Academic Stress Among Male and Female Students After the Covid-19 Pandemic

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Abstract
This study aims to describe the condition of students' academic stress and examine differences in academic stress in male and female students after the Covid-19 pandemic. This research is a comparative research obtained through random sampling. The sample of this study was 118 students consisting of several high schools in Padang City. Data was collected with an academic stress scale with 57 items. The analysis technique uses the item response theory (IRT) approach with the Rasch Model analysis. This study examines descriptive and differences with Welch with the help of WINSTEPS Version 4.7.0. The results show that there is a significant difference between male and female academic stress. Other findings found that women's academic stress tended to be higher than that of men, and what was interesting from this data was that there was a woman who was at the highest logit or an outlier, meaning that this woman needed to be given intervention to reduce her stress by providing individual counseling services. Based on the results of this study it is hoped that school counselors will focus more on women for academic stress prevention programs.

Keywords: Academic Stress, students, Covid 19 Pandemic

Introduction

On December 31, 2019, the World Health Organization (WHO) was notified of a cluster of unidentified pneumonia cases reported in Wuhan City, Hubei Province, China. The virus that causes the coronavirus disease (COVID-19) was identified by Chinese authorities on January 7 (WHO, 2020). Since then, many people around the world have been infected, and many have died as a result. The World Health Organization has advocated social distancing as a method of protection against the virus. Likewise with the Indonesian cultural education ministry making policies for the implementation of online teaching and learning or also known as online learning (in the network). Meanwhile, in Saudi Arabia as a precautionary and precautionary measure, the government closed all schools, universities and educational institutions on March 8, 2020, in response to advice from health officials to protect students and employees. Saudi Ministry of Education, 2020). Ten hours later, the Saudi Minister of Education informed

the nation that the conventional education system would be replaced with virtual classrooms facilitated by various online education platforms (Moawad, 2020). Phenomena in the field of learning that are carried out online are considered to be less effective, based on a survey conducted by KPAI (2020) there were 73.2% of students having difficulty doing assignments, then unstable internet access made students delay in doing assignments (Rigianti, 2020). This condition is exacerbated by the ability of teachers in Indonesia who are not ready to deal with online schools, online school programs have not been planned beforehand. So that those who receive the impact are students, students find it difficult to understand lessons that make students stressed in learning.

Stress is a part of life regardless of social, economic, ethnic, or cultural status, but the modern world, which should be a world of achievement, is also a world of stress. There is stress in every aspect of life, including family, work, school, and all other social and economic activities. Meanwhile, academic stress is usually used to refer to stress that arises in the school or education environment (Rahmadani, 2014; Sinaga, 2015). Desmita (2009) explains academic stress is induced by academic pressure. Academic stressors include pressure to move up grades, length of study, cheating, multiple assignments, receiving repeat grades, deciding on majors or careers, exam anxiety, and managerial stress. Academic stress is a consequence of excessive demands and homework that students must complete. Students are increasingly burdened with various pressures and obligations because of the pressure to demonstrate academic achievement and excellence in conditions of increasingly intensive academic competitiveness. Students suffer academic stress as a result of their subjective awareness of differences between their environmental expectations and real resources. In addition to the demands of an online teaching and learning paradigm, the Covid-19 outbreak presents additional challenges for students. Due to the inability to engage directly with teachers or other classmates, the online learning process is more tedious and time-consuming. Thus, children experience frustration which if it continues can lead to stress (Barseli et al., 2020).

This condition is of course influenced by many factors, one of which is gender. Clabaugh et al. (2021) found that women were more stressed in their home learning environment than men; however, there were no other significant gender differences in academic perceptions. With regard to personality and emotional well-being, women have higher levels of neuroticism, more stress, and worse coping than men (Clabaugh et al., 2021). A possible explanation for this gender difference is that the pressures (e.g., deadlines, competition) and change (e.g., too many disruptive changes to life and goals) that women experience can trigger physiological reactions (e.g., migraine headaches, tremors, sweating).) to the cause of stress (Karaman et al., 2019). Based on the explanation of the concept above, there is no data on student academic stress based on gender in post-Covid-19 pandemic conditions. For this reason, the purpose of this study was to describe the condition of students' academic stress and to examine differences in academic stress in male and female students after the Covid-19 pandemic.

Methods

Participants

This research is a comparative research, which was obtained through random sampling. The target population is high school (SMA) students in Padang City, sampling was carried out after the Covid-19 pandemic through a scale spread from social media and Guidance and Counseling Teacher Council (MGBK). All procedures carried out were approved by the Universitas Negeri Padang Ethics Committee. The informed consent sheet becomes one with the instrument, the data is obtained electronically from the students. The sample in this study were 118 students consisting of 38 male and 80 female.

Measures

This study uses an academic stress scale which is compiled based on the general aspects of stress by behavior. The academic stress scale is a scale with 57 items, where the items are answered in a five response format by Sarafino & Smith (2014) which are then adjusted in the academic field, namely: physical, emotional, and points for example: always to never. Example of the item "I get depressed when my grades don't match expectations." Higher scores indicate severe academic stress, this scale has very good reliability (Cronbach's of 0.96; item reliability at rasch 0.98) and satisfactory validity with Raw

variance explained by measures 49.9% (Fischer & Molenaar, 2012; Ifdil et al., 2022; Syahputra et al., 2022; von Davier, 2016).

Data Analysis

The analysis technique uses an item response theory (IRT) approach with Rasch Model analysis. This study examines descriptive and differences with Welch (Bond & Fox, 2015; Ifdil et al., 2018; Syahputra et al., 2019; Syahputra & Erwinda, 2020) with the help of WINSTEPS Version 4.7.0 (Linacre, 2011). To achieve the research objectives, there are several that will be analyzed, including: 1) descriptive test of academic stress based on gender; and 2) test differences in academic stress based on gender.

Results and Discussions

This study uses two analyses, including: 1) descriptive test of academic stress based on gender; and 2) test differences in academic stress based on gender. Furthermore, a descriptive test of academic stress based on gender is presented in table 1.

Post-Covid-19 Pandemic Academic Stress Descriptive Test Based on Gender

Tabel 1. Descriptive of Academic Stress in View of Gender

Person Count	Mean Measure	S.E. Mean	Median	SD	Model Separation	Model Reliability	RMSE	Code
118	153.9	0.08	-0.44	0.81	4.91	0.96	0.17	*
38	144.9	0.12	-0.74	0.74	4.43	0.95	0.17	M
80	158.2	0.09	-0.35	0.82	4.97	0.96	0.17	F

Information: * = Total; M = Male; F = Female

In the table above, it shows that women (n = 80) are more dominant in filling out the academic stress instrument than men (n = 38). Overall, the model reliability for men and women is not much different, they are still in the same category, that is, the quality of the answers given by men and women is very good. Furthermore, the mean standard error indicates a good condition and the separation models formed when filling in the instrument are male (formed 4 groups) and female (formed 5 groups). To be clearer, the conditions of academic stress for men and women can be seen in Figure 1.
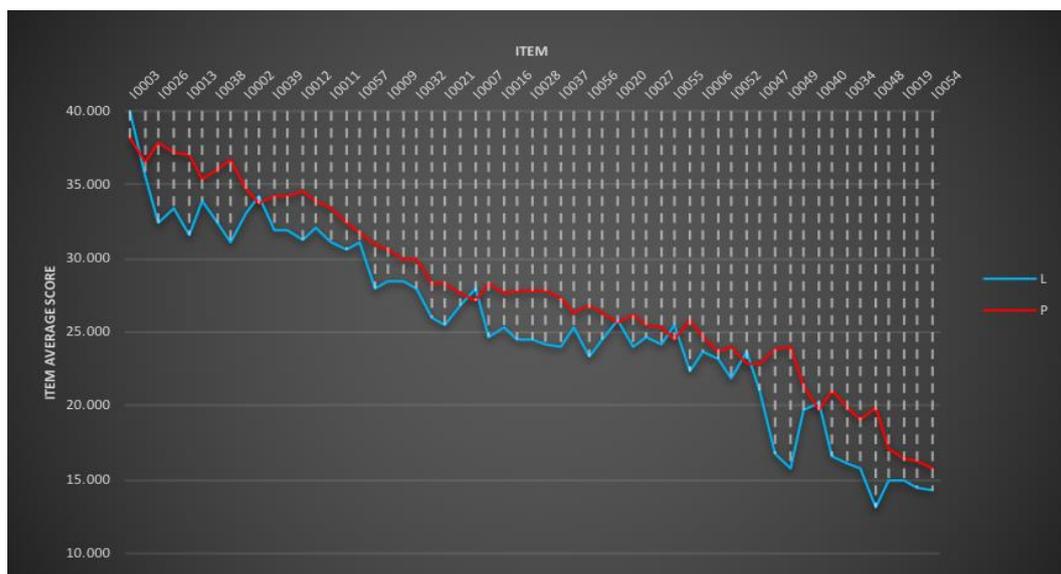

Figure 1. Conditions of Academic Stress Based on Gender After the Covid-19 Pandemic

Female tend to experience academic stress more often than men (as evidenced by the higher red line with the blue line (coded male). In addition, the tendency of items in the academic stress instrument to be approved more often by groups of women than men (Fig. 1) To clarify academic stress conditions can be explained in Figure 2 below using logit units.
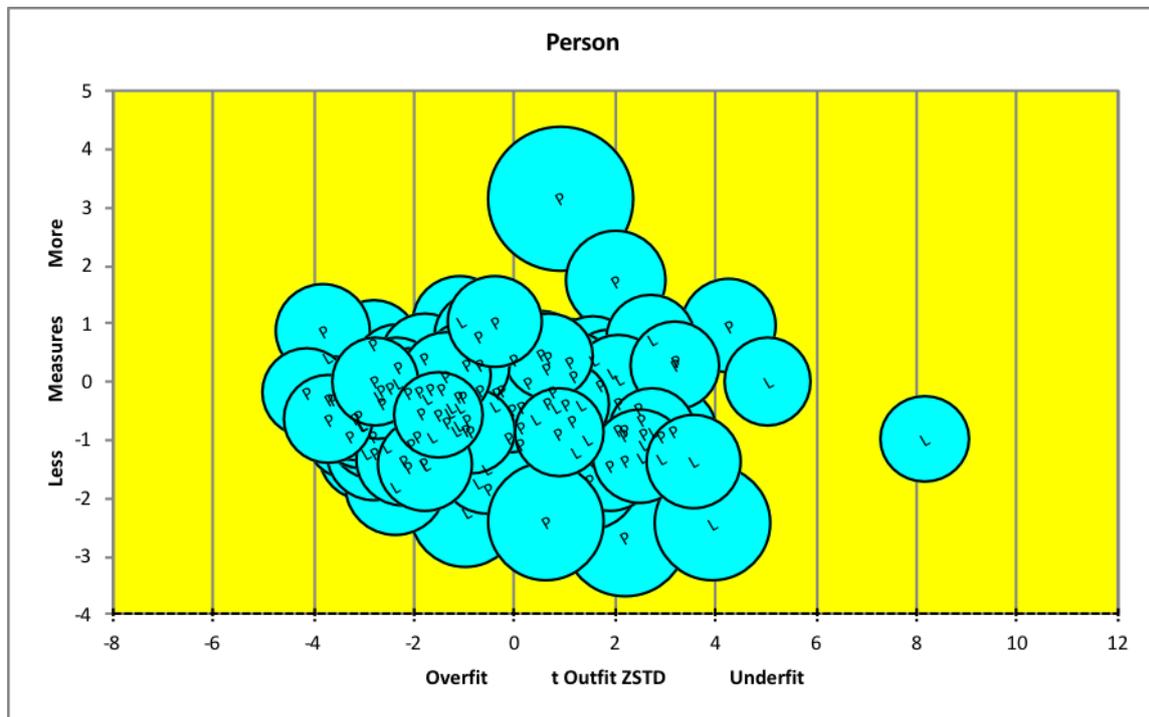

Figure 2. Academic Stress Logit by Gender (Bubble Chart)

Figure two shows that women's academic stress tends to be higher than that of men, and what's interesting about this data is that there is a woman who is in the highest logit or an outlier, meaning that this woman needs to be given intervention to reduce her stress by providing individual counseling services. Furthermore, to clarify the differences in male and female academic stress, it is explained using Welch's difference analysis. The following is presented in the table of two tests of differences in academic stress based on gender.

Test Differences in Academic Stress Based on Gender

Table 2. Test of Differences in Academic Stress Based on Gender After the Covid-19 Pandemic

Person		Mean Difference	S.E.	t	Welch	Prob
Male	Female	Measure			d.f.	
M	F	-0.36	0.16	-2.32	79	0.023

The results of the difference test showed that there was a significant difference between male academic stress and female academic stress. This reinforces the findings in Figures 1 and 2 which explain that the tendency of respondents to experience academic stress is female.

The results show that there is a significant difference between male academic stress and female academic stress. In addition, women's academic stress tends to be higher than that of men. The findings of

this study are the same as previous studies where women are more academically stressed than men (García-Martínez et al., 2021). Clabaugh et al. (2021) found that women were more stressed in their home learning environment than men; however, there were no other significant gender differences in academic perceptions. With regard to personality and emotional well-being, women have higher levels of neuroticism, more stress, and worse coping than men (Clabaugh et al., 2021). Gender is significant because female students have higher physiological stress than male students. Several studies have shown results similar to this study, there are significant differences between the levels of academic stress of male and female students (Backović et al., 2012; Rahardjo et al., 2013). A possible explanation for this gender difference is that the pressures (e.g., deadlines, competition) and change (e.g., too many disruptive changes to life and goals) that women experience can trigger physiological reactions (e.g., migraine headaches, tremors, sweating).) to the cause of stress (Karaman et al., 2019). Women and ethnic minorities are more likely to experience negative work and mental health consequences due to the pandemic (Adams-Prassl et al., 2022; Alonzi et al., 2020). Men and ethnic minorities are more likely to experience negative health outcomes after exposure to COVID-19 (Griffith et al., 2020). Women and ethnic minorities are more likely to experience negative changes in emotional well-being due to the pandemic, according to preliminary studies (Rothman et al., 2020; Smith et al., 2020; Thibaut & van Wijngaarden-Cremers, 2020).

Academic stress can affect student learning outcomes, in line with research (Barseli et al., 2018) finding that there is a significant relationship between academic stress and student learning outcomes. Students' academic stress conditions increased, when the National Examination standards became more difficult, and burdened student learning activities in senior high schools (Taufik et al., 2013). In addition, Piña-Watson et al. (2015)revealed that achievement motivation is not significant for predicting academic stress. Higher academic stress levels in research (Karaman et al., 2019) are associated with higher levels of external control and lower life satisfaction. Test anxiety and academic stress are negatively predicted by resilience, the higher the student's resilience, the lower the exam anxiety and academic stress (Trigueros et al., 2020).

Academic stress increased dramatically when schools were closed due to the Covid-19 pandemic (Andiarna & Kusumawati, 2020; Clabaugh et al., 2021; Harahap et al., 2020; Lubis et al., 2021) A recent report on American college students showed that before COVID-19, only 35% had taken one or more courses online (D'Amato, 2020).This is because one of the best predictors of academic success in online formats is previous online course experience (Hachey et al., 2012). This lack of experience can be compounded by challenging home conditions, including loss of access to academic resources (e.g., computers and internet connectivity) and disruption in the home learning environment. Indeed, early research suggests that distractions at home (including distraction from other family members and additional responsibilities) are a significant challenge for students studying from home during COVID-19 (Son et al., 2020).Taken together, these factors are likely to lead to significant academic stress and uncertainty. In addition to facing stressors related to potentially unfamiliar online learning environments, students are also dealing with the emotional impact of COVID-19 (Clabaugh et al., 2021).

Based on these findings, there is a need for counseling from school counselors to prevent student academic stress. Aligned with (Karaman et al., 2019) explained that counselors should provide psychoeducational seminars about mental health and how to recognize the harmful effects of stress on academic achievement. In accordance with the findings (Karaman et al., 2019), these programs will assist students in recognizing their level of self-efficacy and the beneficial impact of self-efficacy on their academic achievement. In addition, counselors can urge teachers to collaborate closely with students, thus offering much-needed support systems (Boyraz et al., 2016). As a result, educators will know when to refer students to qualified counselors, who can then provide assistance. Another implication for counselors is exploring social networks as a means of increasing students' sense of belonging and assisting in cultural understanding and teacher diversity training (Chun et al., 2016).

Conclusions

The results show that there is a significant difference between male academic stress and female academic stress. Other findings found that women's academic stress tended to be higher than that of men, and what was interesting from this data was that there was a woman who was at the highest logit or an outlier, meaning that this woman needed to be given intervention to reduce her stress by providing individual counseling services. Based on the results of this study it is hoped that school counselors will focus more on women for academic stress prevention programs. Meanwhile, future researchers pay more attention to representative research data, and the social demographics of the research sample.

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