



Academic Hardiness and Active Procrastination: Levels and Correlation among University Students

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Abstract

Academic hardiness is a personality characteristic that can resist all academic pressures on students, while active procrastination is an activity or behavior that procrastinates intentionally, and repeatedly in completing academic tasks. The research objectives: (1) measure the level of active procrastination and academic hardiness of students, and (2) predict the relationship between academic hardiness and procrastination in students. The research uses a quantitative approach with the type of correlational research. The research population is active undergraduate students in one of the State Universities in Banda Aceh. Determination of the number of samples using the Slovin formula, from a population of 22,798 students obtained a sample of 393 students. The Clustered Random Sampling technique was used in the selection of samples with batch as the cluster from the 2016 to the 2020 batch. The data collection technique used a questionnaire contains two scales; namely Revised Academic Hardiness Scale (RAHS) and Active Procrastination Scale (APS). The results showed that the average active procrastination level was in the medium category, with a percentage of 68.4% and the average academic hardiness level was in the medium category with a percentage of 67.4%. Research shows that there is a significant positive relationship between academic hardiness and active procrastination with a Pearson correlation of 0.308 and a probability value of 0.000 ($p < 0.05$). The results of this study can be used as the basis for making a hardiness trainer program by the University Counseling Service Unit to increase academic hardiness in students so that they can fight all academic pressures.

Keywords: Academic Hardiness; Active Procrastination; University Students

Abstrak

Academic hardiness adalah karakteristik kepribadian yang dapat melawan segala tekanan akademik pada mahasiswa, sedangkan prokrastinasi aktif adalah kegiatan atau perilaku menunda-nunda secara sengaja, dan berulang-ulang kali pada penyelesaian tugas akademik. Tujuan penelitian: (1) mengukur tingkat prokrastinasi aktif dan *academic hardiness* mahasiswa, dan (2) meramalkan hubungan antara *academic hardiness* dengan prokrastinasi pada mahasiswa. Penelitian menggunakan pendekatan kuantitatif dengan jenis penelitian korelasional. Populasi penelitian adalah seluruh mahasiswa S1 aktif di salah satu Perguruan Tinggi Negeri di Banda Aceh. Penentuan jumlah sampel menggunakan rumus slovin, dari populasi sebanyak 22.798 mahasiswa diperoleh sampel sebanyak 393 mahasiswa. Teknik Clustered Random Sampling digunakan dalam pemilihan sampel dengan angkatan sebagai cluster-nya dari angkatan 2016 sampai angkatan 2020. Teknik pengumpulan data menggunakan angket dengan 2 skala yaitu *Revised Academic Hardiness Scale* (RAHS) dan *Active Procrastination Scale* (APS). Hasil penelitian menunjukkan tingkat prokrastinasi aktif rata-rata berada dalam kategori sedang, dengan persentase 68,4% dan tingkat *academic hardiness* rata-rata berada pada kategori sedang dengan persentase 67,4%. Penelitian menunjukkan adanya hubungan positif yang signifikan antara *academic hardiness* dengan prokrastinasi aktif dengan pearson correlation sebesar 0,308 dan *probability value* ditaraf 0,000 ($p < 0,05$). Hasil penelitian ini dapat menjadi dasar pembuatan program hardiness trainer oleh Unit Pelayanan Konseling Universitas untuk meningkatkan *academic hardiness* pada mahasiswa agar dapat melawan segala tekanan akademik.

Kata Kunci: Academic Hardiness; Prokrastinasi Aktif; Mahasiswa



INTRODUCTION

Procrastination has been around since ancient times and increased over time during the Industrial Revolution (Steel & Klingsieck, 2016). Burka & Yuen (2007) estimates that 75% of university students and 50% of school students procrastinate, meaning that university students procrastinate more than school students. Initial observations made by Azizah and Kardiyem (2020) in Economics Education students at Semarang State University (UNNES) class of 2016 on January 25, 2019 resulted in 96.23% of 53 students having procrastinated. Students who do academic procrastination tend to do things that are non-academic rather than immediately completing assignments from the lecturer. It is proven that 60.38% of students access social media outside of lecture materials, 13.20% chat with friends outside of academic assignments, and 26.42% do other activities such as joining organizations, entrepreneurship, and taking breaks. Based on the research conducted by Muyana (2018) 6% of students of the Guidance and Counseling Study Program at Ahmad Dahlan University had very high criteria procrastination. The majority or 81% had high criteria procrastination, and 13% had moderate criteria procrastination. This means that almost all students have done procrastination. This procrastination behavior can be carried out by students anywhere, including students in the Aceh region. The results of previous research by Setiawan & Faradina (2018) showed that 57.36% of Syiah Kuala University students did academic procrastination in the

moderate categorization, 23.6% in the low categorization and 19% in the high categorization. However, the results of this study only described the level of passive procrastination.

Chu dan Choi (2005) and Wessel et al., (2019) contrast passive procrastination as inadvertent procrastination despite realizing the need to start their task early. Active procrastinators intentionally procrastinate, seeking pressure imposed by proximal deadlines to increase motivation without compromising performance. Research has found that intentional procrastination has a positive relationship with mindfulness, self-control, and well-being (Haghbin, 2015; Haghbin & Pychyl, 2015). Subsequent research has supported the positive side of active procrastination. Active procrastination is positively correlated with psychological well-being, autonomy, environmental mastery, personal growth, positive relationships, and life goals (Habelrih & Hicks, 2015). Active procrastination also showed a significant positive relationship to self-regulation, self-efficacy, awareness, and proactive coping strategies such as intentional procrastination (Chowdhury & Pychyl, 2018). The aspects that build the characteristics of active procrastination are as follows: outcome satisfaction, preference for pressure, intentional decisions to procrastinate, and the ability to meet deadlines (Kim & Seo, 2015; Kiser, 2020; Mccloskey, 2011).

Every student has academic pressure during lectures. People who have tough, strong personality characteristics, and are able to face all academic pressures

are people who have academic hardiness personality characteristics. Benishek et al. (2005) and Cheng et al., (2019) mentions that academic hardiness refers to a person's resilience to persist in completing his academic tasks. Benishek et al. (2005) build the concept of academic hardiness from two cognitive-oriented theories, namely Kobasa's Psychological Resilience theory and Dweck and Leggett's Academic Motivation theory to understand why some students can survive in the face of academic difficulties while others cannot. Academic Hardiness has been conceptualized as a combination of three aspects, namely: commitment, control, and challenge (Creed et al., 2013; Karagiannopoulou et al., 2014). (1) Controls; associated with a person's desire to have control over important events. This control aspect is divided into two dimensions, namely control of affect (students' ability to regulate their emotions when facing academic challenges and control of effort (students' ability to recognize and activate behaviors that improve their ability to overcome academic difficulties), (2) Commitment; refers to a situation where individuals are willing to commit or engage in certain activities or tasks, (3) Challenge; students' intention to find difficult course work and view academic challenges as experiences that will ultimately contribute to the student's personal development.

Several follow-up studies use the theory of academic hardiness to measure the resilience of students and their performance, such as students at the end of elementary school (Kamtsios & Karagiannopoulou, 2013a, 2013b), Junior and Senior High School (Abdollahi &

Noltemeyer, 2018; Creed et al., 2013), and university level (Weigold et al., 2016). Research has found that academic hardiness plays an important role in learning, such as self-efficacy (Wang & Tsai, 2018), and academic achievement (Benishek et al., 2005). The results of Mahasneh et al., (2021) at Hashemite University, Jordan showed that from a sample of 804 male and female students, Hashemite University students had academic hardiness in the medium category.

Tamaya's research results (2016) stated that the majority of Syiah Kuala University students had academic hardiness in the medium category of 82.3%, while 17% was in the high category, and 0.6% was in the low category. Furthermore, Jannah's research (2021) which measured the academic hardiness of Bidikmisi students at Syiah Kuala University (USK) showed that the academic hardiness of Bidikmisi students at USK was in the medium category at 71%, while in the high category, it was 14.8%, and the low category was 14.2%. The number of USK Bidikmisi students was 5,982 out of a total of 22,798 USK active students. However, the results of this study only described the level of academic hardiness of USK Bidikmisi students, not students as a whole. Therefore, in this study, the aim of the researcher was to measure the level of active procrastination and academic hardiness of all USK students and to measure the strength and weakness of the relationship between the two.

METHODS

This study employed a quantitative approach, with the type of correlational

research. The population was all active students at one of the State Universities in Banda Aceh for the 2016 to 2020 undergraduate level, as many as 22,798 students (University Data Portal, 2021). Sampling used the Clustered Random Sampling technique, with batch as the cluster. The number of samples was 393 people who were calculated using the Slovin formula with a 5% Margin of Error.

Table 1. Distribution of Population and Research Sample

Year	Population	Sample
2020	6.564	115
2019	5.762	99
2018	4.829	83
2017	3.816	65
2016	1.827	31
Total	22.798	393

Instruments and data collection were filled out by students voluntarily without being paid. The data analysis technique used descriptive analysis to find the level of student academic hardiness and active procrastination and product moment correlation analysis from Karl Pearson to measure the strength and weakness of the relationship between academic hardiness and active procrastination.

The research data collection was carried out from 22 May 2021 to 21 June 2021. The data collection technique used an online questionnaire (made with the help of Google Form) which was compiled using the Revised Academic Hardiness Scale developed by Benishek et al., (2005) dan nd the Active Procrastination Scale developed by Choi & Moran (2009). The researcher then modified it with a 5-point Likert-type scale to make it easier for respondents to distinguish each point on the scale and process information. There were five answer choices for each statement item with a rating scale,

including: strongly not suitable, not suitable, doubtful, appropriate, and very appropriate. The instrument trial in this study was conducted with 37 students drawn from the same population. The 80 items Revised Academic Hardiness Scale (RAHS) resulted in 49 valid items with a reliability coefficient of Cronbach’s Alpha $0.929 > 0.60$ so that this instrument was said to be consistent (reliable). The 16 item Active Procrastination Scale (APS) produces 10 valid items with a reliability coefficient of Cronbach’s Alpha $0.688 > 0.60$ so that this instrument is also said to be consistent (reliable).

RESULT

Based on the results of descriptive analysis, the average value (M) of the active procrastination variable was 28.49 with a minimum value of 15 and a maximum value of 48. The standard deviation (SD) obtained was 5.58, so the category of active procrastination level of USK students could be arranged in 3 categories. The categorization formula used the guidelines from Azwar (2012).

Table 2. Categorization Guidelines

Category	Formula
Low	$X < (M - 1 SD)$
Moderate	$(M - 1 SD) \leq X < (M + 1 SD)$
High	$X \geq (M + 1 SD)$

(Azwar, 2012)

Table 3. Levels of Active Procrastination

Category	Category Intervals	Frequency	%
Low	$X < 23$	61	15.5%
Moderate	$23 \leq X < 34$	269	68.4%
High	$X \geq 34$	63	16.0%

The information in Table 3 shows that the average active procrastination by USK students is in the moderate category, which is 68.4%.

Based on descriptive analysis on the Academic Hardiness variable, the average value (M) is 177.15 with a standard deviation (SD) of 19.634. The minimum score obtained is 128 and the maximum value is 263, then the category of academic hardiness level can be arranged as follows.

Table 4. Levels of Academic Hardiness

Category	Category Interval	Frequency	%
Low	$X < 157$	58	14.8%
Moderate	$157 \leq X < 196$	265	67.4%
High	$X \geq 196$	70	17.8%

According to Table 4, The results of the descriptive analysis show that the level of academic hardiness owned by students is in the medium category, which is 67.4%.

Further in Table 5 shows the results of descriptive analysis on each aspect of the active procrastination variable showing that most of them are in the moderate category. 57.8% of students are satisfied with the results or achievements of the tasks carried out after procrastinating. 63.1% of students tend to enjoy the feeling of being challenged when a deadline approaches. 47.8% of students tend to have the ability to meet deadlines, and more than 50% of students tend to decide on procrastination intentionally and suddenly

Table 5. Levels of Active Procrastination Aspects

Aspects	Category	%
Satisfaction with results	Low	16.3%
	Moderate	57.8%
	High	26.0%
Preference for time pressure	Low	12.7%
	Moderate	46.8%
	High	40.5%
Ability to meet deadlines	Low	8.9%
	Moderate	47.8%
	High	43.3%
Deliberate decision to procrastinate	Low	12.0%
	Moderate	63.1%
	High	24.9%

Table 6. Levels of Academic Hardiness Aspects

Aspects	Category	Frequency	%
Control of Effort	Low	45	11.5%
	Moderate	275	70.0%
	High	73	18.6%
Control of Affect	Low	45	11.5%
	Moderate	273	69.5%
	High	75	19.1%
Commitment	Low	54	13.7%
	Moderate	260	66.2%
	High	79	20.1%

According to Table 6, the results of descriptive analysis on each aspect of the academic hardiness variable show that most of them are in the medium category. Most students or as many as 72.3% of students tend to have challenge characteristics, namely the perception that challenges are experiences that are important for personal development, not as threats. Most students or 70% of them tend to have the characteristics of control of effort, namely the ability to overcome academic challenges through effort. Most students or 69.5% of students tend to have control of affect, which is tend to be able to control their emotions when facing academic challenges. Most of the students or 66.2% of students tend to have commitment, which is tend to be willing to maintain their efforts and make sacrifices to achieve academic excellence.

Next, the researcher tested the assumptions to fulfill the basic assumptions of correlation analysis, namely the normality test and linearity test whose calculations were assisted by the Statistical Product and Services Solution (SPSS) Program. The normality test used the One-Sample Kolmogorov-Smirnov Test technique. The result was a significance value of $0.200 > 0.05$, which meant that the data from the two variables were normally distributed. The linearity test was carried

out using the Lack of Fit Test method which resulted in a significance value of deviation from linearity $0.079 > 0.05$, which means that the two variables had a linear relationship.

After the data was declared to be normally and linearly distributed, the product moment-Karl Pearson correlation test was performed. This correlation test aimed to measure the relationship between the active procrastination variable and the academic hardiness variable. The result of the product moment correlation test from Karl Pearson showed that the correlation between the academic hardiness variable and the active procrastination variable had a correlation coefficient (r) of 0.308. (Table 7). The relationship between the two variables included a weak positive relationship. This was in accordance with the Interpretation guidelines for the correlation coefficient from Sugiyono (2013) which states that the correlation coefficient in the range of 0.20 to 0.399 was included in the category of a weak positive relationship. This meant that there was a weak positive relationship between academic hardiness and active procrastination. Thus, that the results of the correlation analysis can be generalized, a significance calculation using the t-test is used. The significance value obtained is 0.000 which means, it is smaller than 0.05. Therefore, it can be concluded that there is a significant relationship between academic hardiness and active student procrastination.

Table 7. Correlation Analysis Results

Variable	R	P	Result
Academic Hardiness – Active Procrastination	0,308	0,000	Positive and Signifikan

DISCUSSIONS

The results of the research conducted on 393 samples showed that the average student was in the category of moderately active procrastination. The results of the data analysis indicate that on average students have 4 aspects/ characteristics of active procrastination behavior in the moderate category, namely: Preference for pressure, Deliberate decision to procrastinate, Ability to meet deadlines, Result satisfaction (Kim & Seo, 2015; Kiser, 2020; McCloskey, 2011).

Students who become active procrastinators are students who tend to enjoy the feeling of being challenged, which results in increased motivation, such as opinions Chu & Choi (2005) motivated to do their jobs as they approach deadlines. They tend to decide to procrastinate on purpose, suddenly, but the time used remains organized. They can accurately estimate the minimum amount of time required to complete a task and push themselves to proceed efficiently toward a goal, even with (or perhaps because of) last minute pressure and tend to derive satisfaction from the results achieved because active procrastinators know how to motivate themselves in a state of urgency, make a deliberate decision to procrastinate, and complete tasks on time (Choi & Moran, 2009).

The level of academic hardiness based on this research is in the medium category, which means that students have a fairly good academic hardiness. Maddi (2006) explained that academic hardiness gives students the courage to overcome difficulties and see academic stress as a

learning opportunity. This courage and positive view of stress actually comes from 4 aspects that build the characteristics of academic hardiness in students, namely commitment, control of effort, control of affect, and challenge (Creed et al., 2013; Karagiannopoulou et al., 2014). Based on the analysis results, USK students have academic hardiness characteristics in the medium category. The first is "commitment", i.e. students are willing to maintain their efforts and make sacrifices to achieve academic excellence. Second, "control of effort" means that students have the ability to overcome academic challenges through the efforts they make. The third is "control of affect" where students are able to control their emotions when facing academic challenges. The fourth is the "challenge" where students have the view that every academic difficulty is a challenge, not a threat. This happens because the student has the view that any knowledge or insight gained from the class will be beneficial for his development, and feels challenged to learn it.

Active procrastinators are people who deliberately choose to procrastinate, have high self-efficacy, they have the ability to make decisions to complete tasks on time, and the results obtained are satisfactory (Chu & Choi, 2005). According to Chu & Choi's opinion above, it means that there is self-efficacy possessed by active procrastinators which according to previous researchers is positively related to academic hardiness. Bandura (Cheng et al., 2019) explains that self-efficacy is related to a person's beliefs about what can be done with certain skills under certain conditions that affect how people feel, think, behave, and motivate themselves when facing problems. It is this individual's belief, hope, and confidence in his ability to carry out the task that makes individuals who

have academic hardiness feel confident in themselves when faced with academic pressure, so they can motivate themselves and are not afraid to procrastinate. The positive relationship between self-efficacy and academic hardiness is supported by previous researchers (Jang & Liang, 2016; Wang & Tsai, 2016; Cheng et al., 2019) which shows that there is a strong positive association between academic hardiness and self-efficacy. Their perceptions of academic self-efficacy were strongly related to academic resilience, indicating that students with higher academic self-efficacy strongly reflected their perceptions of academic resilience and *vice versa*. The study of Cheng et al. (2019) revealed that the 3 dimensions of academic toughness (commitment, control, and challenge) were strong predictors of academic self-efficacy. In addition, this study also shows an effective contribution from the two variables which can be seen from the results of the measures of association analysis with R Square = 0.095. Therefore, it can be concluded that the magnitude of the influence of the academic hardiness variable on the procrastination variable is only 9.5%, while 90.5% is influenced by other factors not examined in this study.

The description of the level of academic hardiness of students who are still in the moderate category is expected to be the basis for the creation of a Guidance and Counseling service program by the University Guidance and Counseling Service Unit which aims to help students achieve success in studying in Higher Education. The Guidance and Counseling service program to improve academic hardiness in students that can be applied is Hardiness Training. Hardiness Training is a training that not only teaches conceptualization of academic toughness, but also how to utilize certain techniques and develop certain attitudes that will

transform stressful situations in their lives from potential problems into opportunities for growth (Maddi et al., 2009). Hardiness training has been widely applied and effective in the academic field, from students to students. Hardiness training is effective in increasing the average value of first semester students (Maddi et al., 2002), meningkatkan IPK mahasiswa (Maddi et al., 2009), reduce anxiety levels in 1st grade female students in Tehran (Moazedian et al., 2014), improve the quality of life of female students at Fatimah Azzahra school in Ahwaz (Shokohifard et al., 2017), and improve self-efficacy and self-acceptance in male students of Parsabad city junior high school in Iran (Azimi & Shariatmadar, 2018).

This research has been carried out as well as possible, but of course it still has limitations, such as: (1) Data collection was carried out online during the covid-19 pandemic, so that researchers could only distribute instruments through social media which could cause respondents to fill it out in a non-serious or focused manner, but the researchers tried to minimize it by providing clear and complete instructions for filling out the questionnaire. (2) the factor of low enthusiasm of students to fill out questionnaires voluntarily spread online affects the length of the study, which was one month to collect data from 393 respondents. (3) This study showed that the influence of the academic hardiness variable on the procrastination variable was only 9.5%. Therefore, there were other factors that caused active procrastination that needed to be investigated further by further researchers.

CONCLUSIONS

Academic hardiness owned by students and students' active procrastination behavior are in the medium

category. Furthermore, there is a weak positive relationship between academic hardiness and active procrastination. This weak relationship does not mean that the higher the academic hardiness, the higher the active procrastination by students. There are many other factors that are related and affect active procrastination besides academic hardiness, both internal and external factors that still need to be studied more deeply.

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