

THE EFFECT OF EXERCISE GROUP TECHNIQUE ON ACADEMIC HARDINESS IN SENIOR HIGH SCHOOL

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Abstract

Academic stress related Hardiness (Benishek & Lopez, 2007). Students that have powerful personality 84% able to solve any difficulty, misfortune, and changes that happen in life with optimism and positivity, meanwhile the one that has no powerful personality only 16% students able to act optimistically in a difficult situation, misfortune, and unexpected changes (Lan, 2013). Academic Hardiness provides positive framework for students to react toward academic challenges. Academic toughness is the individual state of resilience toward academic failure: Individuals who have academic hardiness display a willingness to engage in academic challenges, commitment to follow all academic activities, and have control over academic performance for maximum results (Kobasa, Maddi, & Kahn, 1982).

The purpose of this study to determine the increase in academic hardiness and decrease in academic stress perceived by Senior High School in Indonesia. Group exercise technique provides an exercise program to increase the commitment, control, and challenge of each student. A quasi-experimental nonequivalent control group with pre-test and post-test was used with a convenience sample of students. Results of academic hardiness profile of high school students have low academic hardiness value with a value academic hardiness aspect: 66% commitment, 22.7% control, and 25.6% challenge. The statistical analyses by paired t-tests revealed that the exercise group technique intervention have a statistically significant effect on increasing academic hardiness scores compared with those who were not given intervention, but the commitment aspect cannot be improved significantly. Further academic hardiness research in senior high school, utilizing the entire academic hardiness intervention, was recommended.

Keywords: Academic Hardiness, Exercise Group Technique, Senior High School

1. INTRODUCTION

Stress is highly potential among high school and college students and becomes a topic of interest from several kinds of literature (Misra, McKean, 2000; Dahlin, Joneborg, & Runeson, 2005; Friedlander, Reid, Shupak,&Cribbre, 2007). The academic stress comes from teaching and learning process which includes pressure for being promoted to next grade, study duration, cheating, multiple assignments, repeat values, bureaucracy, scholarship, decisions on majors and career, exam anxiety and time management learning (Desmita, 2010, pp. 297). Students express stress in each semester with a high-stress source from learning

before the exam, at the exam, value competition, and from so much material to be mastered in a short time (McKean & Misra, 2000, p 41).

The most common stress experienced by many students is in the late adolescence age for fear of failure in the formal education process (Tyrrel, 1992; Schafer, 1996; Gibbons, 2015; Kamtsios & Karagiannopoulou, 2015). Weak personality is the trigger of stress that even occur in the academic realm, do not have the commitment, self-control and consider the difficulty with pessimistic attitude is the attitudes possessed by individuals with a weak personality. Most studies show academic stress associated with toughness (Benishek & Lopez, 2001; Karimi & Venkatesan, 2009).

Academic hardiness provides a framework for students to react to academic challenges (Benishek et al., 2005) a positive relationship between the three cognitive processes used in academic toughness, challenge, commitment, and control (Lifton, Seay, & Bushko, 2000). Previous studies support this assertion that the high academic stress that students experience is due to the low academic toughness students have (Misra, McKean, West, & Russo, 2000; Dahlin, Joneborg, & Runeson, 2005; Friedlander, Reid, Shupak, & Cribbre, 2007). Students experience high stress in high school students entering college and face entrance test to be the acutest source of tension and stress (McGowen, Gardner, & Fletcher, 2006; Gibbons, Dempster, & Moutray, 2008; Heikkila, Lonka, Niemine, & Niemivitra, 2012; Gibbons, 2015).

These problems cannot be ignored because it will adversely affect the psychological, mental, and academic outcomes of students in the future, especially the academic toughness is still very minimally researched in the provision of preventive measures in high school (Creed, Elizabeth G. Conlon, & Dhaliwal, 2015). Therefore, it takes certain effort in developing academic toughness so that individual has high learning motivation (Maddi, Harvey, Khoshaba, Fazel, & Resurreccion, 2009) self-efficacy and positive attitude proceed to Higher Education (Benishek & Lopez, 2001).

The nature of toughness helps protect the individual from the effects of stress and predicts future well-being (Cole, Field, & Harris, 2004). The positive impact that resilience has on the academic environment is to be expected. Academic toughness as a one-dimensional construct, as well as a multi-dimensional nature with steps: commitment, control, and challenge (Benishek et al., 2005; Benishek & Lopez, 2001; Creed et al., 2013; Kamtsios & Karagiannopoulou, 2014).

Guidance and Counseling is a pedagogical effort to help every individual including teenagers to develop themselves optimally. Guidance and Counseling Services has an important role for every student within the school, family, and society in general Kartadinata (2011, pp. 5). Developing academic toughness in senior high school students by group exercises contributes to the body's knowledge of the nature of academic toughness, which can assist in developing a better understanding of the variables that affect academic achievement and academic outcomes, such as success and future job fulfillment (Coetzee & Harry, 2014). Implementation of academic toughness is an individual able to have optimistic attitude, physical and mental health, and personality development (Maddi, 2006), Effective leadership (Barthone, 2009), well-being, (Encclles, & Barbel, 2004), and achievement of pride (Maddi, Harvey, Khoshaba, & Mostafa Fazel, 2012).

This study aims to determine the value of academic hardiness of students as well as the influence of group guidance interventions with exercise techniques to the academic hardiness of senior high school students. This research is a preliminary project, and still can be done later. Researchers only take one school as the object of research.

2. THEORETICAL FRAMEWORK

2.1 Academic Hardiness

Academic hardiness evolved from the concept of hardiness born of existential psychology (Ferreira, 2012). This hardiness is seen in terms of human in seeking authenticity by creating personal meaning through self-reflection, decision-making, and actions that encourage growth (Kobasa 1979, Maddi & Kobasa, 1984). Academic hardiness is reflected in learning, growth-oriented personality styles (Sheard & Golby, 2007). High levels of hardiness show authentic life; Not looking for ways to avoid stressful events. But the individual draws strength from the difficulties facing and overcoming obstacles as a challenge. (Carr, Kelley, Keaton, & Albrecht, 2011).

Hardiness is introduced in research in the field of education, in an effort to ascertain the positive impact of hardiness that can be had in academic settings (Benishek & Lopez, 2001; Kamtsios & Karagiannopoulou 2011, 2013). The formulation of the meaning of academic hardiness was formulated by Benishek and Lopez (2001) (Benishek, Feldman, Shipon, Mecham, & Lopez, 2005; Benishek & Lopez, 2001), providing a

framework for understanding how students react to academic challenges (Benishek, et al., 2005). Academic hardiness develops a relationship between an attitude of hardiness and a form of behavior that concerns learning and performance components as an ideal student.

The components of academic hardiness are defined as follows: a commitment to the willingness of students to spend a consistent effort and make personal sacrifices to achieve academic excellence, regardless of the content or demands of the academic process. Challenges are defined as focused efforts to always try, great efforts of students to achieve goals, in the academic process and experience to justify the actions embedded in the student's personality. Control is defined as students' belief that students have the capacity to achieve desired educational outcomes through personal effort and through effective emotional self-regulation in the face of academic pressure and disappointment (Benishek, et al., 2005).

2.2 Group Exercise

Group exercises are pioneered by Jacob et al. The group exercise emphasizes the process of group dynamics that requires active group members in activities. Activities conducted in groups can help students learn many skills, such as communication skills, trust, cooperation, to the ability to support each other (Rusmana, 2009, pp. 15-17). There are reasons to use group exercises: developing discussions, participation, focusing groups, raising a focus, providing opportunities for experiential learning, giving useful information counselors, giving fun and relaxation (Jacob, 2012, pp. 223-245).

The stages of group guidance are divided into four stages. (Glading, 2012; Rusmana, 2009) The four stages of group guidance are the beginning a stage, the transition stage in a group, the working stage in a group, and the termination stage. The following group guidance in the form of developing students' academic hardiness with group exercise techniques: a). The beginning a Stage; 1) Objectives 2) Group formation, b). Transition stage in a group: storming and norming group leaders group reconciliation and restructuring by the division of tasks and contracts c) The working stage in a group: 1) Experiments 2) Identification, the group leader performs a one-step reflection by identifying the list and understanding of group members in commitments made to alleviate the lists that have been written in the writing exercise (commitment) 3) Analysis. The group leader reflects. Improvement plans are realized in the process of completing the list of lists that makes students feel stressed in subsequent guidance; 4) Generalization. The group leader carries out the final reflection by inviting the group members to create a control system so that the resolution in stage two can be continuously done to achieve the expected objectives (Control); d) Termination of a group: 1) General reflection. The group leader invites the group members to review or recall the process of guidance that has been done. Then the counselor gives the process of movement exercise two with home spot technique that is the participants are asked to make a circle and hold hands.

3. METHOD

The study designs using quasi-experimental non-equivalent with pre-test and post-test were used for this study. The purpose of the quasi-experimental research design is to examine the cause and effect of the relationship between independent and dependent variables (Burns & Grove, 2009). The sample used is high school students in Bandung, West Java of Indonesia. The total sample was 68 students. The minimum required the number of subjects in this study was determined by a power apriori power analysis of 2.0 (SPSS, 2010). The sample was dominated by 42 students and 26 male students. Age ranges from 14-18 years (M=15). The sample size for the experiment in this study amounted to 34 students (control group, n=17, experimental group, n=17). Data collection method used the development of Academic Hardiness Scale (Benishek & Lopez, 2001). AHS has been widely used in several studies for high school students. The scale can help to develop the scale of academic toughness that can be made to determine the profile of academic hardiness in the context to be researched. The conceptualization of academic hardiness can be more widely researched in different life stages, different groups, and in different cultural settings as controls of research control (Benishek et al., 2005; Chan, 2000; Green, Grant, & Rynsaard, 2007). However, in the main focus of this study is on the approach to the development of academic hardiness for high school students.

4. RESULTS

From research done in one of high school in Bandung, yielded data which strong enough where student academic hardiness is still very low (M=26,3) seen from the average score and percentage per aspect. The value of academic hardiness is said to be high above the number 36 for the total number of aspects (Benishek, 2011) Based on research on the acquisition of academic profile of hardiness of high school students are as follows:

Tabel. 4.1
Component of Academic Hardiness

No	Academic Hardiness	Yes	No
1	Commitment	66,5 %	33,5 %
2	Control	22,7 %	77,3%
3	Challenge	25,6 %	74,4%

In the independent T-test experimental analysis that was calculated on the academic hardiness of pre test and considered to emphasize the raw value to determine the group equations so that the study groups were comparable. Samples taken from those with a score range for total academic hardiness are 17 to 39, with a midpoint of 26. Higher scores reflect greater academic hardiness that is above 36 (Maddi & Khoshaba, 2001). The total default value (N=68) for pre-test academic hardiness has a minimum of 18 and a maximum of 39 with an average of 26.5. The average value of academic hardiness pre test is (M=23). For the experimental group (n=17) For the control group (n=17). Scores ranged from a minimum of 17 to 28 in the experimental group and 18 to 30 in the control group.

The paired t test was computed to compare the mean of the result of the post-test score to the mean academic hardiness score of pre-test experimental group (n=17), who participated in the exercise technique to test the improvement of student academic hardiness. Paired t-tests show significant differences. The value of academic hardiness in women based on the results of pre test and post-test is considered higher than in men (female=29, male=22).

Tabel. 4.2
Test of Normality

	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
PRE	.155	17	.200 [*]
POST	.131	17	.200 [*]

Data using kolmogorov-smirnov test resulted in normal distorted pretest data because the value of sign > alfa 0,05; 0.2>0.05, and post test data is distributed normally because the value of sign>alpha; 0.05; 0.2>0.05. Then use the non-parametric statistical test that is wilcoxon test.

Tabel 4.3
Paired Samples Test of academic hardiness

Paired Differences	Mean		Pair 1
	PRE - POST		
	Mean		-6.294
	Std. Deviation		3.331
	Std. Error Mean		.808
	95% Confidence Interval of the Difference	Lower	-8.007
		Upper	-4.581
t			-7.791
df			16
Sig. (2-tailed)			.000

Sign value less than alpha 0.05 then H0: 0,00<0,05, Then there is a difference of pretest and posttest score from the student. Here are the results of pre-test and post-test per an aspect of academic hardiness using Wilcoxon test.

Tabel 4.4
Statistics of test commitment

	post.komitmen - pre.komitmen
Z	-1.466 ^a
Asymp. Sig. (2-tailed)	.143

On the commitment aspect ($Z = -1.466$, 2-tailed = 0.143). sign: $0.143 > 0.05$. So there is no significant difference between pre-test and post-test score of students on the commitment aspect.

Tabel 4.5
Paired Samples Test of Control

		Pair 1
		pre.kontrol - post.kontrol
Paired Differences	Mean	-2.176
	Std. Deviation	1.976
	Std. Error Mean	.479
	95% Confidence Interval of the Difference	Lower
Upper		-1.161
t		-4.542
df		16
Sig. (2-tailed)		.000

In control aspect (2-tailed sign: 0.00) $0,00 < 0,05$, So there is a difference between pre-test and a post-test score of a student on control aspect.

Tabel. 4.6
Paired Samples Test of Challenge

		Pair 1
		pre.tantanfgan - post.tantangan
Paired Differences	Mean	-3.647
	Std. Deviation	1.935
	Std. Error Mean	.469
	95% Confidence Interval of the Difference	Lower
Upper		-2.652
t		-7.773
df		16
Sig. (2-tailed)		.000

Likewise on the challenge aspect (2-tailed sign: 0.00), $0.00 < 0.05$, So there is a significant difference in pre-test and a post-test score of students on the challenge aspect. In the pre-test group and post-test of the female students reached an average score of 29 and the male was 22.

5. DISCUSSION

A happy person emerges from a mixture of interrelated commitments, controls and challenges and helps in managing stressful circumstances and turns them into experiences that stimulate positive growth rather than weaken (Maddi & Kobasa, 1984; Maddi, 2005) The value of academic hardiness pre-test is on average score 23 and post-test 29.2 where the value is still far to reach the value of 36 because the value of hardiness of good student is at value 36 (Benishek, 2011), then result of pre-test of the student's academic

hardiness score is below the average, both in commitment, control and challenge aspects although the students are at 66% in the commitment aspect, but very low on the aspects of control and challenge, each at only 22.7% and 25.6%. The value of academic hardiness indicates a significant increase due to the intervention is given, statistically the value of academic hardiness increases and shows positive growth in students although still far from the ideal value of academic hardiness. The attitude of hardiness is a cognitive and emotional system that is a buffer of an educated person and oriented to positive development (Maddi, 2006).

The value of academic hardiness in women based on pre-test and post-test is higher than men, according to Rice's direction (1997) showed that through the teaching of women's skill is easier to overcome stress when compared with men, more women find ways to reduce stress compared to men. So also with the results of research Hensel and Research Stoelting-Gettelfinger (2011); Goff, 2011) through Signal Stress Syndication (SWS) and 51-item Student-Life Stress Inventory (SSI) to measure personal and academic stressors.

Analysis with paired t-test showed that group guidance intervention with the technique of exercises to improve academic hardiness significantly influenced statistically toward high school students. The explanations for the intervention of academic hardiness pre-test and post-test were statistically significant because of the effects of the group counseling stages on the experimental group used in accordance with the stages of group guidance and in-depth training development. The stages of group guidance are divided into four stages. (Glading, 2012; Rusmana, 2009) The four stages of group guidance are the beginning a stage, the transition stage in a group, the working stage in a group, and the termination of a group. Where in the experimental treatment is possible at the stage of work to be done more than once to deepen the skills of students.

Students can only achieve minimal change score after Intervention done on commitment aspect. Similarly, the average value of the overall academic hardiness change in the post-test only rises slightly from the pre-test although it is said to be significant in statistical tests. The results are in accordance with the logic of the findings following the Rice's Students hardiness literature (1997) Students in a 6-week hardiness academy intervention in an exclusive male sample that has an above-average academic score, so that treatment is treated to produce statistical significance with an average rate of change in height on the post-test. while in this study, the initial sample had a low average academic value as it continued to rise at a not-so-substantial value, while in the student's commitment to pre-test and post-test the student's score was almost equal due to a non-elevated understanding of the commitment aspect, with initial grades as well as student knowledge. Maddi et al., (1998) found that the treatment of hardiness intervention experienced an increase of more than two conditions through relaxation/meditation and passive listening, and the insignificant factor in the commitment aspect due to the lack of modification in the techniques used despite the results of the study of Maddi et al., (2002) evaluated the effectiveness of hardiness interventions in students where their hardiness post-test score was higher than the score of academic hardiness in pre-test. Another plausible explanation for insignificant results on commitment and a low average value of the improvement is in methodological weaknesses; Data collection is only done in one school because the researcher is limited to a minimum acceptable time frame of five weeks for the basic components of skills in the training process. It is not appropriate for high school students to learn the concepts of commitment, control and academic challenges in a short time to be able to explore statistically generated values and figures.

Another obstacle in this study is the lack of representation in the male sample in this study. In addition, additional studies and modifications of existing theories in the subgroup of academic hardiness (Khoshaba and Maddi, 2008; Benishek, 2011) and exercise group techniques assess congruence in the design of the study and identify correspondence between the experiments, the experimental results show consistency with academic hardiness, but gaps and inconsistencies with academic hardiness on the commitment aspect.

6. CONCLUSIONS

The academic hardiness profile of high school students has low academic hardiness value with a value academic hardiness aspect: 66% commitment, 22, 7% control, and 25.6% challenge. There is a difference of academic hardiness value of high school students who follow group guidance activity with exercise technique and who do not get group guidance service with exercise technique.

Academic stress still exists in high school education. Empowering counseling and guidance services for students are able to improve skills for having academic commitment, control, and challenges. Further theoretical proportions and methodology of research and evaluation are needed to improve the academic hardiness of high school students.

The implications for Guidance and Counseling from this research are the foundation for the development of Guidance and Counseling practical service theory in the field of learning. This research needs to be continuously done in finding the best way to increase academic commitment, control, and challenges and further develop comprehensive academic hardiness assessment on every component of academic hardiness.

Model to modify adaptation theory toward the perceived pressure in high school about academic hardiness will serve as a framework to guide further research studies. Developing academic hardiness on adaptive and transformational academic stress management is a must to raise reliable human resources to face future challenges.

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