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Analysis of Factors Affecting Students' Adversity Quotient on Completing Undergraduate Thesis

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Abstract

Writing an undergraduate thesis will inevitably encounter various obstacles and problems. A high adversity quotient is needed to complete an undergraduate thesis. Other psychological abilities need to be analyzed in relation to increasing the adversity quotient. The aim of this study is to analyze other factors that affected the adversity quotient in compiling an undergraduate thesis. The cross-sectional design was conducted on 110 students who were preparing their undergraduate thesis. Respondent characteristics (gender), intrinsic motivation, adversity quotient, self-directed learning readiness (SDLR), and anxiety were measured for all respondents. The results of the analysis showed that the adversity quotient was significantly associated with intrinsic motivation, SDLR, and anxiety, but not with gender. The strength of the relationship of all these factors is ranged from very weak to weak. The conclusion of this study is the adversity quotient is one of the individual responses to a certain situation or condition. Correlation between these factors describes that all factors appear in responses to the situation or conditions. However, these factors do not play a role in increasing a person's adversity quotient.

Introduction

Writing an undergraduate thesis is one of the requirements that a student must meet when they finish their studies. An undergraduate thesis is also called a final project. The undergraduate thesis is included as a scientific work that has scientific principles in its writing. Consequently, the preparation of an undergraduate thesis should employ certain methods depending on the type of research adopted (Felix & Smith, 2019). The writing of the undergraduate thesis is given to students in order to evaluate the capacity of students for scientific applications according to the sciences that students have learned. Writing an undergraduate thesis will allow students to develop their reasoning capabilities for the knowledge they are studying (Dowd et al., 2018).

Students will face several barriers to writing an undergraduate thesis. Constraints in writing an undergraduate thesis can be categorized into two based on the source, namely internal (self-esteem, motivation, anxiety, paraphrasing ability, article review, literacy ability), and external (communication skills with supervisors, thesis administration, costs) (Asisa, 2021; Harjum, 2020; Ling, 2022; Puspita, 2019; Sariyanto et al., 2015). These obstacles and constraints make it difficult for students to write an undergraduate thesis.

The success of students in compiling an undergraduate thesis cannot be separated from the ability of the adversity quotient possessed by students (Rivalina & Setyowati, 2020; Soniatri & Syukur, 2019). The adversity quotient is a person's ability to face the difficulties he encounters in doing or achieving a certain goal (P. G. Stolz, 2010). The success of students in dealing with and solving a problem is can be apart from a high adversity quotient. On the other hand, a low adversity quotient will reduce the success of students in writing an undergraduate thesis. One effect of this success is that students fill out the thesis according to the time determined by the campus. Adversity Quotient is a relatively new psychometric measurement compared to other psychometrics (Phoolka & Kaur, 2012). Research related to the factors influencing the adversity quotient has not yet been completed. Thus, the explanation of the factors that can increase or decrease a person's adversity quotient is still unknown. Several studies have revealed the influence of certain factors on an individual's adversity quotient, including self-esteem, self-confidence, demographic factors (gender, age), self-directed learning, and anxiety (Pangma et al., 2009; Sarmidi et al., 2020; Shen, 2014b, 2014a; Wahyuningtyas et al., 2020). The purpose of this study is to examine the factors that affect the adversity quotient of students in writing an undergraduate thesis. The researcher only measured the factors of gender, motivation, self-directed learning, and anxiety which considered to be related to the adversity quotient. The research population is chosen so that the adversity quotient can be clearly measured in a particular learning activity.

Method

This research is an analytic observational study with a cross-sectional design. The population of this study consisted of all the students from the last semester working on the preparation of the undergraduate thesis in 2021, totaling 156 respondents. All research variables were measured by using a questionnaire. The Adversity Quotient questionnaire consists of 20 statement items that are proven to be valid and reliable (P. Stolz, 2022). The results of the measurements are ranked into 5 levels: low (≤ 117), moderately low (118-134), moderate (135-160), moderately high (161-177), and high (178-200).

In addition, the adversity quotient of respondents is also categorized by type into climbers, campers, and quitters. The anxiety measurement uses an adaptation of the anxiety questionnaire from Greenberg & Padesky which amounts to 40 items and has been proven to be valid and reliable (Harahap, 2019). A modified motivation questionnaire developed by McAuley et al., (1989) was used to measure intrinsic motivation. Self-Directed Learning was measured using Fisher's Self-Directed Learning questionnaire (Fisher et al., 2001). The data were collected using the Google form that is shared with the respondent through the WhatsApp application. Respondents were given three weeks to fill out the questionnaire. The researcher reminded each respondent to complete the questionnaire each week. This was done to improve the response rate to this study. The data collected will be analyzed through a correlation test to see how the factors are interconnected. The correlation test that is used is the Somers'd test for the ordinal-ordinal data and the Eta test for the nominal-ordinal data.

Results

A total of 110 respondents took part in the study. Due to this amount, the response rate for this study is 70.51%.

The proportion of male respondents to female respondents is lower. This proportion is identical to the proportion of sex in each batch, with more females than males.

Table 1. Respondent Characteristic

	Variable (n=110)	f (%)
Gender	Male	40 (36.4)
	Female	70 (63.6)
Level of Adversity Quotient	Low	6 (5.5)
	Moderately Low	28 (25.5)
	Moderately	56 (50.9)
	Moderately High	13 (11.8)
	High	7 (6.4)
Type of Adversity Quotient	Climbers	102 (92.7)
	Campers	8 (7.3)
	Quitters	0 (0.0)
Level of SDLR	Low	23 (20.9)
	High	87 (79.1)
Intrinsic Motivation	Low	2 (1.8)
	Moderate	69 (62.7)
	High	39 (35.5)
Anxiety	Mild	0 (0.0)
	Moderate	9 (8.2)
	Severe	94 (85.5)
	Panic	7 (6.4)

The highest respondent's adversity quotient level is in the moderate category, where most of them are climbers (92.7%). The findings show that most respondents have a high level of self-directed learning (79.1%), moderate intrinsic motivation (62.7%) and a severe level of anxiety (85.5%). The correlation between adversity quotient with SDL, intrinsic motivation, and anxiety can be seen below.

Table 2. Correlation between Adversity Quotient with SDLR

Adversity Quotient	SDLR			p*
	Low	High	Total	
	f (%)	f (%)	f (%)	
Low	2 (1.8)	4 (3.6)	6 (5.5)	0.006
Moderately Low	10 (9.1)	18 (16.4)	28 (25.5)	
Moderately	10 (9.1)	46 (41.8)	56 (50.9)	
Moderately High	0 (0.0)	13 (11.8)	13 (11.8)	
High	1 (0.9)	6 (5.5)	7 (6.4)	
Total	23 (20.9)	87 (79.1)	110 (100.0)	

*) Somers' d Test

Those who have a high adversity quotient also tend to have a high SDLR. The Somers' d correlation test proves that the correlation between the adversity quotient and the SDLR is significant (Somers' d value= 0.168, p= 0.006).

Table 3. Correlation between Adversity Quotient with Intrinsic Motivation

Adversity Quotient	Intrinsic Motivation			Total	p*
	Low	Moderate	High		
	f (%)	f (%)	f (%)		
Low	1 (0.9)	3 (2.7)	2 (1.8)	6 (5.5)	0.029
Moderately Low	0 (0.0)	23 (20.9)	5 (4.5)	28 (25.5)	
Moderately	1 (0.9)	32 (29.1)	23 (20.9)	56 (50.9)	
Moderately High	0 (0.0)	8 (7.3)	5 (4.5)	13 (11.8)	
High	0 (0.0)	3 (2.7)	4 (3.6)	7 (6.4)	
Total	2 (1.8)	69 (62.7)	39 (35.5)	110 (100.0)	

*) Somers' d Test

A high adversity quotient will also increase an individual's intrinsic motivation. The crosstabulation shows that

most respondents have a moderate adversity quotient and a moderate intrinsic motivation. Based on the table, we can see that respondents with a high adversity quotient tend to have a high intrinsic motivation (Somers' d value= 0.162, $p=0.029$). Adversity quotient has a relationship with anxiety. In the table above, we can see that the higher the adverse quotient of the respondent, the lower the anxiety. Somers' d correlation test got Somers' d value of - 0.246 ($p=0.0001$).

Table 4. Correlation between Adversity Quotient with Anxiety

Adversity Quotient	Anxiety				Total f (%)	p*
	Mild	Moderate	Severe	Panic		
	f (%)	f (%)	f (%)	f (%)		
Low	0 (0.0)	0 (0.0)	4 (3.6)	2 (1.8)	6 (5.5)	0.0001
Moderately Low	0 (0.0)	0 (0.0)	24 (21.8)	4 (3.6)	28 (25.5)	
Moderately	0 (0.0)	3 (2.7)	52 (47.3)	1 (0.9)	56 (50.9)	
Moderately High	0 (0.0)	5 (4.5)	8 (7.3)	0 (0.0)	13 (11.8)	
High	0 (0.0)	1 (0.9)	6 (5.5)	0 (0.0)	7 (6.4)	
Total	0 (0.0)	9 (8.2)	94 (85.5)	7 (6.4)	110 (100.0)	

*) Somers' d Test

Gender has no correlation with adversity quotient ($p>0.05$). The cross-tabulation shows that there is no trend to increase a person's adversity quotient by gender.

Table 5. Correlation between Gender with Adversity Quotient

Gender	Adversity Quotient					Total f (%)	p*
	Low	Moderately Low	Moderately	Moderately High	High		
	f (%)	f (%)	f (%)	f (%)	f (%)		
Male	2 (1.8)	7 (6.4)	25 (22.7)	3 (2.7)	3 (2.7)	40 (36.4)	>0.05
Female	4 (3.6)	21 (19.1)	31 (28.2)	10 (9.1)	4 (3.6)	70 (63.6)	
Total	6 (5.5)	28 (25.5)	56 (50.9)	13 (11.8)	7 (6.4)	110 (100.0)	

*) Eta Test

Discussion

Adversity quotient is one kind of intelligence that is needed by people when they face the problem and deals with them. Like another intelligence, the adversity quotient is believed not to be affected by personal characteristics. But there have only been a few studies to prove that statement. In this study, one of the purposes is to analyze the effect of gender on the adversity quotient.

The results of this study show that there is no significant relationship between gender and a person's level of adversity quotient. Previous studies also showed the same results on other individual characteristics, such as age, gender, and education.(Napire, 2013; Pusparani & Jannah, 2022) The explanation that can be given for these results is that the adversity quotient is a measure of psychological ability, so the level of adversity quotient can vary according to the conditions and the situation. Therefore, the change in the environment that causes some problems for the individual can change how they resolve that problem. This process will increase or decrease people's adversity quotient levels. Gender as an individual characteristic is not involved in this process, and it means gender does not have a correlation to the adversity quotient.

Work performance arises as a result of the ability to deal with and solve problems encountered at work. Several studies that assessed the relationship between work performance and the adversity quotient obtained similar results, showing that there was a relationship between work performance and the adversity quotient..(Lubis, 2019; Runtu et al., 2019) Based on the results of the study, it can be said that the adversity quotient has an influence on one's work performance. This emphasizes that the adversity quotient is a psychological ability that varies depending on changes that occur in the environment and is not permanent as in individual characteristics.

The level of adversity quotient will be higher if the motivation of the individual is also high.(Pangma et al., 2009; Sarmidi et al., 2020) The desire to solve a problem or challenge will encourage the individual to make an effort. This drive is also known as motivation. Based on the source of the emergence of motivation, then motivation can be divided into two, namely: internal motivation (which comes from inside) and external motivation (which comes from outside). Both sources can increase a person's level of adversity quotient. The motivation that arises is very dependent on the existing triggers. The stronger the trigger that causes motivation, the greater a person's ability to deal with problems.

Most of the respondents had a Climbers category of adversity quotient. Individuals who are in the climber's category will have persistence in facing difficulty. As stated earlier, a condition or situation that arises difficulties in a person's life will trigger the person to perform the ability to deal with the problems. A person who is compiling his final thesis is also faced with several difficulties, and as a response to dealing with these difficulties, they will form the ability to deal with problems so they can complete the thesis.

Writing an undergraduate thesis is an activity that requires tenacity and seriousness to complete. This activity will also create conditions that require a person to have the ability to deal with and solve adverse situations that he/she confronts. All students will react differently in accordance with their perception of it. If the students had the

perception that completing their undergraduate thesis was the important thing, they would give more effort to doing it. This will increase the level of the adversity quotient. Students that compile an undergraduate thesis tend to have a high adversity quotient, and they will be in the campers or even climbers category. (Rivalina & Setyowati, 2020; Soniatri & Syukur, 2019)

Independent learning is needed in the learning process, including in writing a thesis. Determination of targets and how to achieve these targets are some of the things that are done in the independent learning process. When viewed from the psychological aspect, there should be a relationship between the adversity quotient and the ability to learn independently, as obtained in this study and other studies. (Dewi & Daharnis, 2021)

However, other studies show different results. In those studies, they state that there is no significant relationship between adversity quotient and learning independence. (Widuroyekti et al., 2022) The results may be caused by differences in the situations and conditions where the adversity quotient and SDLR are measured. Motivation theory explains that when some condition triggers the motivation, then the person will perform a specific act to fulfill it. Motivation arises as a result of internalizing a stimulus from the environment to perform a certain action. This motivation is not general in nature, but is specifically aimed at one particular thing. So, the relationship between the adversity quotient and SDLR can occur if the motivation underlying the two actions is the same.

The relationship between adversity quotient and anxiety has been shown to be related in this study. Several other studies that measured the relationship between these two variables also obtained the same results. (Isharyoto, 2022; Nurfitri, 2022; Putri & Akbar, 2022; Rasyidin, 2018) Even so, the study which found that there was no significant relationship between the adversity quotient and anxiety also found. This can happen because the measurement of anxiety and adversity quotient may not be specific to one particular condition or situation. As a result, the anxiety that is measured is not caused by the same reason that makes the level of adversity quotient high or low. That's why in the other study found no relationship between the two of it.

The relationship between adversity quotient with intrinsic motivation, SDLR, and anxiety in this study does not make these factors play a role in increasing or decreasing a person's adversity quotient. This can be seen from the correlation coefficient of each analysis which is categorized as weak to very weak (0,00-0,40). Further research using a larger sample may be able to clearly describe the role of these factors in increasing or decreasing the level of the adversity quotient. Other factors need to be investigated further to describe their role in influencing the value of the adversity quotient.

Conclusion

Adversity quotient is a measure that describes the level of a person's ability to face and find ways to deal with the difficulties he faces. Adversity quotient can also be called as a perseverance. Perseverance will appear when someone is faced with difficulties or problems that must be solved. The adversity quotient is not influenced by individual characteristics, but its related to things that arise as an act to deal with the one problems or difficulties, eg: motivation, SDLR, and anxiety. The perseverance or adversity quotient can be unrelated to motivation, SDLR,

and anxiety if the triggers for these things do not come from the same situation or condition. Even so, the results of this study cannot explain that intrinsic motivation, SDLR, and anxiety factors can increase or decrease a person's adversity quotient level. There needs to be further research to analyze other factors that might affect the adversity quotient level.

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