CONFIDENCE, ACADEMIC STRESS, COPING STRATEGIES AS PREDICTORS OF STUDENT ACADEMIC ACHIEVEMENT IN PHYSICAL EDUCATION CLASSES DURING COVID-19

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Authors’ Contribution: A – Study design; B – Data collection; C – Statistical analysis; D – Manuscript Preparation; E – Funds Collection

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Accepted for Publication: April 9, 2022
Published: June 25, 2022
DOI: 10.17309/tmfv.2022.2.05

Abstract
Research purpose. In this COVID-19 pandemic era, the psychological aspect takes an important role in achieving optimal academic results among students, but the factors that correlate with academic achievement are not yet known accurately. Thus, this study aims to assess the relationship between self-confidence, academic stress, coping strategies and academic achievement.

Materials and methods. This study used a correlation method with subjects from among students in grades 7 to 9 at Ibtidaiyah Junior High School (N = 90). The instrument used in this study was a self-confidence, academic stress and coping strategy questionnaire, while the average score for the final semester examination was used as an indicator that showed progress of student academic achievement. Data was analyzed using IBM SPSS to find out descriptive statistics, data normality. Meanwhile, bivariate correlation and regression analysis were used to test the relationship between variables. The following conclusions can be drawn from this study.

Results. First, self-confidence was related to academic achievement, second, academic stress was related to academic achievement, and third, the coping strategy was related to academic achievement.

Conclusions. Thus, to obtain high academic achievement in physical education classes, contribution from self-confidence, academic stress and coping strategies are highly needed. The findings from this study make several contributions to the development of science in the physical education field in terms of psychology to improve student academic achievement.

Keywords: self-confidence, academic stress, coping strategies, academic achievement.

Introduction
In December 2019 a new variant virus named Corona (SARS-CoV-2) appeared in the city of Wuhan (China) has infected millions of people around the world and the World Health Organization (WHO) has declared the novel coronavirus (COVID-19) outbreak a global pandemic (Torales, O’Higgins, Castaldelli-Maia & Ventriglio 2020; Pawar, 2020; Leal Filho et al., 2021). Based on warning issued by WHO, the governments in all countries have implemented a number of measures to prevent COVID-19 from spreading massively in the society, for example applying social distancing, physical distancing (Hu, Zhang, Sun & Li, 2021; Yomoda & Kurita, 2021), lock down (Morgül et al., 2020), then prohibit daily activities in groups with relatively large numbers in public places, shops, industry and schools (Chen, Byrne & Vélez, 2021). The existence of these policies often triggers negative effects on the psychological aspects of society (Saladino, Algeri & Auriemma, 2020; Li et al., 2020; Cielo, Ulberg & Di Giacomo, 2021). The physical education learning process is one of the areas that has been significantly affected by COVID-19 and currently often triggers a negative impact on the psychological aspects of students, such as the emergence of laziness, depression, stress, frustration,
Academic achievement is an essential part and must be achieved as high as possible by students when undergoing the physical education process in the long term. High academic achievement could support students to gain their potential, so they will much easier to get a job and be successful in living his life in the future (Moore, 2019). High academic achievement assists students more motivated to develop their ability in obtaining a job during this difficult COVID-19 pandemic and conversely, if students have low academic achievement, it will cause students difficult to get a job (Tentama & Abdillah, 2019). Several factors are claimed to have a relationship with the high or low academic achievement of a student, including self-confidence, academic stress, and coping strategies.

Self-confidence is the first factor that is claimed to be closely related to student academic achievement in school. Self-confidence is one of the psychological aspects that generally has a definition as a student's belief in own ability to do the best assignment in a school or sports activities (Hays et al., 2009; Besharat & Pourboholool, 2011; Kuloor & Kumar, 2020). Self-confidence is one of the aspects that must be developed in students' character. Possessing a high level of self-confidence will help them become more enthusiastic about studying at school and at home during the COVID-19 pandemic (Malureanu et al., 2021). Recent studies reported that crises in most current education systems were due to low self-confidence, which causes low participation in learning activities (Ravichandran et al., 2021). Self-confidence is needed for a student to be implicated in learning activities. The results of another study found that the self-confidence factor is the key for students to achieve optimal performance in a competition (Ibrahim, Jafar, Kassim & Isab, 2016). However, when someone has a low level of self-confidence, it often leads to higher levels of anxiety, depression, and stress and impacts decreased performance (Marshall & Gibson, 2017). In addition, low levels of self-confidence will greatly affect motivation and academic achievements (Malureanu, Panisoara & Lazar, 2021). Even the biggest disadvantage is when a person has a low level of self-confidence, it is possible to trigger extreme stress (Litwic-Kaminska, 2020).

Academic stress is a psychological aspect that currently often appears during learning process in the COVID-19 era (Mahapatra, 2021; Chandra, 2021; Clabaugh, Duque & Logan, 2021; Fuente et al., 2021; Basheti, Mhaidat & Mhaidat, 2021). Academic stress is a condition in which a student experiences a mental disorder or pressure caused by learning activities at school (Bashit, Syahputra, Fitriyadi, Rosmaiaydi, Fitri & Triani, 2021). A student who experienced high stress might have feelings of fear, anxiety, panic and worse can lead to weakness, nausea, dizziness, shaking, loss of concentration, and decreased motor skills (Runswick, Roca, Williams, Bezdíss & North, 2016). A recent study reported that students' academic stress levels while taking lessons in the COVID-19 era increased by 12% (Moeller et al., 2020). Recent studies have reported that several factors that cause the increment in stress levels are online learning which has various obstacles is a trigger for stress symptoms in students (Basheti, Mhaidat & Mhaidat, 2021). Another factor is students are afraid of being infected by COVID-19, students must undergo isolation/lock down (Sundaresan et al., 2020), or the difficulty of carrying out physical education lessons online (Jumareng, Setiawan, Patah, Aryani, Asmuddin & Gani, 2021). Thus, these factors will trigger the low academic achievement of students (Basith, Syahputra, Fitriyadi, Rosmaiaydi, Fitri & Triani, 2021).

A coping strategy is one of the methods that can be used in sports and in the context of physical education learning to reduce stress levels in students and is claimed to have the power to trigger self-confidence (Radochonski, Cynarski, Perenc & Siorek-Maślanka, 2011). According to Skapinksis et al., (2020) coping is a psychological response to a threat, loss, or negative things and through coping strategies, all problems that attack aspects can be overcome. Several studies have reported that there was a link between academic stress and coping strategies with academic (Gustems-Carnicer et al., 2019). However, not all coping strategies were effective in reducing stress (Basith, Syahputra, Fitriyadi, Rosmaiaydi, Fitri & Triani, 2021). Research on coping strategies had been extensively studied internationally and reported by previous studies (Kaplánová, 2019; Gustems-Carnicer et al., 2019; Morales & Pérez-Mármol, 2019; Kaplánová, 2020; Muthmainah, Purwanta, Suwarjo & Mariani, 2021). However, there are no studies that try to explain the relationship between self-confidence, academic stress, coping strategies, and academic achievement that have been reported. Therefore, our main objective was to examine the relationship between self-confidence, academic stress, and coping strategies with academic achievement.

Materials and methods

Study participants

This study adopted a descriptive correlation method, which investigated the correlation between independent variables and another (Jumareng & Setiawan, 2021).

Table 1. Demographic of Subject

<table>
<thead>
<tr>
<th>Demographic Information</th>
<th>Frequency</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>60</td>
<td>66.7</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>33.3</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;13</td>
<td>21</td>
<td>23.3</td>
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<tr>
<td>14-15</td>
<td>42</td>
<td>46.7</td>
</tr>
<tr>
<td>16+</td>
<td>27</td>
<td>30.0</td>
</tr>
<tr>
<td>Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>19</td>
<td>21.1</td>
</tr>
<tr>
<td>8</td>
<td>48</td>
<td>53.3</td>
</tr>
<tr>
<td>9</td>
<td>23</td>
<td>25.6</td>
</tr>
</tbody>
</table>

The subjects involved in this study were Ibtidaiyah Junior High School located in Karawang Regency, West Java Province (Indonesia) which was selected using a random sampling technique and obtained 90 students from 120 students who were willing to participate in this study. The characteristics of the subjects are presented in Table 1.

Instrument

Self-Confidence. The instrument for measuring self-confidence was a questionnaire that was adopted from Ibrahim,
Multiple regression analysis was used to examine the strongest relationship between self-confidence, academic stress, coping strategies, and academic achievement. A multiple regression analysis was used to examine the strongest predictor of self-confidence, academic stress, and coping strategies with academic achievement (Asakereh & Yousofi, 2018). The significance level used was 0.05.

**Results**

The results of the data normality test show that the self-confidence variable has (p = 0.189) while the academic stress variable (p = 0.221) for the coping strategies variable (p = 0.249) and academic achievement (p = 0.321), thus it can be interpreted that all data were normally distributed.

Table 2 shows statistical descriptive of each variable and Table 3 shows that academic stress was positively correlated with self-confidence (r = 0.767, p < 0.05), coping strategies was positively correlated with self-confidence (r = 0.645, p < 0.05), and academic stress (r = 0.638, p < 0.05), academic achievement was positively correlated with self-confidence (r = 0.747, p < 0.05), academic stress (r = 0.711, p < 0.05), and coping strategies (r = 0.763, p < 0.05).

Table 4 shows the results of regression analysis obtained self-confidence (β = 0.206; p < 0.05), academic stress (β = 0.128; p < 0.05) and coping strategies (β = 0.307; p < 0.05), which have a high correlation with academic achievement, (β = 0.326; p < 0.05).

**Discussion**

This study aims to assess the relationship between self-confidence, academic stress, coping strategies and student academic achievement in the physical education process during the COVID-19 pandemic.

This study shows the following results. First, the self-confidence aspect was a predictor of students’ academic achievement in participating in the physical education learning pro-

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
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<tr>
<td>Self-confidence</td>
<td>88.89</td>
<td>12.141</td>
</tr>
<tr>
<td>Academic stress</td>
<td>91.22</td>
<td>10.914</td>
</tr>
<tr>
<td>Coping strategies</td>
<td>91.77</td>
<td>10.910</td>
</tr>
<tr>
<td>Academic achievement</td>
<td>90.16</td>
<td>7.661</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>C. Pearson (r)</th>
<th>SC</th>
<th>AS</th>
<th>CS</th>
<th>AA</th>
</tr>
</thead>
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<tr>
<td>SC</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS</td>
<td>0.767**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.645**</td>
<td>0.638**</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>p</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>AA</td>
<td>0.747**</td>
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<td>0.763**</td>
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<tr>
<td>p</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes. **Correlation is significant at the 0.05 level (2-tailed). SC = Self-confidence; AS = Academic stress; CS = Coping strategies; AA = Academic Achievement.
Table 4. The regression coefficients (N = 90)

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>32.087</td>
<td>4.175</td>
<td>7.685</td>
<td>0.000</td>
</tr>
<tr>
<td>SC</td>
<td>0.206</td>
<td>0.061</td>
<td>3.326</td>
<td>0.001</td>
</tr>
<tr>
<td>AS</td>
<td>0.128</td>
<td>0.067</td>
<td>2.907</td>
<td>0.006</td>
</tr>
<tr>
<td>CS</td>
<td>0.307</td>
<td>0.056</td>
<td>5.457</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Notes. SC = Self-confidence; AS = Academic stress; CS = Coping strategies; Dependent Variable = Academic Achievement

Figure 1. Relationship Model between Self-confidence (SC), Academic stress (AS), Coping strategies (CS) and Academic Achievement (AA)

The three psychological aspects including self-confidence, academic stress, and coping strategies were proven in this study to have a positive relationship with students' academic achievement in participating in the physical education learning process during the COVID-19 pandemic. The results of this study contradict previous studies which reported that there was no significant relationship between academic stress and academic achievement (Basith, Syahputra, Fitriyadi, Rosmaiaydi, Fitri & Triani, 2021). Therefore, academic stress becomes an important aspect for students, if academic stress can be managed properly then the academic achievement will be more optimal (Gustems-Carnicer, Calderón, Gardo & Martin-Piñol, 2021), but on the other hand, when academic stress cannot be overcome, it will cause students' academic achievement to decrease drastically. The results of this study contradict previous studies which reported that there was no significant relationship between academic stress and academic achievement (Basith, Syahputra, Fitriyadi, Rosmaiaydi, Fitri & Triani, 2021).

Third, similar to the previous result, the coping strategy was a predictor variable that closely related to the high or low academic achievement of students when undergoing physical education during the COVID-19 pandemic. Coping is a strategy-oriented to avoid situations that can potentially cause stress, for example, involving students to carry out interesting and fun activities (e.g., yoga, listening to music, dancing, playing hula hoop, cycling, swimming, playing with family, watching movies, playing games), which can promote relaxation and calmly in facing their problem. When stress can be overcome through coping strategies, it will increase student academic achievement. This is also reinforced by previous research which reported that there was a significant relationship between coping strategies and academic achievement (Genc, 2016; Yazon, Ang-Manaig & Tesoro, 2018; Gustems-Carnicer, Calderon & Gardo, 2019). In addition, the results of this study contradict other studies which show that there is no relationship between academic stress and coping strategies with academic achievement (Basith, Syahputra, Fitriyadi, Rosmaiaydi, Fitri & Triani, 2021).

Conclusions

The three psychological aspects including self-confidence, academic stress, and coping strategies were proven in this study to have a positive relationship with students' academic achievement during the COVID-19 pandemic. Self-confidence is one of the psychological aspects that play an important role for students when undergoing the physical education learning process before as well as during the COVID-19 pandemic (Blanco et al., 2020; Malureanu, Panisoara & Lazar, 2021) ease of use, and usefulness of eLearning platforms in corporate training.

Second, the academic stress aspect was also a predictor of student academic achievement in participating in the physical education learning process during the COVID-19 pandemic. Academic stress is currently often experienced by students when participating in learning activities during the COVID-19 pandemic. For example, students felt bored and frustrated with an online learning system which is claimed more difficult for students (Yang, Chen & Chen, 2021). A recent study reported that poor internet network, costly internet quota, and subject matter that was not delivered optimally were factors that caused student stress to increase in the current era (Jumareng, Setiawan, Patah, Aryan, Asmuddin & Gani, 2021). Therefore, academic stress becomes an important aspect for students, if academic stress can be managed properly then the academic achievement will be more optimal (Gustems-Carnicer, Calderon, Gardo & Martin-Piñol, 2021), but on the other hand, when academic stress cannot be overcome, it will cause students' academic achievement to decrease drastically. The results of this study contradict previous studies which reported that there was no significant relationship between academic stress and academic achievement (Basith, Syahputra, Fitriyadi, Rosmaiaydi, Fitri & Triani, 2021).

In addition, students with low confidence tend to have greater anxiety and stress, which in turn will affect student performance and academic achievement (Sari et al., 2015; Misra, 2021). The results of this study are in line with previous research which reported that success or failure in academics was closely related to the level of self-confidence of a student (Malureanu, Panisoara & Lazar, 2021) ease of use, and usefulness of eLearning platforms in corporate training.
Impact of the COVID-19 pandemic on families in the UK. 


As the authors of this manuscript, we declare that there is no conflict of interest whatsoever in this research.


У нинішню еру пандемії COVID-19 даних було проаналізовано з використанням програм описової статистики, перевірки нормальності розподілу екзаменах за останній семестр навчання. Для встановлення нівня упевненості у собі, академічного стресу та стратегій подолання, а як показник зростання академічної успішності в цьому дослідженні використовували анкету молодшої середньої школи (Індонезія) (вали з числа учнів 7–9 класів конфесійної мусульманської гії подолання, а як показник зростання академічної успішності. Аналізований дослід показав, що впевненість у собі, академічний стрес, стратегії подолання та академічна успішність. Фактори, які впливають на ці показники, визначені в дослідженні, їх можна визначити як вітчизняні, соціальні та психологічні. 

Як засіб зменшення стресу та підвищення успішності, учні були запрошені використовувати спосіб активного відкривання, що здійснювалося з використанням програмної забезпечення IBM SPSS. При цьому для перевірки взаємозв'язків між змінними використовували двовишіроку кореляційну матрицю та регресійний аналіз. Із цього дослідження можна дійти наступних висновків. 

По-перше, було встановлено зв'язок між перевіреною успішністю та соціальними факторами, як впевненість у собі, академічний стрес, стратегії подолання та академічна успішність. По-друге, було встановлено зв'язок між стратегією подолання та академічною успішністю. По-третє, було встановлено зв'язок між стратегією подолання та академічною успішністю. 

Висновки. Таким чином, для досягнення успішності учнів на заняттях фізичного виховання, дуже потрібна участь таких сприятливих факторів, як впевненість в собі, академічний стрес, стратегії подолання та академічна успішність. 

Ключові слова: успінність у собі, академічний стрес, стратегії подолання, академічна успішність.

Received: 27.01.2022. Accepted: 9.04.2022. Published: 25.06.2022

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