

PSYCHOLOGICAL CONDITIONS AND COMMUNICATION LOAD OF EDUCATORS ON DIGITAL STRESS

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Abstract: *This study aims to describe, calculate and analyze the effect of Social Pressure, Communication Load, fear of being left behind on Lecturer's Perceived Stress. The model used in this study is a causal model or relationship and influence, or also known as path analysis. To test the hypothesis that will be proposed in this study, the model fit analysis technique used is SEM (Structural Equation Modeling) which is operated using the SMARTPLS 3.0 program. The results of the study prove that there is a positive and significant influence between Social Pressure, Communication Load, fear of being left behind on Perceived Stress. The results of this study are expected to be used as library materials and information in the development of science, especially in the field of human resource management and especially in developing theories in overcoming digital stress for both lecturers and other readers.*

Keywords: *Social Pressure, Communication Load, Fear Of Missing Out, Perceived Stress, Media Online Multitasking*

1. Preliminary

The development of Information and Communication Technology is so fast and its progress is so rapid that it is unavoidable. The percentage of the population using cellular phones continues to increase, until in 2019 it reached 63.53 percent (Central Bureau of Statistics, 2020). In line with the presentation of the use of ICT, the use of the internet has also increased. Currently, the number of internet users in Indonesia until the second quarter of 2020 reached 196.7 million or 73.7 percent of the population (Herman, 2020).

In the world of education, ICT can improve the quality of teaching, learning and management in schools thereby helping to raise educational standards (Livingstone, 2012). In general, there are problems that often approach educators related to the use of ICT, especially in digital learning activities or better known as distance learning (PJJ),

including lack of support (lack of support), lack of trust (lack of confidence), and lack of equipment (lack of equipment)(Nikolopoulou, 2016). The students' lack of material absorption ability, and the lack of ability to understand information technology are the roots of the emergence of perceived stress. Perceived stress by educators if left unchecked will cause depression, anxiety and ongoing fatigue.

In this study, several factors that allegedly affect Perceived Stress by educators in the era of digitalization of education are Social Pressure, fear of loss, Communication Load and Media Online Multitasking. Several previous studies have looked at the effect of social pressure, fear of loss, Communication Load and Media Online Multitasking on Perceived Stress.(Jeong, S.-H., & Fishbein, 2007; Misra & Stokols, 2012; Przybylski, AK, Murayama, K., DeHaan, CR, & Gladwell, 2013; Reinecke et al., 2017; Thomée et al., 2012).

The novelty in this study is that the level of Perceived Stress will be calculated based on years of service, age and gender. Age characteristics in this study were used to see whether or not there was an increase in Perceived Stress in cognitive capacity.

THEORETICAL BASIS

H1: Social Pressure Has a Positive and Significant Effect on Communication Load

In this study, the researcher tries to overcome Social Pressure in the practice of using ICT which is potentially harmful to a person's psychological condition. Previous research has shown that the onset of Communication Load is characterized by high social norms and expectations. Violation of social expectations in communication interactions, such as not responding to emails (commonly known as slow responses) from colleagues or relatives for a long period of time can result in negative evaluations of the email sender towards the email recipient (Kalman, YM, & Rafaeli, 2011). Other examples related to Social Pressure can be seen through online communication, such as the use of social media (Quan-Haase, A., & Young, 2010). Therefore, previous research states that perceived social pressure to always be available has a significant impact on communication patterns. Supporting this reason, Misra & Stokols (2012) found that perceived pressure to respond to online communications was a significant predictor of information load.

H2: Communication Load Has a Positive and Significant Effect on Perceived Stress

Several previous studies have investigated the effects of information overload (communication load) outside the work context. In a survey study with 600 student participants, LaRose & Hales (2014) explores the effect of “Connection Overload” arising from communication demands resulting from the use of social media and email. The results show that less self-regulation of Internet use and communication demands are significant predictors of perceived stress.

In a perspective panel study with 1,127 students Thomée & Hagberg, (2007) found that high levels of ICT use (computers and mobile phones) significantly predicted increased stress and depression at one year of follow-up. Two additional survey studies with more than 4,000 young adults in Sweden found significant detrimental effects of high accessibility demands caused by frequent cell phone and computer use in the form of sleep disturbances, stress, and depression. (Thomée et al., 2012).

H3: The Fear Of Missing Out Has a Positive and Significant Effect on Media Online Multitasking

Recent research has linked online communication and social media use with fear of missing out (Przybylski, AK, Murayama, K., DeHaan, CR, & Gladwell, 2013). Fear of being left behind is defined as "a widespread fear of a person who considers himself or herself to have no valuable experience" (Przybylski, AK, Murayama, K., DeHaan, CR, & Gladwell, 2013). Social media has provided easy access to social information and an easy way to stay socially engaged (Quan-Haase & Young, 2010). The fear of being left behind is characterized by a “desire to stay connected to what others are doing” (Przybylski, AK, Murayama, K., DeHaan, CR, & Gladwell, 2013).

Previous research has found a strong empirical relationship between the fear of missing out and the intensity of social media use (Przybylski, AK, Murayama, K., DeHaan, CR, & Gladwell, 2013). These results suggest that the fear of missing out should be positively related to the frequency of online communication and examination behavior, which results in higher levels of Communication Load. Previous research has also provided evidence linking the fear of missing out on Internet multitasking.

Research on the topic of the Fear Of Missing Out was also conducted by (Reinecke et al., 2017) This study investigates the psychological health effects and motivational origins of digital stress based on a representative survey of 1,557 German Internet users between the ages of 14 and 85. The results show that there is a positive effect of the Fear Of Missing Out on Media Online Multitasking. being left behind is a significant motivational driver of Media Online Multitasking.

H4: Media Online Multitasking Positively and Significantly Affects Perceived Stress

The independent variable of ICT-related stress discussed in this study is Internet multitasking. Previous studies have discussed Media Online Multitasking both in terms of the simultaneous use of two or more different media stimuli (Parry & Ryan, 2013) and the combination of media use and other non-media activities (Jeong, S.-H., & Fishbein, 2007). In this study, we refer to Internet multitasking as the combination of Internet use with other media or non-media activities. In a time when Internet access is ubiquitous, Internet multitasking has become a common phenomenon.

Furthermore, in a survey among 547 adolescents in the United States by (Jeong, S.-H., & Fishbein, 2007). most of the participants reported that they frequently used the Internet during homework (24%) or interactions with friends (22%). Furthermore, in an experiential sampling study with 189 undergraduate students, (Moreno, MA, Jelenchick, L., Koff, R., Eikoff, J., Diermyer, C., & Christakis, 2012) found that their participants multi-tasked 56.5% of their time online. More research on media multitasking (Jeong, S.-H., & Fishbein, 2007; Reinecke et al., 2017) based on the limited capacity model of information processing (Lang, 2000).

2. Research Methods

The research method used is a survey method. The model used in this study is a causal modeling or relationship and influence, or also known as path analysis. The technique of model fit analysis used is SEM (Structural Equation Modeling) which is operated using the SMARTPLS 3.0 program. The population in this study were all Educators (Lecturers) from State and Private Universities. The research sample amounted to 200 respondents.

Data collection techniques in this study used a questionnaire with a 5-point Likert scale (Strongly disagree, Disagree, Hesitate, Agree, Strongly Agree). The questionnaire used in this study is a replica of the expert questionnaire where Social Pressure (Fishbein and Ajzen, 2010); fear of missing out (Przybylski & Gladwell, 2013); Communication Load (LaRose & Hales, 2014); Media Online Multitasking (Jeong & Fishbein, 2007; Shih, 2013); Perceived Stress (S. Cohen, Kamarack, & Mermelstein, 1983).

3. Results And Discussion

Description Analysis

Gender

The percentage of male respondents is 47.28% and female respondents are 52.72%. This shows that the number of lecturers and non-lecturers who are used as research respondents is dominated by women.

Tabel 1. Gender

Gender	Amount	Percentage
Male	97	48.50%
Female	103	51.50%
Total	200	100.00%

Source: Research Results (2022).

Age

Research respondents were dominated by the age of 36-40 years with a percentage of 47.96%, followed by respondents aged 31-35 years as much as 25.51%, and ages 41-45% with a percentage of 13.95%. The various age characteristics of respondents will affect the respondents' answers in determining the level of stress on the use of online media in teaching and learning activities.

Tabel 2. Age

Age	Amount	Percentage
25-30 Years	9	4.50%
31-35 Years	38	19.00%
36-40 Years	95	47.50%
41-45 Years	34	17.00%
> 45 Years	24	12.00%
Total	200	100.00%

Source: Research Results (2022).

Working Period

Research respondents were dominated by lecturers with a tenure of more than 5 years with a percentage of 53.06% and 2 to 5 years with a percentage of 40.48%, while lecturers with a working period of less than 2 years were only 6.46%. One of the factors that influence a person's work behavior but indirectly and slowly makes behavioral changes in that person, namely the experience factor which is the experience that a person gains from the work period so as to shape behavior in his organizational life (Thernando Maulana, 2018). Respondents are dominated by lecturers who have worked for more than 5 years and are expected to be able to overcome things that affect the level of stress on the digitalization of education.

Table 3. Working Period

Years of service	Amount	Percentage
< 2 Years	11	5.50%
2 to 5 Years	64	32.00%
> 5 Years	125	62.50%
Total	200	100.00%

Source: Research Results (2022).

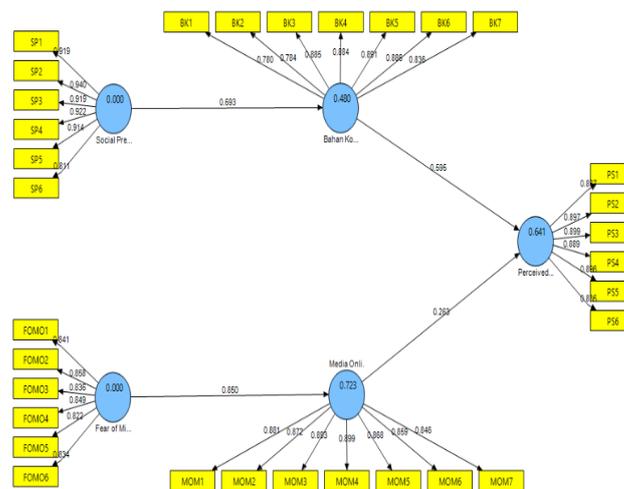
PLS-SEM

PLS-SEM is divided into 2 evaluation models, namely the evaluation of the outer model (measurement model) and the inner model (structural model). The evaluation of the outer model consists of convergent validity (outer loadings > 0.4 and AVE > 0.5), reliability (composite reliability > 0.6), and discriminant validity. There is also an evaluation of the inner model to test the significance of the effect of exogenous (independent) variables on endogenous (dependent) variables and to see the goodness of the model (goodness of fit) based on the value of R² (coefficient of determination).

Outer Model

The following figure is a path diagram of the research model consisting of Social Pressure (SP), Communication Load (BK), Fear of Missing Out (FOMO), Media Online Multitasking (MOM), and Perceived Stress (PS).

Social Pressure consists of 6 measurement indicators, *Communication Load* consists of 7 measurement indicators, *Fear Of Missing Out* consists of 6 indicators, *Media Online Multitasking* with 7 indicators, and *Perceived Stress* consists of 6 indicators.



Source: Research Results (2022).

Figure 1. Outer Model

Based on the evaluation of the outer model above, the first thing that needs to be seen and evaluated is the value of loadings or outer loadings which shows the validity of the measurement indicators. An indicator is declared valid if it has outer loadings above 0.4. In this research model, all indicators have outer loadings values above 0.4 so that these indicators have been validly used to measure latent variables.

Table 4 Evaluation of The Initial Outer Model

Indicator	Loadings	Information
BK1	0.780	Valid
BK2	0.784	Valid
BK3	0.884	Valid
BK4	0.884	Valid
BK5	0.891	Valid
BK6	0.886	Valid
BK7	0.836	Valid
FOMO1	0.841	Valid
FOMO2	0.858	Valid
FOMO3	0.836	Valid
FOMO4	0.849	Valid
FOMO5	0.822	Valid
FOMO6	0.834	Valid
MOM1	0.881	Valid
MOM2	0.872	Valid
MOM3	0.893	Valid
MOM4	0.899	Valid
MOM5	0.867	Valid
MOM6	0.859	Valid

MOM7	0.846	Valid
PS1	0.887	Valid
PS2	0.897	Valid
PS3	0.899	Valid
PS4	0.889	Valid
PS5	0.896	Valid
PS6	0.835	Valid
SP1	0.919	Valid
SP2	0.940	Valid
SP3	0.919	Valid
SP4	0.922	Valid
SP5	0.914	Valid
SP6	0.811	Valid

Source: Research Results (2022).

Table 5 Evaluation of Outer Model

Latent Variable	Indicator	Loadings	AVE	Composite Reliability	Discriminant Validity
<i>Communication Load</i>	BK1	0.780	0.724	0.948	Yes
	BK2	0.784			
	BK3	0.884			
	BK4	0.884			
	BK5	0.891			
	BK6	0.886			
	BK7	0.836			
<i>Fear Of Missing Out Out</i>	FOMO1	0.841	0.706	0.935	Yes
	FOMO2	0.858			
	FOMO3	0.836			
	FOMO4	0.849			
	FOMO5	0.822			
	FOMO6	0.834			
<i>Media Online Multitasking</i>	MOM1	0.881	0.764	0.958	Yes
	MOM2	0.872			
	MOM3	0.893			
	MOM4	0.899			
	MOM5	0.867			
	MOM6	0.859			
	MOM7	0.846			
<i>Perceived Stress</i>	PS1	0.887	0.781	0.955	Yes
	PS2	0.897			
	PS3	0.899			

Latent Variable	Indicator	Loadings	AVE	Composite Reliability	Discriminant Validity
	PS4	0.889	0.819	0.964	Yes
	PS5	0.896			
	PS6	0.835			
<i>Social Pressure</i>	SP1	0.919			
	SP2	0.940			
	SP3	0.919			
	SP4	0.922			
	SP5	0.914			
	SP6	0.811			

Source: Research Results (2022).

In discriminant validity with cross loadings, the value of loadings indicators on a latent variable must be higher than the value of loadings indicators on other latent variables.

Table 6 Cross loadings (Discriminant Validity)

	<i>Communication Load</i>	<i>Fear Of Missing Out</i>	<i>Media Online Multitasking</i>	<i>Perceived Stress</i>	<i>Social Pressure</i>
BK1	0.780	0.614	0.585	0.762	0.624
BK2	0.784	0.615	0.569	0.777	0.559
BK3	0.885	0.778	0.601	0.631	0.571
BK4	0.884	0.737	0.560	0.611	0.598
BK5	0.892	0.769	0.611	0.605	0.577
BK6	0.886	0.763	0.606	0.606	0.593
BK7	0.836	0.778	0.580	0.588	0.580
FOMO1	0.809	0.841	0.651	0.609	0.628
FOMO2	0.778	0.858	0.656	0.614	0.603
FOMO3	0.761	0.836	0.629	0.596	0.622
FOMO4	0.782	0.849	0.623	0.623	0.584
FOMO5	0.589	0.822	0.825	0.552	0.574
FOMO6	0.610	0.834	0.828	0.613	0.590
MOM1	0.631	0.789	0.881	0.604	0.623
MOM2	0.614	0.765	0.872	0.615	0.583
MOM3	0.575	0.741	0.893	0.582	0.568
MOM4	0.625	0.758	0.899	0.596	0.623
MOM5	0.570	0.718	0.868	0.540	0.591
MOM6	0.609	0.707	0.859	0.584	0.582
MOM7	0.613	0.718	0.846	0.612	0.625
PS1	0.643	0.586	0.566	0.887	0.522
PS2	0.658	0.627	0.613	0.897	0.544
PS3	0.671	0.608	0.580	0.899	0.526

PS4	0.713	0.649	0.605	0.889	0.566
PS5	0.717	0.692	0.655	0.896	0.573
PS6	0.716	0.618	0.561	0.835	0.554
SP1	0.637	0.622	0.610	0.567	0.919
SP2	0.641	0.665	0.629	0.592	0.940
SP3	0.615	0.641	0.613	0.546	0.919
SP4	0.639	0.640	0.646	0.585	0.922
SP5	0.640	0.653	0.611	0.558	0.914
SP6	0.587	0.657	0.617	0.519	0.811

Source: Research Results (2022).

Discriminant validity on the Fornell-Larcker criteria is met if the square root value of the AVE (diagonal value in the matrix) is higher than the correlation value from one latent variable to another latent variable.

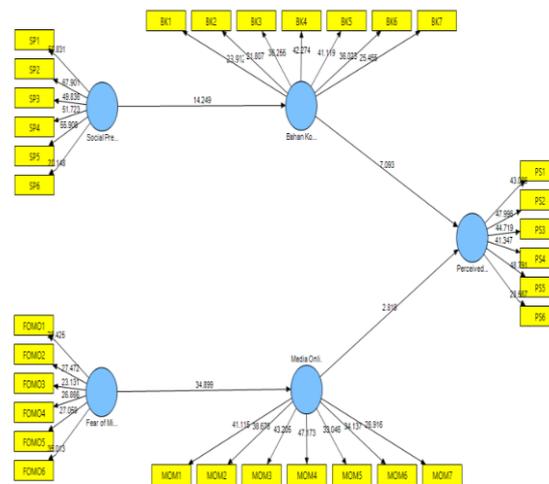
Table 7 Fornell-Larcker Criteria (Discriminant Validity)

	<i>Communication Load</i>	<i>Fear Of Missing Out</i>	<i>Media Online Multitasking</i>	<i>Perceived Stress</i>	<i>Social Pressure</i>
BK	0.851				
FOMO	0.847	0.840			
MOM	0.693	0.850	0.874		
PS	0.778	0.714	0.676	0.884	
SP	0.693	0.714	0.686	0.620	0.905

Source: Research Results (2022).

Inner Model Evaluation

In the evaluation of the inner model (structural model) a significance test or hypothesis testing is carried out regarding the effect of exogenous (independent) variables on endogenous (dependent) variables, both direct and indirect effects and total effects.



Source: Research Results (2022).

Figure 2 Inner Model

Direct Effect

The results of the evaluation of the inner model on the direct effect of exogenous variables on endogenous variables are presented in the table below. The effect of exogenous variables is significant if it has a t-value > 1.96 (significant level 5%).

Table 8 Direct Effect of Exogenous Variables on Endogenous Variables

	Estimate	Std. Error	T-value	Information
Social Pressure → Communication Load	0.693	0.049	14,249	Significant
Fear Of Missing Out Out → Media Online Multitasking	0.850	0.024	34,900	Significant
Media Online Multitasking → Perceived Stress	0.263	0.093	2.818	Significant
Communication Load → Perceived Stress	0.595	0.084	7.093	Significant

Source: Research Results (2022).

Based on the table above, it is found that social pressure has a significant and positive effect on communication load with a magnitude of 0.693. Fear of missing out out has a significant and positive effect on Media Online Multitasking with a magnitude of 0.850. Communication load and Media Online Multitasking have a significant effect on perceived stress with each effect magnitude of 0.595 and 0.263, meaning that communication load has a greater influence on perceived stress compared to Media Online Multitasking.

Total Effect (Total Effect)

The table below is a test of the total significance of the effect of exogenous variables on endogenous variables.

Table 9 Effect of Total Exogenous Variables on Endogenous Variables

	Estimate	Std. Error	T-value	Information
Social Pressure → Communication Load	0.693	0.049	14,248	Significant
Fear Of Missing Out → Media Online Multitasking	0.850	0.024	34,900	Significant
Fear Of Missing Out → Perceived Stress	0.224	0.079	2.832	Significant
Media Online Multitasking → Perceived Stress	0.263	0.093	2.818	Significant
Communication Load → Perceived Stress	0.595	0.084	7.093	Significant
Social Pressure → Perceived Stress	0.412	0.064	6.437	Significant

Source: Research Results (2022).

The results show that each exogenous variable has a significant and positive effect on each endogenous variable. This can be seen from the t-value which is greater than 1.96. The biggest influence of exogenous variables is fear of missing out on Media Online Multitasking with a magnitude of 0.850, then the effect of social pressure on communication load with a magnitude of 0.693, and the next is the influence of communication load on perceived stress with a magnitude of 0.595.

R² (Coefficient of determination)

R-square or commonly known as the coefficient of determination is a measure of the goodness of fit. This coefficient of determination explains the extent to which the variance of the endogenous variable can be explained by the exogenous variable. The table below is a table of the coefficients of determination of Communication Load, Media Online Multitasking, and Perceived Stress.

Table 10 Goodness of Fit – R Square

	R Square
Communication Load	0.480
Media Online Multitasking	0.722
Perceived Stress	0.641

Source: Research Results (2022).

Based on the table above, it can be explained that the coefficient of determination for the communication load variable is 0.480, meaning that the

exogenous social pressure variable is only able to explain or predict the communication load of 48%. The coefficient of determination for Media Online Multitasking is 0.722, meaning that the fear of missing out is able to describe Media Online Multitasking by 72.2% and the rest is explained by other variables not examined. Meanwhile, perceived stress can only be explained by the four variables of social pressure, communication load, fear of missing out, and Media Online Multitasking by 64.1% and the rest is explained by other variables not examined in this study.

The results of the analysis above show that there are many other things other than the four variables of social pressure, communication load, fear of missing out, and Media Online Multitasking that affect perceived stress.

Discussion

Table IV.11 Direct Effect

	Estimate	Std. Error	T-value	P. Value	Information
<i>Social Pressure → Communication Load</i>	0.693	0.049	14,249	0.000	Significant
<i>Fear Of Missing Out Out → Media Online Multitasking</i>	0.850	0.024	34,900	0.000	Significant
<i>Media Online Multitasking → Perceived Stress</i>	0.263	0.093	2.818	0.000	Significant
<i>Communication Load → Perceived Stress</i>	0.595	0.084	7.093	0.000	Significant

Source: Research Results (2022).

H1: Social Pressure Has a Positive and Significant Effect on Communication Load

The effect of Social Pressure on Communication Load in this study is said to be significant with a t-statistic of 14.249 (> 1.96) and P Values of 0.000 <0.05. The initial estimated value of the positive sample is 0.850 which indicates that the direction of influence between Social Pressure and Communication Load is positive and significant.

Therefore, previous research states that perceived social pressure to always be available has a significant impact on communication patterns. Supporting this reason, Misra & Stokols (2012) found that perceived pressure to respond to online communications was a significant predictor of information load. Thus, their expectation of social availability to the environment places Internet users under perceived pressure to respond to online communications immediately (hence, increasing Communication

Load) and regardless of situational demands or conflicting activities. It can be said that the Social Pressure felt by a person in the practice of using ICT affects the Communication Load he feels.

H2: Communication Load Has a Positive and Significant Effect on Perceived Stress

The influence of Communication Load on Perceived Stress in this study is said to be significant with a t-statistic of 7.093 (> 1.96) and P Values of $0.000 < 0.05$. The initial estimated value of the positive sample is 0.595 which indicates that the direction of influence between Communication Load on Perceived Stress is positive and significant.

Several previous studies have investigated the effects of information overload (communication load) outside the work context. In one study, LaRose & Hales (2014) stated that less self-regulation of online media use and communication demands were significant predictors of perceived stress. The existence of stress experienced by a person is usually reflected in the form of sleep disturbances, easy emotions and depression (Thomé et al., 2012).

H3: The Fear Of Missing Out Has a Positive and Significant Effect on Media Online Multitasking

The effect of The Fear Of Missing Out on Media Online Multitasking in this study is said to be significant with a t-statistic of 34.900 (> 1.96) and P Values of $0.000 < 0.05$. The initial estimated value of the positive sample is 0.850 which indicates that the direction of the influence between The Fear Of Missing Out on Media Online Multitasking is positive and significant.

Previous research has found a strong empirical relationship between the fear of missing out and the intensity of social media use (Przybylski, AK, Murayama, K., DeHaan, CR, & Gladwell, 2013). These results suggest that the fear of missing out should be positively related to the frequency of online communication and examination behavior, which results in higher levels of Communication Load. Previous research has also provided evidence linking the fear of missing out on online multitasking.

H4: Media Online Multitasking Positively and Significantly Affects Perceived Stress

The influence of Media Online Multitasking on Perceived Stress in this study is said to be significant with a t-statistic of 2.818 (> 1.96) and P Values of $0.000 < 0.05$. The initial estimated value of the positive sample is 0.263 which indicates that the direction of influence between Media Online Multitasking on Perceived Stress is positive and significant.

The independent variable of ICT-related stress discussed in this study is Media Online Multitasking. Previous research has addressed media multitasking both in terms of the simultaneous use of two or more different media stimuli (Parry & Ryan, 2013) and the combination of media use and other non-media activities (Jeong, S.-H., & Fishbein, 2007).

The effects of Media Online Multitasking have been discussed from a number of theoretical perspectives in previous studies. Some research (Wang et al., 2012) have referred to central inhibition theory which proposes that human information processing is limited and can only accommodate one stimulus at a time (for an overview, see (Allen & Meyer, 1990)). As a result, when two tasks need to be processed simultaneously, they have to be queued, resulting in decreased performance during multitasking. More research on media multitasking (Jeong, S.-H., & Fishbein, 2007; Reinecke et al., 2017) based on the limited capacity model of information processing (Lang, 2000).

4. Conclusions And Suggestions

Conclusion

The results show that each exogenous variable has a significant and positive effect on each endogenous variable. This can be seen from the t-value which is greater than 1.96. The biggest influence of exogenous variables is fear of missing out on Media Online Multitasking with a magnitude of 0.850, then the effect of social pressure on communication load with a magnitude of 0.693, and the next is the influence of communication load on perceived stress with a magnitude of 0.595. The results of the analysis above show that there are many other things besides the four variables of social pressure, communication load, fear of missing out, and Media Online Multitasking that affect perceived stress.

Suggestion

Characteristics of respondents in this study based on gender, age, years of service, faculty, type of work and years of service. Suggestions for further research is to update this research using each respondent's characteristics that have been described previously on digital stress levels. Years of work and gender are very interesting things to be used as intervening variables considering the previous theory stated that one of the factors that can influence behavior in organizational life is experience and personal characteristics (gender and genetics) (Thernando Maulana, 2018).

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