-motivation, support from fellow teachers.
or low supervisors will increase the occurrence of work fatigue (burnout) and vice versa, if the demands of the teacher's work can be responded to properly will increase engagement in the workplace. Research (Salmela-Aro & Upadyaya, 2018) states that job resources are positively related to Attachment, this is because good cooperation between members in a team will create harmony in work and increase employee confidence so that there is an attachment to the work.

**LITERATURE REVIEW**

**Burnout**

Burnout is a condition where a person experiences a high level of physical, mental and emotional exhaustion caused by work stress suffered for a long time, in situations that require high emotional involvement (Maslach & Schaufeli, 2008). Further burnout as a psychological process that begins when the profession begins to be applied at work.

Maslach (2003) argues that burnout consists of three dimensions, namely: (1) Emotional Exhaustion, a reaction from ongoing stress due to work, this stress arises due to fatigue due to workload, work-related depression, psychosomatic complaints, and anxiety. (2) Depersonalization is characterized by giving distance to service recipients, and on the other side of the work can be manifested by the existence of alienation that is the feeling of alienation felt by employees. (3) Reduced Sense of Personal accomplishment which refers to a decreased sense of competence and achieving success in the workplace.

**JD-R**

The JD-R model is very suitable for this purpose because of its comprehensive nature of integrating a positive focus on attachment and negative focus on burnout, its scope is very broad which makes it possible to include relevant job characteristics (Schaufeli, 2017).

**Job Demand**

Research according to (Akkermans, 2013) The basic assumption of the JD-R model is that each work environment is characterized by work demands, which can lead to increased welfare (for example, work engagement). Job demands (Job Demand) are physical, psychological, social, and organizational aspects of employees that require ongoing physical and / or psychological effort or skills and are related to certain physical and / or psychological costs (Bakker & Demerouti, 2007).

Semmer in (Sari 2017) and Karasek (1979) in his research grouped Job Demand into five dimensions, namely: (1) Psychical Workload, referring to the extent to which employees need to perform multiple tasks in a short period of time. (2) Time Pressure is psychological pressure in doing and completing work quickly and precisely in less time than is needed or desired. (3) Recipient Contact, namely the existence of negative and cynical behavior received by students because teachers are required to help, pay attention and be sensitive to the needs and problems with students. (4) Psychic Environment is all physical conditions that occur around the workplace that can affect...
employees directly or indirectly. (5) Emotional Demand is a work demand related to the emotional individual of the job.

**Job Resources**

According to (Demerouti, et al. 2001) job resources (job resources) are physical, social, psychological or organizational aspects of work or (a) functioning in achieving work goals, (b) reducing employee demands and physiological and psychological costs related, and (c) stimulate personal growth, learning and development. Employee resources may have the potential for intrinsic motivation by facilitating personal learning or development and the potential for extrinsic motivation by providing specific instrumental or information assistance for achieving goals (Schaufeli & Bakker, 2004).

According to Bakker et al (2003) Dimensions in Job Resources are divided into four, among others: (1) Social Support is a resource that is directly related in achieving work goals. (2) Support Supervisor is the quality of relationships with superiors can reduce job demand on burnout on employees. (3) Constructive Performance Feedback not only helps employees do work more effectively, but also improves communication between superiors and subordinates who can change their performance for the better. (4) Reward to employees for the effort he has issued, where the award it can be in the form of giving clear career paths, learning opportunities, or providing incentives in accordance with the achievements he has done. (5) Participation is the engagement between employees in decision making in organizations.

**Theoretical Framework and Hypotheses**

The teaching profession is recognized internationally as very demanding (Johnson et al, 2005), evidenced by the high prevalence of stress, and fatigue reported by teachers from various countries (Katz et al 2016, Steinhardt et al 2011, Wang et al 2015). Teachers at a young age or early career stages in particular have been identified as vulnerable times marked by challenges with mental and physical health risks (McLean et al, 2019), reduced self-efficacy (Wang et al, 2015), and a sense of disappointment about the profession (Goldstein, 2005). These factors are likely to contribute to the teacher's decision to leave his profession in the early stages of his career.

A similar study was also submitted by Salmela-Aro (2018) who stated that younger employees were more likely to experience burnout than older employees, this is because in the early years of work younger employees were still not fully experienced using existing resources. For example the support of colleagues who are still lacking, authoritarian management or support of superiors in developing skills in dealing with the demands of their jobs are also still small (Brewer & Shapard, 2004)

The JD-R model assumes that the entire range of job characteristics can have an impact on work fatigue. These job characteristics can be categorized as job demands or job resources. Job demands are defined as physical, psychological, social, or organizational aspects of work that require physical
and / or psychological (cognitive and emotional) effort or skills and are therefore related to certain physiological and / or psychological costs (Bakker & Demerouti, 2007). Job demands such as workloads, emotional demands, and aggression at work can reduce employee energy, which may cause fatigue in the long run. Job resources, on the other hand, refer to "physical, psychological, social, or organizational aspects of work that help to achieve work goals, reduce work demands and associated physiological and psychological costs, or stimulate personal growth, learning, and development "(Bakker et al., 2014). In summary according to Tinne, et.al (2016). The JD-R model states that both job demands and job resources predict fatigue and that job resources are the main predictors of work engagement (ie, main effect).

In the world of work, a person is faced with a work situation that is full of demands and pressures. High job demands will cause many problems for individuals and can have a negative impact on work performance. Excessive work demands include working hours, responsibilities and routine work. With conditions of high demand make employees tend to show a high level of burnout so that they have a strong desire to quit the job (Demerouti et al, 2001).

Low job resources such as poor communication between employees and colleagues or with superiors, will support the emergence of psychological fatigue in the work, so there is a possibility that employees become irritated, anxious, do not concentrate when doing tasks, and vice versa if employees have a relationship both with coworkers or superiors then they will come to help solve problems at work so that it will reduce the level of burnout. Thus, it is suspected that the amount of job resource has an effect on reducing the level of burnout experienced by employees.

H1: Job Demands have a positive effect on burnout in different age groups
H2: Job resources negatively affect burnout in different age groups

Figure 1: Relationship between JD-R Model and Burnout with moderating Age Differences (Haley et al, 2016)
2. RESEARCH METHODOLOGY

Participants
The research sample consisted of teachers (N = 205) who worked in Public and Private High Schools in the City of Ponorogo. A total of 205 questionnaires were distributed to respondents. The sample of respondents received consisted of 19 people (9%) aged 18-30 years, 115 people (56%) aged 31-50 years, 71 people (35%) aged 51-65 years.

Measures
Burnout
Burnout variables are measured by the Maslach Burnout Inventory-Educators Survey (MBI-ES) by Maslach et al., 1997. MBI-ES consists of 12 dimensions measured using a 5-point linkert scale. Scale scores start from 1 = strongly disagree to 5 = strongly agree. Cronbach's alpha value of Burnout Teachers at a young age of 0.981, middle-aged 0.978, at an old age of 0.969. It can be seen from the AVE Burnout value of Teachers at the young age of 0.825, middle-aged 0.808, and old age of 0.748 which means that these variables are valid and research can be continued.

Model JD-R
Job Demand is measured by tools made by Bakker et al, 2003, namely Social Support, Supervisor Support, Performance Feedback, Reward, Participations. Job Demands consist of 12 dimensions measured using a 5-point linkert scale. Cronbach's alpha value of job demands at young age 0.983, middle-aged 0.971, old age 0.983. So it can be said that the data related to Job Demands meet the reliability test requirements in all age groups. The value of AVE job demands young age is 0.855, middle-aged 0.0.779, old age is 0.854 which has fulfilled the validity test requirements at all different age levels.

Job Resources consists of 11 dimensions created by Bakker et al, 2003 namely Social Support, Supervisor Support, Performance Feedback, Reward, Participations. Each item is rated on a 5-point scale with a score from 1 = strongly disagree to 5 = strongly agree. Cronbach's alpha value from Job Resources young age is 0.986, middle-aged 0.982, old age is 0.981. AVE value of Job Resources young age is 0.864, middle-aged 0.836, and old age is 0.825 which is greater than 0.5 which can be interpreted that the research variables are valid for further research.

Age
The age classification used in this study is young age less than 35 years, middle-aged age 35-49 years, and aged more than 50 years (Salmela-Aro, K & Upadyaya, K., 2018). Based on these classifications the value of Cronbach’s Alpha and AVE is equal to 1 at all different age levels, which means the study of moderation variables is worth continuing.
Tabel 1. Reliability and Validity Test Result

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Variabel</th>
<th>Cronbach’s Alpha</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Burnout</td>
<td>0.981</td>
<td>0.825</td>
</tr>
<tr>
<td></td>
<td>Job Demands</td>
<td>0.983</td>
<td>0.855</td>
</tr>
<tr>
<td></td>
<td>Job Resources</td>
<td>0.986</td>
<td>0.864</td>
</tr>
<tr>
<td>Middle-aged age group (35 - 49 years)</td>
<td>Age</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Burnout</td>
<td>0.978</td>
<td>0.808</td>
</tr>
<tr>
<td></td>
<td>Job Demands</td>
<td>0.971</td>
<td>0.779</td>
</tr>
<tr>
<td></td>
<td>Job Resources</td>
<td>0.982</td>
<td>0.836</td>
</tr>
<tr>
<td>Old Age Group (&gt; 50 years)</td>
<td>Age</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Burnout</td>
<td>0.969</td>
<td>0.748</td>
</tr>
<tr>
<td></td>
<td>Job Demands</td>
<td>0.983</td>
<td>0.854</td>
</tr>
<tr>
<td></td>
<td>Job Resources</td>
<td>0.981</td>
<td>0.825</td>
</tr>
</tbody>
</table>

Sources: Primary Data Processed

ANALYSES AND DISCUSSION

Tabel 2. Goodness of fit Model

<table>
<thead>
<tr>
<th>Age group</th>
<th>SRMR</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young Age Group (&lt;35 Years)</td>
<td>0.065</td>
<td>Model Fit</td>
</tr>
<tr>
<td>Middle-aged age group (35 - 49 years)</td>
<td>0.090</td>
<td>Model Fit</td>
</tr>
<tr>
<td>Old Age Group (&gt; 50 Years)</td>
<td>0.096</td>
<td>Model Fit</td>
</tr>
</tbody>
</table>

The results of the PLS model goodness of fit test in the following table 2 show that the SRMR value of the model in each age group <0.10. Because the SRMR value of the model is good on the saturated model and the estimated model is below 0.10, then the whole age group model is declared perfect fit and is suitable to be used to test the research hypothesis.

Hypothesis Test
Based on the results of the PLS analysis, a summary of the results of the hypothesis research is obtained as follows:

### Table 3. Research Hypothesis Testing Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesis Description</th>
<th>P Value &amp; Path Coefficient</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Job demands have a positive effect on burnout in different age groups</td>
<td>P Value: 0.000 (young age), 0.000 (middle age), 0.000 (old age) Path coefficient: 0.664 (young age), 0.635 (middle age), 0.510 (old age)</td>
<td>accepted</td>
</tr>
<tr>
<td>2</td>
<td>Job resources negatively affect burnout in different age groups</td>
<td>P value: 0.003 (young age), 0.003 (middle age), 0.000 (old age) Path coefficient: -0.257 (young age), -0.287 (middle age), -0.457 (old age)</td>
<td>accepted</td>
</tr>
<tr>
<td>3</td>
<td>Job demands negatively affect work engagement in different age groups</td>
<td>P value: 0.000 (young age), 0.000 (middle age), 0.000 (old age) Path coefficient: -0.352 (young age), -0.637 (middle age), -0.557 (old age)</td>
<td>accepted</td>
</tr>
<tr>
<td>4</td>
<td>Job resources have a positive effect on work engagement in different age groups</td>
<td>P value: 0.000 (young age), 0.000 (middle age), 0.000 (old age) Path coefficient: 0.613 (young age), 0.258 (middle age), 0.386 (old age)</td>
<td>accepted</td>
</tr>
</tbody>
</table>

1) Effect of Job Demand on Burnout
Based on the results of the analysis in this study, it was found that in the young age group (<35 years), the p value of the influence of Job Demand on Burnout (JD ⊗ BURN) was 0.000 with a path coefficient marked positive, because the p value <0.05 and positive path coefficient, it is concluded...
that in the young age group, job demands have a positive and significant effect on burnout. In the middle age group (35 - 49 years), the analysis shows that the value of p value of the influence of Job Demain on Burnout (JD → BURN) is 0.000 with a positive path coefficient, because the p value <0.05 and positive path coefficient it is concluded that in the middle age group, job demands have a positive and significant effect on burnout. Furthermore, in the old age group (> 49 years), the p value of the effect of Job Demain on Burnout (JD → BURN) is 0.000 with a positive path coefficient, because the p value <0.05 and the positive path coefficient is concluded that at Old age group, job demands have a positive and significant effect on burnout. Based on these results, it can be concluded that in all age groups, job demands have a positive and significant effect on burnout in different age groups.

The results of the analysis show that in the young age group, job demand has a positive effect on burnout, the results of the analysis also show that based on path coefficients in each age group, job demand at a young age has the highest path coefficient compared to middle and old age, this shows that the influence of job demand on burnout is more common in the young age group. This is in line with the theory of Johnson et al., 2005, in theory the teaching profession is recognized internationally as very demanding as evidenced by the high prevalence of stress, and fatigue reported by teachers from various countries (Katz et al 2016, Steinhardt et al 2011, Wang et al 2015). Teachers at a young age or early career stages in particular have been identified as vulnerable times marked by challenges with mental and physical health risks (McLean et al, 2019), reduced self-efficacy (Wang et al, 2015), and a sense of disappointment about the profession ( Goldstein, 2005). These factors are likely to contribute to the teacher's decision to leave his profession in the early stages of his career.

The JD-R model assumes that the entire range of job characteristics can have an impact on work fatigue. Job demands are defined as physical, psychological, social, or organizational aspects of work that require physical and / or psychological (cognitive and emotional) effort or skills and are therefore related to certain physiological and / or psychological costs (Bakker & Demerouti, 2007). In the world of work, a person is faced with a work situation that is full of demands and pressures. High job demands will cause many problems for individuals and can have a negative impact on work performance. Excessive work demands include working hours, responsibilities and routine work. With conditions of high demand make employees tend to show a high level of burnout so that they have a strong desire to quit the job (Demerouti et al, 2001).

2) The effect of Job Resources on Burnout
In the young age group (<35 years), the p value of the effect of Job Resources on Burnout (JR → BURN) is 0.003 with a path coefficient marked negative, because the p value <0.05 and the negative path coefficient is concluded that the group young age, job resource has a negative and significant effect on burnout. In the middle age group (35 - 49 years), the analysis showed that the p value of the effect of Job resources on Burnout (JR → BURN) was 0.003 with a path coefficient marked negative,
because the p value <0.05 and the negative path coefficient it was concluded that in the middle age group, job resources had a positive and significant effect on burnout. Furthermore, in the old age group (> 49 years), the p value of the effect of Job resources on Burnout (JR → BURN) is 0.000 with a positive path coefficient, because the p value <0.05 and the negative path coefficient is concluded that at Old age group, job resources have a negative and significant effect on burnout. Based on these results, it can be seen that in all old age groups, job resources have a negative and significant effect on burnout, so it can be concluded that, job resources have a negative and significant effect on burnout in different age groups.

The analysis showed that job resources had a negative and significant effect on burnout, the results of the analysis also showed that the path coefficient of the effect of Job resources on burnout was highest in the old age group, this shows that the effect of job resources was most visible in the old age group. This shows that the higher the job resources, the higher the burnout, and vice versa. Low job resources such as poor communication between employees and colleagues or with superiors, will support the emergence of psychological fatigue in the work, so there is a possibility that employees become irritated, anxious, do not concentrate when doing tasks, and vice versa if employees have a relationship both with coworkers or superiors then they will come to help solve problems at work so that it will reduce the level of burnout. Thus, it is suspected that the amount of job resource has an effect on reducing the level of burnout experienced by employees.

CONCLUSION
The conclusions obtained from the results of this study are as follows:
In the young age group (<35 years), job demand has a positive and significant effect on burnout. In the middle age group (35 - 49 years), job demand has a positive and significant effect on burnout. Furthermore, in the old age group (> 49 years) job demand has a positive and significant effect on burnout. Based on these results, it can be seen that in all age groups, job demand has a positive and significant effect on burnout, so it can be concluded that, job demand has a positive and significant effect on burnout in different age groups.

In the young age group, job resource has a negative and significant effect on burnout. In the middle age group (35 - 49 years), the results of the analysis showed that job resources had a positive and significant effect on burnout. Furthermore, in the old age group (> 49 years), job resources have a negative and significant effect on burnout. Based on these results, it can be seen that in all age groups, job resources have a negative and significant effect on burnout, so it can be concluded that, job resources have a negative and significant effect on burnout in different age groups.

Further research can be done by adding research variables that are thought to affect the burnout of teachers, further research can also be done by conducting research in different samples.
[37] Mc-Lean l, Abry T, Taylor M & Gaias L. 2019. The Influence of Adverse Classroom and School Experiences on First Year Teacher Mental Health & career Optimism. Teaching and Teacher education. 87 (2020) 102956