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THE EFFECT OF DIGITAL STRESS ON WORK ENGAGEMENT WITH SELF EFFICACY AS MODERATOR

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ABSTRACT

This research aims to see the effect of Self-Efficacy as a Moderator in the Relationship Between Digital Stress and Employee Work Engagement in the Manufacturing Industry. In this research, researchers place Digital Stress as a causal factor in the possibility of low employee Work Engagement, but it is moderated by Self-Efficacy which may have a positive influence so that work engagement remains good or increases. Participants in this research included 90 employees in the manufacturing industry with a minimum of 1 year of work and a productive age range of 17 – 56 years who were exposed to the use of digital technology in the office with a sampling technique, namely purposive sampling technique. This research uses quantitative research methods by testing relationships, interactions, or testing hypothesized models. The measuring instrument in this research uses Utrecht Work Engagement Scale (UWES-9) as a measurement of Work Engagement (α = 0.937), Digital Stressors Scale (DSS) as a measurement of Digital Stress (α = 0.957) and General Self Efficacy Scale (GSES) as a measurement of Self-Efficacy (α = 0.946). The results of this research indicate that there is an influence of Digital Stress on Work Engagement but Self-Efficacy cannot function as a moderator with a value of r = 0.323, p = 0.0 2 < 0.05, and an interaction value of P = 0.830 > 0.05.

Keywords: *Digital stress, work Engagement, self efficacy*

1. INTRODUCTION

The development of the times cannot be separated from the development of technology, which also causes the need for technology to increase. According to Gartner (2019) Technology Information and Communication (ICT) will not only be a tool for individuals but also become an important asset for many organizations around the world in 2019. Even the results through surveys on Internetworldstats (2020), the moment this is available, almost 60% of the global population have had access to the Internet. Phenomenon This supported Also with exists pandemic COVID-19 Which the more make need will technology the more increase with exists condition Work Which require employee so that still can work good in a way remote or Work from House, communication in a way online, nor exists use new technology in the workplace to facilitate more effective work processes and efficient with exists behavior social differentiation as well as reduce activity stare face to face.

In research conducted by L. Reinecke et al. (2016) that apart from effect from exists communication in a way on line in context digital, multitasking Internet Also impact on psychological health and well-being, study This Also highlighting the existence of online communication drivers on related stress ICT apart from that The research also shows that the communication burden resulting from send, accept, And inspect e - mail personal And so s damn

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media, as well as multitasking The Internet significantly increases stress and has indirect effects burden of communication and internet multitasking on fatigue and depression/ worry so that show that potency disturbance health consequence ICT on decline level well-being psychological.

Based on the results of a survey conducted by the Center of Innovation and Collaboration (CIC) PPM Management from December 2020 to January 2021, 29.7% of respondents declared his readiness in facing challenges in 2021. Meanwhile, 59.1% of respondents stated that they were in the process of preparing his company. However, the challenge of facing the increasing need for digital is also a demand in work. Job demands themselves may include all aspect context Work Which requires quite a lot of energy, such as work pressure, workload, pressure time, physical effort, complexity of tasks, conflicts with leaders and colleagues, role ambiguity, job insecurity, and various stressful events (Bakker et al., 2014; Schaufeli & Taris, 2014; Bakker, 2015; Schaufeli, 2017). Employees are also expected to be able to quickly adapt to these changes and drive productivity and efficiency to meet market trends and to be able to still be competitive in the market. However, change in organization can result in stress psychological and physique in between employees (Hylton, 2004; Day, et al., 2017).

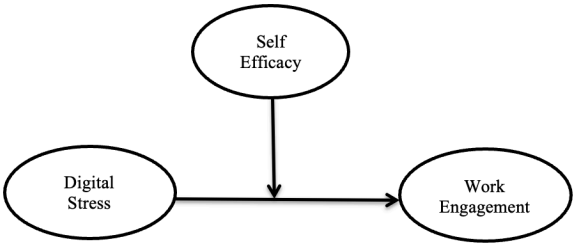
According to Paulin Vans Dorssen-Boog et al., (2021) Employees who have work engagement are predicted to have an impact on performance and health in general. Employees with a high level of work engagement will display this behavior innovative and more creative in work, furthermore positively related to performance of the business unit. Not only at the individual level but also at the team level (Schaufeli, Stouten et al., 2020). The aim of this research is to fill the gap in study about impact from Stress Digital against work engagement employees with Self-Efficacy as moderator. Apart from that, there is also previous research that discusses the direct effects of stress on work engagement where stress is negatively related to work engagement with stress Which low and terrified Work tall (Zhang et al, 2021). Study provides recommendations for self-confidence to become one of the factors that can be used to increase employee work engagement. According to Ojo, A. Oluwaseyi et al. (in sustainability, 2021) with his findings show the influence of family and support Friend, self efficacy, and condition facility (IT) on resilience (endurance) employees affects work engagement during stressful situations. But research does not review how influence directly from self-efficacy on work engagement is caused by digital stress. The competencies that are built will increase the strength of self-efficacy in carrying out work tasks (Zimmerman 2000; Skarin, Frida., et al., 2019). Self-efficacy is an indicator of work performance (performance) according to Stajkovic and Luthan, 1998), job attitude (Judge and Bono, 2001), an individual's ability to build personality (personality construct), and psychological capital (psychological capital) according to Luthan and Avolio et.al, 2007).

Employees who have work engagement are capable employees who demonstrate full ability and feel involved in every job, are active in the company, and have a high commitment to quality standards performance set by the company. However, changes in the organization can result in psychological and physical stress among employees especially in ICT in the era of digitalization. Digital Stress is a stress phenomenon experienced by users in organization as results from use ICT Which cause exists fatigue due to ICT demands. Self-Efficacy is expected can help individuals in enhancing work engagement caused by digital stress by placing digital stress as a factor causing the possibility of low work engagement at employees and self-efficacy as a moderator who might be able to have an influence which is positive so that work engagement becomes still good and increases.

2. RESEARCH METHOD

This research uses a quantitative research method. The variable used in this research is the variable Work Engagement which is used as dependent variable, Digital Stress as independent variables as well as variable variables Self-Efficacy as a moderator in this research. The effect of Self-Efficacy as a moderator variable is expected to help individuals in increasing work engagement caused by stress digital with digital stress as a factor because of the possibility of low work engagement on employees and Self-Efficacy which may have a positive influence on work engagement.

Figure 1
Research Model



Participant

Participants in this study consisted of 90 participants consisting of 39 male people (43.3%) and 51 female people (56.7%) who worked as private employees in the manufacturing industry and using digital technology in office (IT software or form digital communications) with a minimum work period of 1 year and had a range of ages. productive 17 – 56 years. Bachelor (S1) with a total of 61 people (67.8%), in addition there were also participants with a Diploma (DI-DII) totaling 14 people (15.6%), 12 high school people (13.3%). %) and Masters (S2) as many as 3 people (3.3%) of the total participants. The work period of the majority of participants in this study was 1 to < 3 year with a total of 39 participants (43.3%), 18 participants with a work period of 3 to < 5 years (20.0%), 5 to <7 years there were 8 participants (8.9%) and there were 25 participants with a work period of 7 years or more (27.8%). Of the 90 participants taken, there were participants with positions There were 40 staff with a percentage of 44.4%, Supervisors with a percentage of 29 people (32.2%), and Manager level with a total of 18 people (20.0%) and the remaining 3 participants chose Other.

Measurement

To measure work engagement, researchers used 9 items from the Utrecht measurement scale Work Engagement Scale (Schaufeli, Bakker & Salanova, 2006) Which measure r of 3 aspects, with use scale likert 1-7 from “never” to “always. Digital Stress variables researchers use Digital Stressor Scale (DSS) from Thomas Fischer, Martin Reuter, and René Riedl (2021) with 10 stress category using Liker scale 1 (strongly disagree) to 7 (strongly agree). Self-efficacy researchers use General Self Efficacy Scale (GSES) from Schwarzer & Jerusalem, 1995) which is a unidimensional scale with using 10 items.

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Table 1
Reliability Cronbach's Alpha

	cronbach's alpha	***item***
Work Engagement	0.937	9
Digital Stress	0.957	50
Self Efficacy	0.946	10

3. RESULTS AND DISCUSSIONS

The results of the normality test using the One-Sample Kolmogorov Smirnov Test with the Monte-Carlo technique showed that Digital Stress, Work Engagement and Self-Efficacy had a p value > 0.05, so it could be interpreted that the variables in this study had a normal distribution. The results of testing the relationship between these variables show that there is a negative relationship between digital stress on work engagement and self-efficacy, and a negative relationship is also seen between work engagement and digital stress as well as self-efficacy on digital stress. A positive relationship only occurs between work engagement and self-efficacy and vice versa with a value of R=0.664. An explanation can be seen in Table 2.

Table 2
Matrix Correlations

No	**Variable**	***Mean***	***SD***	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***	***13***	***14***	***15***	***16***
1	Digital Stress	3.334	1.071	1															
2	*Complexity*	2.420	1.073	.639**	1														
3	*Conflicts*	3.033	1.429	.557**	.375**	1													
4	*Insecurity*	2.320	1.156	.626**	.536**	.214**	1												
5	*Invasion (of Privacy)*	4.275	1.397	.638**	.243*	.373**	.261*	1											
6	*Overload*	3.638	1.215	.836**	.471**	.381**	.459**	.490**	1										
7	*Safety*	3.980	1.344	.649**	.248*	.200	.356**	.568**	.489**	1									
8	*Social Environment*	3.888	1.006	.667**	.318**	.331**	.378**	.276**	.641**	.444**	1								
9	*Technical Support*	3.293	1.353	.774**	.422**	33 2**	.381**	.371**	.614**	.344**	.407**	1							
10	*Usefulness*	2.953	1.083	.804**	.612**	.347**	.564**	.371**	.658**	.388**	.488**	.677**	1						

11	*Unreliability*	3.528	1.500	.771**	.365**	.247*	.344**	.379**	.645**	.422**	.484**	.778**	.618**	1					
12	Work Engagement	5.427	0.873	-.323**	-.377**	-.200	-.221*	-.113	-.289**	.033	-.190	-.355**	-.347**	-.244*	1				
13	*Vigor*	5.459	1.199	-.405**	-.438**	-.278**	-.345**	-.142	-.332**	-.020	-.222*	-.424**	-.399**	-.273**	.931**	1			
14	*Dedication*	5.577	1.135	-.272**	-.282**	-.170	-.157	-.112	-.255*	.035	-.143	-.292**	-.303**	-.242*	.939**	.839**	1		
15	*Absorption*	5.244	1.147	-.213*	-.319**	-.102	-.103	-.057	-.211*	.079	-.158	-.261**	-.254*	-.159	.899**	.732**	.763**	1	
16	Self Efficacy	5.646	0.852	-.376**	-.444**	-.138	-.394**	-.142	-.284**	-.102	-.161	-.316**	-.451**	-.265*	.664**	.683**	.574**	.577**	1

Hypothesis testing uses the linear regression method with the reason that the sample size is below 100 participants.

Linearity Test

The purpose of linearity testing is to determine whether the data processed is linear data or that the relationship between research variables forms a straight line. The results of the linearity test obtained a Deviation from Linearity value of p>0.05. Thus, the variables in this research can be concluded to be a linear relationship. Explanations can be seen in Table 3 and Table 4.

Table 3

Linearity Test of Work Engagement and Digital Stress

		Mean	***Sum of Squares***	***df***	***Mean Square***	***F***	***Sig.***
Work Engagement*	*(Combined)*	6.129.989	67	91.492	.935	.599	
Digital Stress	*Linearity*	866.535	1	866.535	8.859	.007	
	Deviation from Linearity	5.263.454	66	79.749	.815	.742	
	(Combined)	6.129.989	67	91.492	.935	.599	

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Table 4
Linearity Test of Work Engagement and Self Efficacy

	Mean	*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Work Engagement* Self Efficacy	*(Combined)*	5.343.527	27	197.908	4.176	.000
	Linearity	3.647.452	1	3.647.452	76.964	.000
	Deviation from Linearity	1.696.075	26	65.234	1.376	.152
	(Combined)	5.343.527	27	197.908	4.176	.000

Multicollinearity Test

The purpose of multicollinearity testing is to determine whether there is a multicorrelation relationship between independent variables, meaning that there is a very low correlation relationship or a very high correlation relationship. This condition can be seen from the Tolerance value > 0.10, so there is no collinearity relationship or VIF (Variance Infation Factor) < 10, meaning the level of collinearity can be tolerated. The variable tolerance results have a tolerance value of > 0.858 (Tolerance > 0.10) and a VIF value of 1,165 (VIF < 10). Thus, it can be interpreted that multicollinearity does not occur. Explanation can be seen in Table 5.

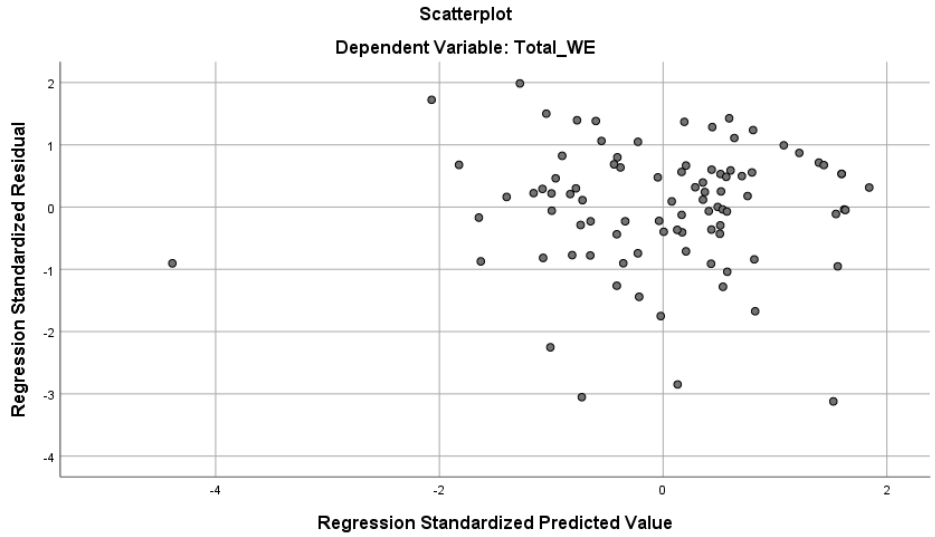
Table 5
Multicollinearity Test Results

Variable	***Tolerance***	***VIF***	**Result**
Work Engagement and Digital Stress	0.858	1.165	Multicollinearity not occur
Work Engagement and Self Efficacy	0.858	1.165	Multicollinearity not occur

Heteroscedasticity Test.

Heteroscedasticity testing uses scatterplot graphs. In the regression model of the influence of Digital Stress on Work Engagement with Self-Efficacy as a moderator, there are no symptoms of heteroscedasticity. There is no particular pattern and the points spread irregularly above and below the 0 axis on the Y axis. So the classic heteroscedasticity assumption test is met. Can be seen in Figure 2.

Figure 2
Scatterplot - Heteroscedasticity Test



Hypothesis Testing Stage 1: Influence of the Digital Stress variable on the Work Engagement variable.

The relationship between Digital Stress and Work Engagement directly (without a moderator) uses PROCESS data processing and a correlation value is obtained of R= -0.323, Sig. ($p<0.05$) with an adjusted R Square contribution (R 2 = 0.105). This shows that Digital Stress has a significant influence on Work Engagement. The influence given is a negative influence where when a person's work engagement is high, the lower the Digital Stress. An explanation can be seen in Figure 3 and Table 6.

Figure 3
Hypothesis Testing Digital Stress on Work Engagement

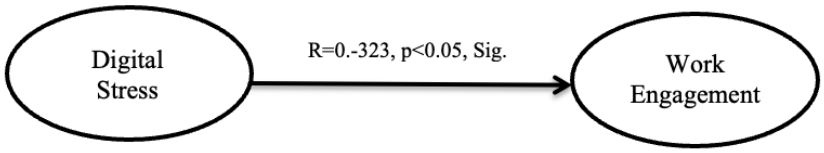


Table 6
Regression Test of Digital Stress on Work Engagement

Variable	R	R Square	Adjusted R Square	Unstandardized Coefficients (*B*)	Standardized Coefficients (Beta)	Sig. (*p*)
Digital Stress	.323[a]	.105	.094	-.071	-.323	.002

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Hypothesis Testing Stage 2: Self-Efficacy can be a moderator between Digital Stress and Work Engagement.

Through the relationship in stage 1 of the hypothesis, then in the multi regression test between the three variables between the three variables it was found that there was a significant influence on the three research variables (R = 668, Sig. ($p<0.05$). Then in the Moderator test, Self-Efficacy did not succeed in becoming a moderating variable in Digital Stress and Work Engagement (b = 0.000, SE = 0.001, p = 0.830 (> 0.05). The results can be seen in Figure 4 and Table 7.

Figure 4
Moderator Hypothesis Test

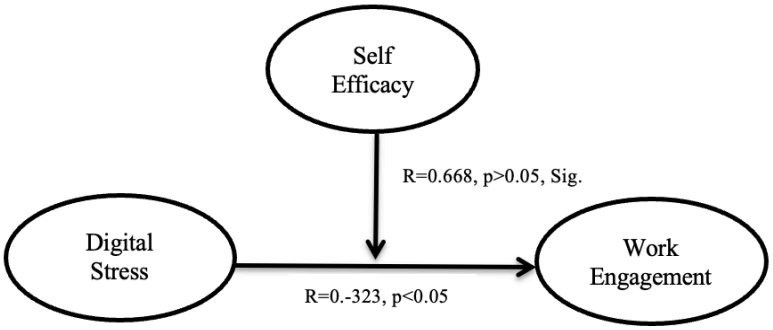
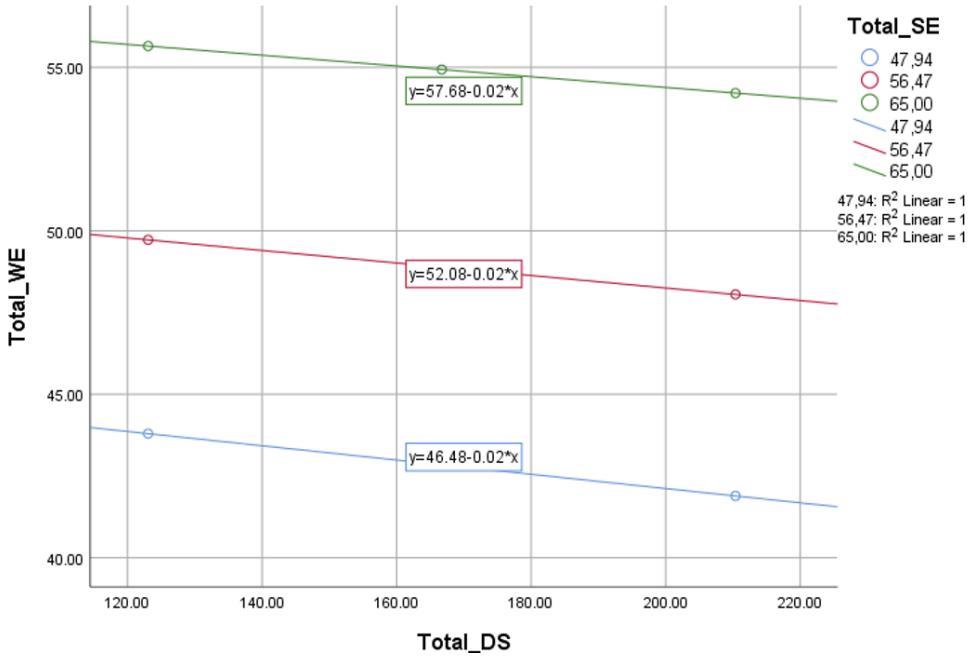


Table 7
Results

Variable	B	SE	t	p
Self Efficacy	0.714	0.097	7.337	0.000
Interaction Digital Stress * Self Efficacy	0.000	0.001	0.215	0.830

Multicollinearity Test Results
Thus, Self-Efficacy cannot act as a moderator of Digital Stress and Work Engagement with an interaction value of $p = 0.830$ (> 0.05) . However, Self-Efficacy can be said to be a moderating predictor with an interaction value of $p = 0.000$ (< 0.05). The Moderator Graphic can be seen in Figure 5.

Figure 5
Graphic Syntax



In the graph above, it can be seen that when Work Engagement (WE) is high, Digital Stress (DS) will be low, and from the graph above, there is no function of Self-Efficacy as a moderator in the relationship between Digital Stress and Work Engagement.

4. CONCLUSIONS AND SUGGESTIONS

Based on the explanation above, it can be seen that the results between Work Engagement and Digital Stress are r = 0.323, p = 0.0 2 < 0.05, which means that the two variables have a significant relationship so they influence each other. Meanwhile, Self-Efficacy can have a significant influence, but does not function as a Moderator. This means that in this research, if Digital Stress is high then Work Engagement is low and Self-Efficacy cannot function as a moderator, however Self-Efficacy can be said to be a predictor of moderation because the interaction results are significant at p = 0.000 (< 0.05). It is possible for Self-Efficacy to be used as an Independent Variable.

The data above is supported by several previous studies, such as research by Ojo, A. Oluwaseyi et al. (in Sustainability, 2021) with his findings showing the influence of self-efficacy and facility conditions (IT) on employee resilience in influencing work engagement during stressful situations. Thus, the Self-Efficacy Variable can indeed increase employee Work Engagement through its function as an Independent Variable. Apart from that, there is also previous research that discusses the direct effect of stress on work engagement where stress is negatively related to work engagement with low stress and high work engagement (Zhang et al, 2021), which research is in line with the results of this research that Digital stress is negatively related to work engagement.

The variables in this research are still limited, so further research is needed to be developed. As with the variable of Digital Stress itself, there is still minimal discussion, so further research is needed to increase insight into related variables. Likewise, with the moderator variables in this research, it is hoped that future research can provide other cultural and/or Psychological Capital

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variables such as motivation and optimism which are more likely to become moderators in the relationship between Digital Stress and Work Engagement as well as providing other variables that are able to support efforts to improve one of the employee work engagements, as in previous research, is self-confidence or one can also look at the influence of subject characteristics such as educational background and age of the participants.

REFERENCES

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and Work Engagement: The JD–R Approach. Annual Review of Organizational Psychology and Organizational Behavior, 1(1), 389–411. doi:10.1146/annurev-orgpsych-031413-091235

Fischer T, Reuter M and Riedl R (2021) The Digital Stressors Scale: Development and Validation of a New Survey Instrument to Measure Digital Stress Perceptions in the Workplace Context. Front. Psychol. 12:607598. doi: 10.3389/fpsyg.2021.607598

Hu, X., Santuzzi, A. M., & K. Barber, L. K. (2019). Disconnecting to detach: The role of impaired recovery in negative consequences of workplace telepressure. Journal of Work and Organizational Psychology, 35, 9-15. https://doi.org/10.5093/jwop2019a2

Ojo, A. O., Fawehinmi, O., & Yusliza, M. Y. (2021). Examining the Predictors of Resilience and Work Engagement during the COVID-19 Pandemic. Sustainability, 13(5), 2902. doi:10.3390/su13052902

Reinecke, L., Aufenanger, S., Beutel, M. E., Dreier, M., Quiring, O., Stark, B., Müller, K. W. (2016). Digital Stress over the Life Span: The Effects of Communication Load and Internet Multitasking on Perceived Stress and Psychological Health Impairments in a German Probability Sample. Media Psychology, 20(1), 90–115. doi:10.1080/15213269.2015.1121832

Schaufeli, W. B. (2017). Applying the Job Demands-Resources model. Organizational Dynamics, 46(2), 120–132. doi:10.1016/j.orgdyn.2017.04.008

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The Measurement of Work Engagement With a Short Questionnaire. Educational and Psychological Measurement, 66(4), 701–716. doi:10.1177/0013164405282471

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, Measures in health psychology: A user's portfolio. Causal and control beliefs (pp. 35-37).

Zhang, M., zhang, P., Liu, Y., Wang, H., Hu, K., & Du, M. (2021). Influence of perceived stress and workload on work engagement in front‐line nurses during COVID‐19 pandemic. Journal of Clinical Nursing. doi:10.1111/jocn.15707