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Self-Control Demand Affects Procrastination: Moderated by Proactive Behavior and Perceived Social Support From Educators and Lecturers in Higher Education Institutions

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ABSTRACT
Background. This study aims to examine: (1) the impact of self-control demands on procrastination, (2) the moderating role of proactive behavior in weakening the positive relationship between self-control demands and procrastination, and (3) the moderating effect of perceived social support on the influence of self-control demands on procrastination. The research subjects consisted of the academic community, specifically educators and lecturers in higher education institutions.
Methods. Primary data were collected using a purposive sampling method, involving 190 respondents, and analyzed using the Partial Least Squares (PLS) approach within Structural Equation Modeling (SEM) with the Warp-PLS 8.0 software.
Results. The findings reveal that, contrary to some theoretical expectations, higher self-control demands are significantly associated with lower levels of procrastination. Furthermore, the analysis uncovers significant and complex moderation effects. A unique and counterintuitive finding emerged regarding proactive behavior, which positively moderated the relationship. This indicates that for highly proactive individuals, the pressure of high self-control demands is linked to increased procrastination, potentially because their high personal standards and initiative lead to greater psychological resource depletion. Perceived social support also demonstrated a significant, though similarly complex, positive moderating effect, suggesting that it may weaken the beneficial impact of self-control.
Conclusion. These findings yield critical practical implications. Rather than simply encouraging proactivity, higher education institutions must provide resources to manage the associated psychological strain. It is recommended that institutions implement structured, task-oriented support systems, such as formal mentorship, and design workload management policies that prevent excessive self-control demands, thereby preserving educator well-being and reducing procrastination.

1. INTRODUCTION

Procrastination is a prevalent issue across diverse societies and educational levels, defined as the tendency to delay tasks (Van Eerde, 2003). It encompasses avoidance behaviors and irrational actions often linked to mood regulation (Sirois, 2014). Scholars describe

it as a conscious decision to postpone initiating or completing tasks until the last possible moment (Freeman, Cox-Fuenzalida, & Stoltenberg, 2011), sometimes beyond set deadlines (Gupta, Hershey, & Gaur, 2012), or even without deadlines, despite the most effective timing being the present (Rozental & Carlbring, 2014). Procrastination is further associated with poor time management, reduced performance, delayed learning, persistent task avoidance, and challenges in managing negative emotions (Ferrari & Díaz-Morales, 2014). In academic contexts, its impact varies in severity: minor procrastination may cause minimal disruption, whereas severe forms can negatively affect both the procrastinator and others.

In academic contexts, procrastination among lecturers and educators requires particular attention due to its direct impact on educational quality, student development, and the integrity of the learning environment. The effects extend beyond individual performance, influencing the broader academic system. Lecturers with disciplined work habits are typically diligent, organized, and well-prepared, which benefits students by encouraging similar discipline. In contrast, those prone to procrastination may rush through material, display disorganization, act inconsistently or unfairly, and negatively affect student learning and assessment. Procrastination often reflects a gap between intention and action, as individuals delay tasks despite being aware of potential negative outcomes (Klingsieck, 2013; Steel, 2007).

While procrastination is often viewed negatively, some research highlights its potential benefits. Chu and Choi (2005) introduced the notion of active procrastination, where individuals deliberately delay tasks as a strategy, particularly when they perform better under pressure. Likewise, Skowronski and Mirowska (2013) found that postponement can at times serve as a motivational challenge, reinvigorating individuals and alleviating monotony. Procrastination may also assist in balancing academic and social demands, encouraging collaborative study or intentionally creating time pressure to enhance motivation. Nevertheless, the present study primarily adopts the negative conceptualization of procrastination.

Extensive research has shown that procrastination is strongly associated with negative outcomes, including health problems such as stress, sleep disturbances, fatigue, and illness, alongside emotional difficulties such as anxiety, guilt, anger, and dissatisfaction (Grunschel, Patrzek, & Fries, 2013a; Patrzek, Grunschel, & Fries, 2012; Rothblum et al., 1986; Tice & Baumeister, 1997). It also undermines personal life by weakening social ties, straining interpersonal relationships, creating financial burdens, and disrupting academic or career progress. Studies have identified both personal antecedents, such as anxiety (Spada, Hiou, & Nikcevic, 2006) and fear of failure (Ferrari, 2004; Solomon & Rothblum, 1984), as well as situational antecedents aligned with Thorndike's (1927) law of effect, where behaviors are reinforced or suppressed by subsequent outcomes. For instance, lecturers often encounter delayed gratification in teaching and research, experiencing fatigue and stress without immediate rewards, which reduces productivity. Despite these insights, the underlying causes

of procrastination remain insufficiently understood (Klingsieck et al., 2013; Visser, Korthagen, & Schoonenboom, 2018). Among significant predictors are self-control demands, which Iber (2017) found to influence procrastination among employees strongly. While essential for achieving goals (Schmidt & Neubach, 2007), self-control demands impose psychological costs (Muraven & Baumeister, 2000; Baumeister et al., 2007), depleting limited resources akin to muscle fatigue (Muraven & Baumeister, 2000). Excessive demands may also trigger shifts in cognition, emotion, and behavior, contributing to stress (Schmidt & Neubach, 2007; Schmidt & Diestel, 2012). Given the links between procrastination, burnout, and depression, this study emphasizes the role of self-control demands in exacerbating procrastination through the depletion of psychological resources (Muraven & Baumeister, 2000).

Social support and perceived proactive behavior are also necessary to reduce procrastination. Cohen and Wills (1985) state that social support can protect people from negative circumstances and influences. In relation to procrastination, procrastinators tend to think negatively about themselves, experience depression, shame, and feelings of guilt, so social support is believed to withstand the negative influence of certain factors. Almassy, Pek, Papp, and Greenglass (2014) also revealed that individuals with proactive behavior have lower levels of depression and anxiety. Proactive behavior will be useful for procrastinators to reduce their procrastination behavior because proactive individuals tend to look for opportunities, show initiative, take action, and persist until they reach their goals. Individuals who are not proactive show the opposite pattern, as they fail to identify and take advantage of opportunities to change things. They show little initiative and rely on others as a force for change (Bateman & Crant, 1993).

This study is based on the Conservation of Resources (COR) theory developed by Hobfoll (1989) to generate insights into the influence of self-control demands, proactive behavior, and perceived social support on procrastination. COR theory is a theory of stress that describes the motivations that drive humans to maintain their current resources and to pursue new resources (Hobfoll, 1989). The basic principle of COR theory is that individuals and groups make every effort to obtain, maintain, and protect things that are valuable to them (Hobfoll, Halbesleben, Neveu, & Westman, 2018). In this model of research, individuals who make self-control demands will at some point experience resource depletion, which in turn will cause individuals to stop or postpone the intended task. In addition, proactive behavior and perceived social support are necessary to reduce procrastination. Individuals who are proactive and receive high perceived social support from their environment will be able to invest their resources to minimize the level of procrastination. From a practical standpoint, the findings are intended to offer an evidence-based foundation for higher education institutions to design and implement targeted interventions. For example, by understanding the critical role of social support, institutions could foster mentorship programs or more collaborative work environments. Likewise, acknowledging the impact of excessive self-control demands could inform better

workload management policies designed to protect the well-being and enhance the productivity of educators.

2. THEORETICAL REVIEW

2.1. The Effect of Self-Control Demands on Procrastination

Previous studies indicate that the condition of self-control demands can be used as an effective clue to understand the tendency of procrastination behavior. According to research by Ferrari et al. (1995), procrastinators actually have difficulties in controlling their behavior and prefer to do short-term pleasurable activities rather than pursue goals that are more important to them. According to Muraven and Baumeister (2000), the power of self-control acts like a muscle, which, if utilized too much, will experience fatigue. When self-control is used too much, it can lead to a greater urge for self-control. According to research conducted by Schmidt and Neubach (2007), it was found that increased levels of self-control were associated with more intense symptoms of burnout and stress. The need for self-control can hurt a person's thinking ability, emotions, and behavior (Oude Rengerink, 2016).

The demands of self-control may be affected by disorders such as depression and burnout, which are often also associated with procrastination. In the context of the relationship with procrastination, when a person has multiple roles, such as work and household responsibilities, then the person will need good self-regulation to carry out the next role. In addition, work is now very changeable. Individuals are expected to have higher levels of flexibility, adaptability, creativity, and innovation. This means they must have the ability to control and regulate their attention, behavior, and emotions. Therefore, individuals must be able to adapt to change, make creative decisions, and manage emotions well. (Schmidt & Diestel, 2012; Prem et al., 2016). With digitalization, individuals have become more susceptible to distraction due to the influence of the internet and smartphones that easily distract them. The reason why people are now increasingly expected to have the ability to control themselves in changing goal-focused behavior, regulating emotions, and motivating themselves to perform tasks that may not be interesting (Schmidt & Diestel, 2012).

Several studies have found that self-control demands have psychological consequences that consume limited mental energy and potentially lead to burnout (Muraven & Baumeister, 2000; Baumeister et al., 2007). Ultimately, people are unable to work effectively, which results in a tendency to delay work (procrastination). According to COR theory, resources owned by individuals are fundamentally limited (Hobfoll, 1989; Muraven & Baumeister, 2000). When a person faces high demands for self-control, this can lead to long-term fatigue and a significant decrease in future performance compared to people who do not engage in self-control (Schmidt & Diestel, 2013). Therefore, the presence of a strong need for self-control in individuals might lead to a tendency to procrastinate due to a lack of resources. Based on the explanations given, the conclusions that can be drawn are as follows:

Hypothesis 1: Higher self-control demands are positively associated with increased procrastination.

2.2. Proactive Behavior as a Moderator of the Effect of Self-Demand on Procrastination

Proactive behavior relates to the desire to seek differences and strive to take actions that can influence the environment. People who have proactive traits are generally active in seeking opportunities, showing initiative, taking steps, and persisting until they achieve their desired goals (Bateman & Crant, 1993). Meanwhile, people who are not proactive show different behaviors, such as difficulty in recognizing situations, a lack of willingness to act, and failure to take advantage of opportunities to make changes.

According to research by Almassy, Pek, Papp, and Greenglass (2014), it was revealed that there is a link between proactive behavior and lower levels of depression and anxiety. After all, proactive attitudes can increase positive attitudes, see threats as opportunities, and make a person feel more capable of overcoming future threats because individuals obtain appropriate resources in the preparation stage. Proactive behavior can reduce the tendency to procrastinate. Based on COR theory, according to Halbesleben et al. (2014), resources are factors that can be used by individuals to achieve the desired goals. Basically, this shows that almost anything can be used as capital if someone believes that it can help them achieve their goals. Therefore, proactively active people can see sources of stress as an opportunity to help achieve desired goals (Greenglass, 2002; Schwarzer & Taubert, 2002). In COR theory, this will have an impact on the level of procrastination, which is when individuals have a high level of self-control, and, coupled with individuals who behave proactively, will see sources of stress as challenges that can be overcome rather than as threatening. This causes the positive effect of self-control on procrastination to be weak, so that procrastination is reduced. Based on the explanation above, the following assumptions can be proposed:

Hypothesis 2: Proactive behavior serves as a negative moderator in the relationship between self-control demands and procrastination. As proactive behavior increases, the positive impact of self-control demands on procrastination diminishes.

2.3. Perceived Social Support as a Moderator of the Effect of Self-Control Demands on Procrastination

Perceived social support directly serves as a buffer between contextual events and symptoms that cause stress (Sarason et al., 1983; Sarason et al., 1985). According to COR theory, a key principle involving efforts to protect resources from diminishing is the Primacy of Resource Loss (Hobfoll, 1989; Halbesleben et al., 2014). This idea states that it is more detrimental to lose resources than to gain resources. This principle states that people will use resources to protect themselves from loss and acquire new resources. Based on this principle, Ito and Brotheridge (2003) revealed that the purpose of resource investment is to avoid future losses. For example, if a person is facing tremendous stress, other humans, such as friends or

family members, need to provide emotional support to the person. In this way, a person can deal with pressure more effectively because they have used their energy and abilities.

Previous research has revealed that perceptions of social support have a role in protecting people from the negative impact of certain factors. For example, research conducted by Sarason et. al (1985) showed that the more people who provide social support perceived by a person, the lower the level of depression in men and women concerned. Fredrick et al (2018) also found that social support can help reduce the relationship between depression and suicidal ideation. In addition, it can also maintain the integrity between adolescents' online behavior and their mental state (Wang et al., 2018).

Procrastination can occur when individuals feel under-resourced because they are over-organizing themselves. This effect will be reduced when an individual feels they have social support. So, if a person has high social support, this will reduce the positive effect of self-control demands on the tendency to procrastinate. Based on the above explanation, it is assumed as follows:

Hypothesis 3: Perceived social support acts as a negative moderator in the relationship between self-control demands and procrastination. As perceived social support increases, the positive impact of self-control demands on procrastination diminishes.

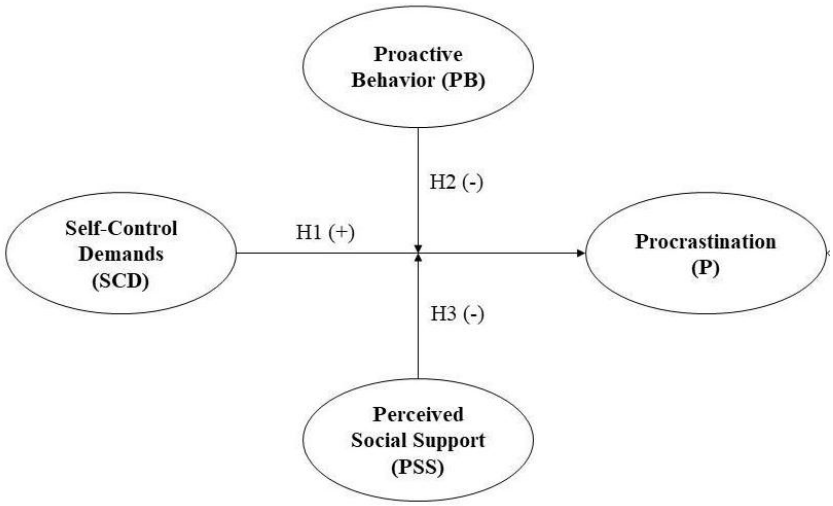

Figure 1. Research Model

3. METHODS

3.1. Sample and Data Collection

The population selected in this study was educators and lecturers in higher education institutions in East Kalimantan province. Educators and lecturers are self-employed professionals with job specializations tailored to different requests within the scope of their competencies, and are committed to rules and superiors and in supporting the Tridharma of higher education. Indeed, the context of perceptions from educators and lecturers with

diverse jobs can contribute to the understanding of procrastination, so that it can produce relevant data when associated with variations among participants. The sampling technique in this study used a non-probability technique; the samples or respondents selected in the study must meet several criteria to meet the research needs (Cooper & Schindler, 2014). The criteria for respondents who meet in this study are (1) Educators or lecturers who are actively engaged in Tridharma and are not on study assignments, (2) Educators or lecturers who have permanent employee status as evidenced by NIDN / NUPTK, and also the employee identification number. The selection of these criteria aims to avoid response bias and maximize the accuracy of respondent data in seeing the tendency of individuals to procrastinate.

The questionnaire distribution was carried out with a total of 205 respondents participating. However, the total respondent data used for further processing was 190 due to respondent data that did not meet the criteria. The sample size has met the rules for SEM analysis suggested by Hair et al. (2014) that the sample size in research models that have less than five or equal to five latent constructs, with more than 3 indicators per construct, requires a minimum sample size of 100 observations/responses. Therefore, the sample size collected is more than enough for further analysis.

3.2. Measurement

Procrastination (P). Procrastination was measured through the General Procrastination Scale, adapted from Lay (1986), consisting of 20 statement items. However, the authors selected 6 items from the original 20 items proposed by Lay, based on the recommendation of Stanton et al. (2002) for shortening the scale because it excludes items that are not generalized to the working population. The procrastination statement items were such as: In preparing for a deadline, I often waste time doing other things, I constantly say that I will complete the tasks tomorrow only. The scale used is a 1-5 Likert scale: (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The Procrastination had a Cronbach's alpha of 0.92 and composite reliability of 0.94.

Self-Control Demands (SCD). Self-control demands used fifteen statement items developed by Schmidt and Neubach (2007). Self-control demands consist of three dimensions, namely: first, impulse control, which consists of six statement items, such as: I am not allowed to lose self-control with all the tasks I face, and the tasks I face require me to be patient. Second, overcoming resistance, which consists of five statement items, such as: I need high willpower to work on uninteresting tasks, I really need to force myself to complete complex tasks. Third, resisting distractions, which consists of four statement items, such as: to cope with the task load, I must force myself not to waste time on unimportant things, if I want to successfully complete the task, I must not give in to any distractions. The questionnaire items were measured using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The Self-Control Demand had a Cronbach's alpha of 0.75 and a composite reliability of 0.86.

Proactive Behavior (PB). Proactive behavior is measured through the Proactive Personality Scale (PPS), which consists of seventeen statement items developed by Bateman and Crant (1993), such as: I am constantly looking for new ways to improve myself, no matter how unlikely it is, if I believe in something, then I will make it happen. Questionnaire items were measured using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The Proactive Behavior had a Cronbach's alpha of 0.98 and a composite reliability of 0.98.

Perceived Social Support (PSS). Perceived social support has twelve statement items, such as: I get the help and emotional support I need from my family, and there are special people with whom I can share my joys and sorrows. The questionnaire items were measured using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The Perceived Social Support had a Cronbach's alpha of 0.95 and a composite reliability of 0.96.

Control Constructs. In this study, researchers tried to control several factors that were thought to affect the measurement. These factors are gender, age, education, marital status, length of service, and position.

4. RESULTS AND DISCUSSION

This study applied PLS-SEM to test the hypotheses due to the multivariate relationships between latent variables embodied in a complex model, which can be estimated simultaneously (Kock, 2018; Hair et al., 2014). Convergent validity was assessed using the Average Variance Extracted (AVE), with a recommended threshold of greater than 0.50. The results indicate that all constructs met this criterion, with AVE values of 0.755 for Proactive Behavior (PB), 0.662 for Perceived Social Support (PSS), 0.76 for Procrastination (P), and 0.667 for Self-Control Demands (SCD). Table 1 shows the mean, standard deviation, and correlation.

Table 1. AVE square root values for discriminant validity/descriptive statistics

	Mean	Std. Dev	1	2	3	4	5	6	7	8	9
1. Procrastination	3.19	1.24	**0.87**								
2. Perceived Social Support	3.50	1.05	0.56	**0.81**							
3. Proactive Behavior	3.25	1.18	-0.55	-0.32	**0.87**						
4. Self-Control Demands	3.34	1.11	0.65	0.47	-0.24	**0.82**					
5. Job Position	0.68	0.72	-0.07	-0.09	-0.02	-0.15	**1.00**				
6. Gender	0.56	0.50	-0.05	-0.05	0.17	0.01	0.05	**1.00**			
7. Ages	31.58	6.29	-0.32	-0.09	0.14	-0.22	0.44	0.00	**1.00**		
8. Education	3.60	0.80	-0.17	-0.22	0.02	-0.28	0.74	0.07	0.54	**1.00**	
9. Tenure	2.26	0.89	-0.29	-0.13	0.04	-0.28	0.34	-0.06	0.72	0.45	**1.00**

The diagonal line (Bold) is the AVE square root of the correlation between constructs.
Source: Data processed through the Warp-PLS 8.0 application

The mean values of all constructs are above the 3.0 scale, indicating that respondents agree with moderate to high responses to all constructs. Table 1 also provides the correlation between the constructs of discriminant validity that can be seen from the root AVEs. The discriminant validity threshold of the root AVE is higher than the correlation value (Hair et al., 2014). Thus, discriminant validity is acceptable.

4.1. Structural Analysis Model

The structural model shows the magnitude of the R-squares as well as the effect size. The fit can be seen from the average path coefficient (APC), average R-squared (ARS), average factor variance inflation (AVIF), and Tanenhaus goodness of fit (GOF). The model is said to be less suitable if it has a value ≥ 0.10, the next level is moderate if it has a value ≥ 0.25, and is very suitable if it has a value ≥ 0.36 (Kock, 2018). The results show that the APC and ARS model fit criteria are significant at p < 0.05 and AVIF < 3.3. The model fit results show that APC = 0.15 and ARS = 0.27, both significant at p < 0.01, and AVIF = 1.76. The structural model or path analysis is shown in Image 2, which investigates the exploration of moderating mechanisms and the impact of self-control demands on their influence on procrastination behavior.

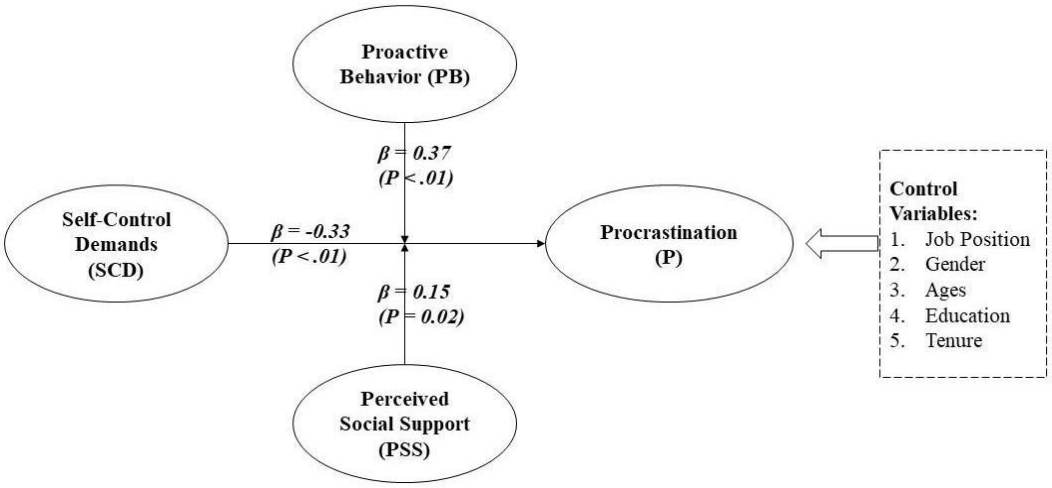

Figure 2. PLS Structural Model (Full Model)

Table 2. Results of structural model analysis

Construct	*Path (β & P-value)*		
	Procrastination (PB)	**P*SCD**	**PSS*SCD**
Model 1. Direct Effect			
Self-Control Demands (SCD)	**-0,33****		
R^2 (Adjusted)	0,13		
Effect Size (f^2)	0.01		
Job Position	-0.08		
Gender	0.16***		
Ages	0.12**		
Education	-0.01		
Tanure	-0.03		
Model 2. Moderation PP			
Self-Control Demands (SCD)	-0,04	**0.37*****	
R^2 (Adjusted)	0,17		
Effect Size (f^2)	0.01	0.15	
Job Position	-0.10		
Gender	0.17**		

Construct	*Path (β & P-value)*		
	Procrastination (PB)	**P*SCD**	**PSS*SCD**
Ages	0.11		
Education	-0.001		
Tanure	-0.07		
Model 3. Moderation PSS			
Self-Control Demands (SCD)	-0,266		**0.15****
R^2 (Adjusted)	0,14		
Effect Size (f^2)	0.09		0.03
Job Position	-0.08		
Gender	0.17		
Ages	0.14		
Education	-0.02		
Tanure	-0.039		

n = 190; ***p < 0,01; **p < 0,05
Source: Data processed through the Warp-PLS 8.0 application

The results of hypothesis testing in Table 2 between the direct effect of self-control demands on procrastination, and testing separately (Model 1 and Model 2) with moderating constructs, show different results. This is because researchers conduct separate tests between direct effects and moderating effects. The results obtained show that the direct effect in model 1 shows a path coefficient of -0.33 ($p < 0.01$). Hypothesis 1 is not supported but significant, this is indicated by the slope curve in Image 3, below:

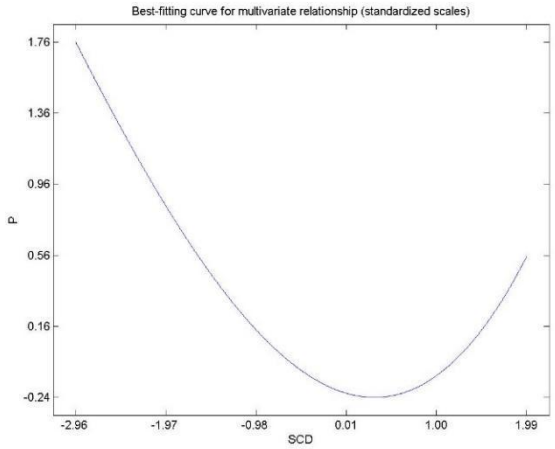

Figure 3. The effect of self-control demands on procrastination behavior

These results contradict the Conservation of Resources (COR) theory, which states that high self-control demands can deplete individual resources and increase procrastination (Hobfoll, 1989). COR theory states that an energy or resource is important and valuable for individuals to use in interacting in all domains of life. Loss of resources is a trigger that pushes individuals to a certain level of stress (Hobfoll, 1989). However, the findings of this study show that lecturers and educators with higher levels of self-control actually have lower procrastination tendencies. This can be explained by their ability to better manage their emotions and behaviors so as not to overuse their resources, which are important in carrying out their academic and administrative responsibilities. Previous research by Tangney,

Baumeister, and Boone (2004) supports these results by stating that strong self-control is associated with better performance and lower stress levels.

Model 2 (Moderating Effect of Proactive Behavior) shows a path coefficient of 0.37 ($p < 0.01$), which states that proactive behavior moderates the effect of self-control demands on procrastination, so hypothesis 2 is not supported. However, the results of the analysis show significant moderation with a path coefficient of 0.37 ($p < 0.01$), but the direction of moderation is opposite to what is hypothesized, as shown by the slope curve in Image 4, below:

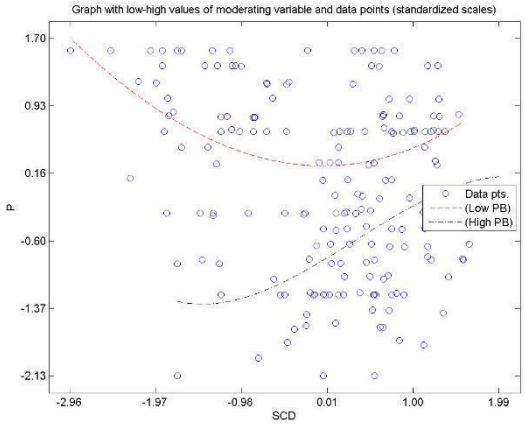

Figure 4. Results of the moderation interaction of proactive behavior on self-control demands to procrastination

This finding indicates that lecturers and educators with high proactive behavior can actually increase the negative impact of self-control demands on procrastination. Based on COR theory, proactive individuals tend to have higher expectations of their work outcomes, which can increase psychological distress (Halbesleben et al., 2014). In an academic context, high expectations on lecturers to produce scientific work or prepare quality teaching materials can consume resources quickly, thus triggering an increase in procrastination.

The third hypothesis, which states that perceived social support moderates the effect of self-control demands on procrastination, is partially supported with a path coefficient of 0.15 ($p < 0.05$) seen in Model 3 (Moderating Effect of Perceived Social Support). The interaction results are shown with the slope curve in Image 5, below:

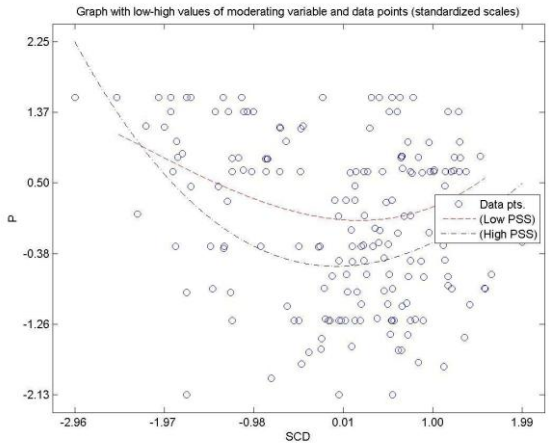

Figure 5. Results of the moderating interaction of perceived social support on self-control demands to procrastination

Perceived social support is able to reduce the negative impact of self-control demands on procrastination, in accordance with COR theory, which states that social support acts as an additional resource that can protect individuals from stress (Cohen & Wills, 1985). Analysis of the slope curve in Image 5 shows that lecturers and educators with high social support are able to mitigate the pressure of self-control demands on procrastination. In contrast, individuals with low levels of social support are more susceptible to the negative influence of self-control demands, which may lead to increased procrastination. In the context of higher education, support from coworkers, superiors, and family can help lecturers deal with heavy work demands, maintain emotional balance, and reduce the tendency to procrastinate.

However, a more detailed analysis of the statistical results reveals a more complex and counterintuitive relationship. While the moderation effect is statistically significant, the positive direction of this coefficient is contrary to the initial hypothesis. This suggests that as social support increases, the beneficial effect of self-control demands in reducing procrastination is actually weakened. This unexpected finding may be explained by several factors within the Conservation of Resources (COR) framework. For instance, high social support could inadvertently create a "safety net paradox," where the perceived availability of help reduces the urgency to complete tasks. Additionally, a highly supportive environment might lead to social interactions that act as distractions, depleting the cognitive resources needed to resist procrastination. It is also possible that the support offered is primarily emotional rather than instrumental, which may validate feelings of being overwhelmed without providing the practical assistance needed to overcome the task. These complex dynamics lead to several recommendations for institutional policy. Rather than merely fostering general support, institutions in higher education should develop structured, task-oriented support systems such as formal mentorship programs. Offering targeted training in time and self-management can also help faculty balance social interaction with focused work. Finally, promoting a culture of

task-based collaboration would ensure that peer support translates directly into productivity, aligning with the resource investment principles of COR theory.

5. CONCLUSION

This research contributes theoretically by enhancing the understanding of the interplay between self-control demands, proactive behavior, and perceived social support among lecturers and educators. Academically, the findings offer new insights into how psychological and social factors impact procrastination behaviors within higher education professionals. Moreover, the study reinforces the applicability of the Conservation of Resources (COR) theory in explaining the connections between self-control demands, proactive behavior, social support, and procrastination. From a practical standpoint, the results suggest that higher education institutions should implement supportive policies, such as strengthening social support networks through mentorship and collaboration platforms, managing academic workloads fairly, offering training in stress and time management, and improving work facilities to promote the well-being of educators.

Despite its contributions, this study has several limitations that should be acknowledged. First, its cross-sectional design restricts the ability to draw causal inferences between the variables. Second, because all data were collected from a single self-report questionnaire at one point in time, the findings may be susceptible to common method bias, which could inflate the observed relationships. Finally, the sample was drawn exclusively from educators in the province of East Kalimantan, which may constrain the generalizability of the results to academic professionals in different cultural or institutional contexts. These limitations, in turn, affirm clear directions for future research. To establish causality, future studies should employ longitudinal designs that track these variables over time. To enhance external validity and address generalization issues, research should utilize broader and more diverse samples from various regions and types of institutions. Furthermore, future inquiry could explore the mechanisms behind the unexpected findings, for instance, by differentiating between instrumental and emotional social support. Overall, the study concludes that self-control demands negatively affect procrastination, while proactive behavior and perceived social support act as significant, albeit complex, moderators. These findings emphasize the critical role of self-control, proactive behavior, and social support in addressing procrastination among higher education faculty.

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