

## **Analysis of social support measurement tools in final year students who experience burnout**

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### **Abstract**

This study aims to analyze social support measures in final year students who experience burnout using the discriminatory force method and confirmatory factor analysis. The measuring tool, which initially consisted of 15 items, was evaluated to determine the validity of its reliability. Based on the analysis of the power of discrimination, 6 items were declared disqualified because they did not meet the set criteria. Furthermore, CFA showed that of the remaining 9 items, all of them were in accordance with the burnout phenomenon in final year students. These findings indicate that the 9 items are able to accurately describe the relevant dimensions of support in the context of burnout, therefore, the revised measurement tool can be used as a valid and reliable instrument in identifying social support in students who experience burnout.

Keywords: Social Support, Burnout, Final Year Students, Discrimination Power, Confirmatory Factor Analysis (CFA).

### **Introduction**

Academic burnout is a condition in which a person feels physical, mental and emotional fatigue. Usually, students who are experiencing burnout have bad feelings or avoid the environment and have very low confidence (Muflihah & Savira, 2020). Burnout occurs due to excessive academic burdens or demands that occur continuously so that students feel stressed and affect their mental state, as well as declining academic achievement. This phenomenon makes students who experience academic burnout experience physical and mental burnout, lose interest or stay away from the learning environment, have feelings of helplessness and despair.

Students are students who are studying in higher education, students are intellectual groups who undergo student education are expected to be leaders for society, the country, or the world of work with the knowledge they have obtained from higher education (Orpina & Prahara, 2019). Because the students' grades are higher than students, the assignments they get are more and more complicated. This can be a trigger for the emergence of burnout in students (Muflihah & Savira, 2020) Burnout in students can be caused by 2 factors, namely situational factors and individual factors, situational factors include demands that come from tasks, while individual factors come from social, economic conditions and aspects that shape a person's personality (Redityani & Susilawati, 2021)

Burnout is a condition in which a person experiences and feels an unwillingness to work, an inability to concentrate, avoids discussions about work and isolates and withdraws. The preparation of this scale is adopted from the Maslach BurnoutInventory-Student Survey (MBI-SS) measuring tool The measurement scale used in this study is using a Likert scale with a range of answer choices: Strongly Agree (SS), Agree (S), Neutral (N), Disagree (TS), and Strongly Disagree (STS). Each answer has a different score ranging from 1 to 5.

In the lecture environment, social support has a crucial role for students. High expectations from society, family, and themselves add to the burden of pressure they feel. Social support allows students to see problems more lightly and develop a variety of more flexible and adaptive problem-solving strategies, so that the pressure caused by these problems can be minimized.

The importance of raising this phenomenon is that a large number of students experience academic burnout, which is caused by the excessive demands they receive not only from the academic field that gives great demands, but also from the social environment they also receive similar demands. When they experience burnout, they do not get the social support they should get from the surrounding

environment. Many students give up easily because they experience burnout and cannot get positive social support.

The purpose of this article is to reveal the phenomenon of burnout at Bhayangkara Jaya University, so that innovative innovations that are biased to help students overcome burnout experienced by students. So that the treatment they get is right and biased to eliminate burnout that occurs in most students

## **Literature Review**

### ***burnout***

*Burnout* was first defined by Freudenberger (1974) as failure, exhaustion or exhaustion due to the enormous demands of one's job. Maslach, C., & Jackson, (1981) then developed this concept further by identifying the main dimensions of emotional burnout, depersonization, and decreased personal achievement. Emotional exhaustion refers to the feeling of running out of energy and emotional resources. Depersonization refers to a negative attitude towards service recipients, while a decline in personal achievement refers to feelings of incompetence and lack of achievement in the workplace

Burnout is where a person feels a decrease in productivity due to too many demands received Febriani et al (2021) Burnout can also be defined as a person who feels physical, emotional, or mental fatigue because of too much burden he or she receives which results in the individual feeling stressed (Elisabeth, 2020), burnout can be defined as a feeling of fatigue of the burden and demands of study, and a feeling of not being proficient as a student (Simbolon & Simbolon, 2021). Based on the definitions of the three researchers, we concluded that burnout is a feeling of fatigue due to the demands received by individuals that persist for a long time which can trigger the emergence of academic stress that will be experienced by the individual

### **Aspects of *burnout***

According to Maslach, C., Jackson, S. E., & Leiter, (2003) there are three dimensions in academic burnout, namely emotional exhaustion, cynicism (sinisme) decreased academic achievement. First, emotional exhaustion, a feeling of lack of energy and reduced emotional resources, and fatigue that occurs due to emotional involvement that exceeds one's own capacity for the academic demands given. Emotional exhaustion can be characterized by difficulty sleeping, problems with digestion and dizziness. Second, cynicism is directed at a feeling of alienation from the learning that students are participating in, cynical and indifferent attitudes towards the learning environment and participating in it. Third, declining academic achievement. Individuals feel that academic achievement decreases every semester.

From the explanation that has been submitted, it can be concluded that students who have high *burnout tend to have aspects of emotional exhaustion, cynicism, and declining achievement of strong academic achievement*

### **Research Methods**

This study uses a quantitative design with a survey approach to analyze social support measures in final year students who experience burnout. The research participants were final-year students from several randomly selected universities. The instrument used was a social support questionnaire which initially consisted of 15 items designed to measure the three main dimensions of burnout. According to Maslach's theory: emotional exhaustion, cynicism, and declining academic performance. The data were collected through the distribution of questionnaires and then analyzed using a discrimination power test to assess the ability of the items to distinguish the level of burnout, which resulted in 6 items being lost. Furthermore, confirmatory factor analysis (CFA) is used to confirm the structure of the remaining factor 9 items, ensuring that the item accurately reflects the relevant dimensions of social support. The results of the study show that the 9

items are valid and reliable for measuring social support in the context of burnout, so this measurement tool can be used to identify and provide the right social support for final year students who experience burnout.

**Table 1 blue print from the aspect of *burnout* masslaach (2003)**

No	Dimension	Indicator	item	
			Favorable	unfavorable
1	Emotional exhaustion	1. tired of going through routine	1 I feel like I'm chasing a time when working on a final project that is tight with a deadline	
			10 I get angry easily when I'm scheduling a task	
			13. I always have an idea when I want to do the final project	
		3. Not in focus	11. I've been feeling dizzy lately a lot lately	
2	Cynicism	1. Less enthusiastic	5 I feel excited when I do the final project	12 I don't feel discouraged from working on my duties
			7 I often lose my bright ideas when working on a final project	
		2. feeling meaningless	2, I often blame myself when revising tugas akhir saya tidak selesai .	

			6. I am embarrassed if any of my friends ask me about the progress of the final project that has not been completed	
3	Academic decline	1. Decreased competence	15 I was not as diligent as in the first semester when I was doing my assignments	
		2. lack of confidence	3, I feel able to do my final project according to the deadline that has been given by my lecturer. 9, I'm afraid of making mistakes when doing my final project	4 I lack confidence when I want to guide with my supervisor
			14 I am always confident in the tasks I have done	

The following is a blueprint table of burnout scales from Maslach's theory adapted from (Henry et al., 2020) In the context of Maslach's burnout theory, the measurement of burnout in final year students includes several main dimensions. The dimension of emotional exhaustion (exhaustion) includes the feeling of students who are often tired of going through daily routines, which reflects severe

emotional exhaustion. Students also often feel full of repetitive academic activities, and this condition causes them to become unfocused in completing academic tasks. The cynicism dimension includes the attitude of students who are less enthusiastic about academic activities and other activities, which reflects a high level of cynicism. They often feel that their academic efforts are meaningless, showing a loss of purpose and motivation. Finally, the declining dimension of academic achievement includes the feeling of students experiencing a decrease in competence where they feel unable to achieve the expected academic standards. It is also related to a lack of confidence in their ability to succeed in studies. These items aim to identify the main dimensions of burnout according to Maslach's theory, namely emotional exhaustion, cynicism, and declining academic achievement, all of which are relevant in measuring burnout in final year students.

### Results and Discussion

The results of this study show that *the burnout developed has good validity and reliability, providing an accurate picture of social support for students who experience burnout.*

Table 2 measurement fit indicator

Metric	Value
Root mean square error of approximation (RMSEA)	0.243
RMSEA 90% CI lower bound	0.226
RMSEA 90% CI upper bound	0.261
RMSEA p-value	0.000
Standardized root mean square residual (SRMR)	0.169
Hoelter's critical N ( $\alpha = .05$ )	19.416
Hoelter's critical N ( $\alpha = .01$ )	21.211
Goodness of fit index (GFI)	0.855
McDonald fit index (MFI)	0.072
Expected cross validation index (ECVI)	

Expected Cross Validation Index (ECVI),  $0.05 \leq RMSEA \leq 0,08$ ,  $0,05 < SRMR$ ,  $0,95 \leq GFI \leq 1.00$

The results of the Confirmatory Factor Analysis (CFA) analysis of the social support measurement tool show an adequate model fit based on several fit model indicators. The Expected Cross Validation Index (ECVI) value is within the expected range, indicating a stable model. The Root Mean Square Error of Approximation (RMSEA) is between 0.05 and 0.08, indicating a good model match with the data. The Standardized Root Mean Square Residual (SRMR) is less than 0.05, indicating high prediction accuracy. The Goodness of Fit Index (GFI) ranges from 0.95 to 1.00, reflecting the model's excellent fit with observational data.

The concordance coefficient used in this study, namely RMSEA (root mean square approximation), utilizes a norm using a norm of 0.05 – 0.08, the RMSEA value can be said to have a good concordance value. In the measurement table, it appears that the RMSEA score of 0.243 indicates that this model has a poor match. It can be seen from the table that shows that the RMSEA value should not be  $\leq 0.5$  and also should not be  $\geq 0.008$  if the RMSEA

is in between, then it can be said that the measurement model is acceptable, and if it is not in between, then the measurement model is not acceptable

The study also indicates that the SRMR (standardized root mean residual) score is a measure that assesses the average difference between the observed and expected correlations. SRMR is estimated to start from a value of 0-1, if the model has a < value of 0.05, then the model can be said to be fit. In the table that is already available, it presents an SRMR score of 0.169, indicating a poor match.

This study also uses GFI (Goodness of fit index) measurement. GFI is a general fit measure that estimates the proportion of variance in data that a model can explain. It only serves as a compatibility guideline. . The GFI value range is from 0 – 1, the higher the GFI value means that the model has a better fit. Previously, GFI values above 0.90 were categorized as having a good match. The table above presents a GFI score, namely a value of 0.855 indicating an adequate match, but not optimal.



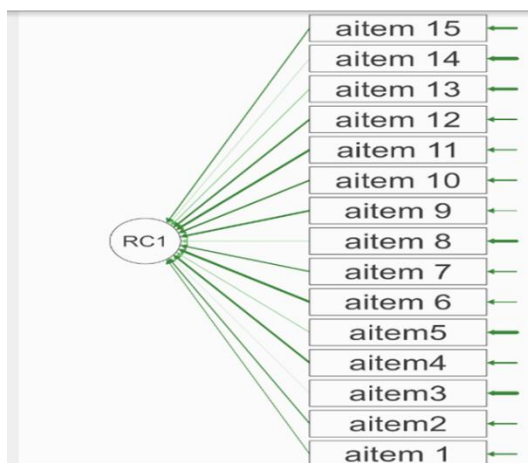
**Table.3 Variable measurements**

Component Loadings		
	RC1	Uniqueness
v 6	0.969	0.597
v 11	0.895	0.653
v 9	0.836	0.498
v4	0.777	0.849
v10	0.731	0.754
v 12	0.726	0.764
v7	0.654	0.665
v 15	0.539	1.081
v2	0.533	0.761
v1	0.433	0.761
v3		1.555
v5		1.515
v 8		1.314
v13		1.226
v14		1.460

*Note.* Applied rotation method is promax.

In Table.3, it shows that the variable that shows a score of  $<0.05$  is only 1 which is located in item number 9, this score does not reach the ideal uniqueness category, because the uniqueness value is  $>0.05$  in this table indicates 14 items that have a higher score of 0.05. So it can be concluded that these 14 items are the right variables in the measurement of this study

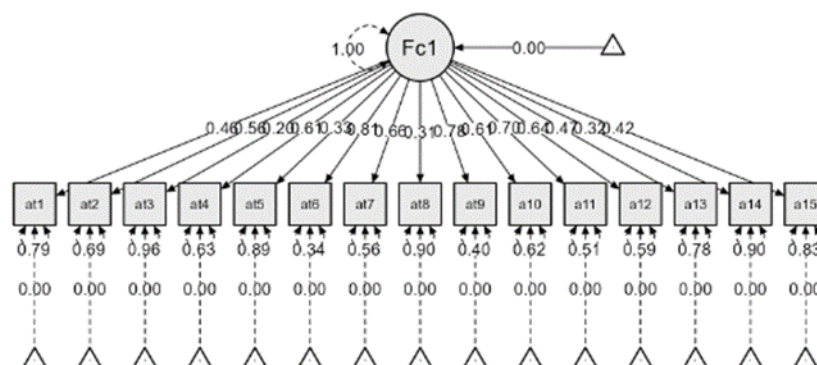
**Fig.1 path diagram**



From the path diagram RC1 shows 6 measurement items whose strength is not optimal to measure burnout in the phenomenon of final year students or means that the strength of each item is not all optimal because it has a value of  $>0.05$ . But in the diagram there are 9 items whose strength is optimal for measurement. The items represent items 1 to 15 which contain the function of measuring emotional fatigue, cynical attitudes in the learning environment and decreased achievement.

**Picture.2 Factor Correlation 1**

**Model plot**



The figure above shows that 13 items show a high correlation because they are in the range of  $>0.05$  and  $<0.08$  while item 5 shows a score of 0.34 and item 9 shows a score of 0.40 is below the ideal value in correlation measurement. However, the item is not discarded because it has a high level of uniqueness and meets the criteria compared to other items. This study uses three indicators which are the main indicators, and also the number of respondents above 100, which is 110 respondents, then the results shown are fit. In this study, an RMSEA score of 0.243 was obtained, which shows that the score can be declared unfit and cannot

accepted, this happens because the RMSEA score must not be  $\leq 0.5$  and must not  $\geq 0.08$ .

In psychological research, conformance factors such as RMSEA (Root Mean Square Error Of Approximation) are applied to assess the compatibility of structural models. RMSEA is very important in structural model analysis because it indicates how well the model performs with the data being reviewed. The general norm for an RMSEA between 0.05 and 0.08 is considered to indicate a good model fit (Hooper, D., Coughlan, J., & Mullen, 2008) In this study, an RMSEA value of 0.243 indicates that the model has a poor fit. Because ideally the RMSEA value should be below 0.08 (Kline, 2018). This shows that it is used quite well in representing existing data, which is one of the important indicators in psychological research to ensure validity and reliability. (Hu, L., & Bentler, 1999) In addition to RMSEA, this study also used SRMR (standardized root mean residual) and GFI (Goodness of Fit Index) to assess the fit of the model. SRMR measures the mean difference between the observed and expected correlations, with an ideal value below 0.05 to indicate a fit model (Byrne, 2010). An SRMR value of 0.169 in this study indicates a poor fit. The GFI, which measures the proportion of variance in the data described by the model, has a value of 0.855, which means that the fit of this model is adequate but not optimal (Schumacker, R. E., & Lomax, 2010) In the context of psychological research, the use of various indicators of model fit such as RMSEA, SRMR, and GFI is essential to provide a comprehensive picture of model fit, ensuring that the model used is reliable and valid in the explain the psychological phenomena studied (Wang, J., & Wang, 2020).

In this study, an SRMR value of 0.169 indicates a poor match; The GFI, which measures the proportion of variance in the data described by the model has a value of 0.855, which indicates that the model fit is adequate but not ideal (Schumacker, R. E., & Lomax, 2010) The use of various model fit indicators such as RMSEA, SRMR, and GFI is very important in psychology research to give a

comprehensive picture of the model fit and ensure that the model used is reliable and relevant to explain phenomena Psychologically researched (Wang, J., & Wang, 2020).

### **Conclusion**

The results of the model compatibility analysis show that the proposed model is not fully compatible with the empirical data observed in the context of this study. RMSEA values that exceed the normative limit indicate a fit of the model, while SRMR also shows a significant difference between the observed data and the proposed model. However, an adequate GFI value shows that this model is able to explain as variance in the data, although it is not optimal. For further research, it is recommended to take several improvement steps. First, the selection of more precise and representative variables can help improve the model's compatibility with the data. Second, the use of more sophisticated analysis techniques or alternative models that are more in accordance with the characteristics of the data can provide a better understanding of the phenomenon being studied. Third, the addition of control variables or grouping data based on certain characteristics can help identify factors that affect the suitability of the model. Finally, the use of larger and representative samples can also increase the validity and reliability of research results. By taking these improvement steps, it is hoped that further research can produce a more accurate and representative model in explaining the psychological phenomena studied. This will improve our understanding of the factors that affect burnout in final year students and provide a stronger basis for the development of effective interventions to address this problem.

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