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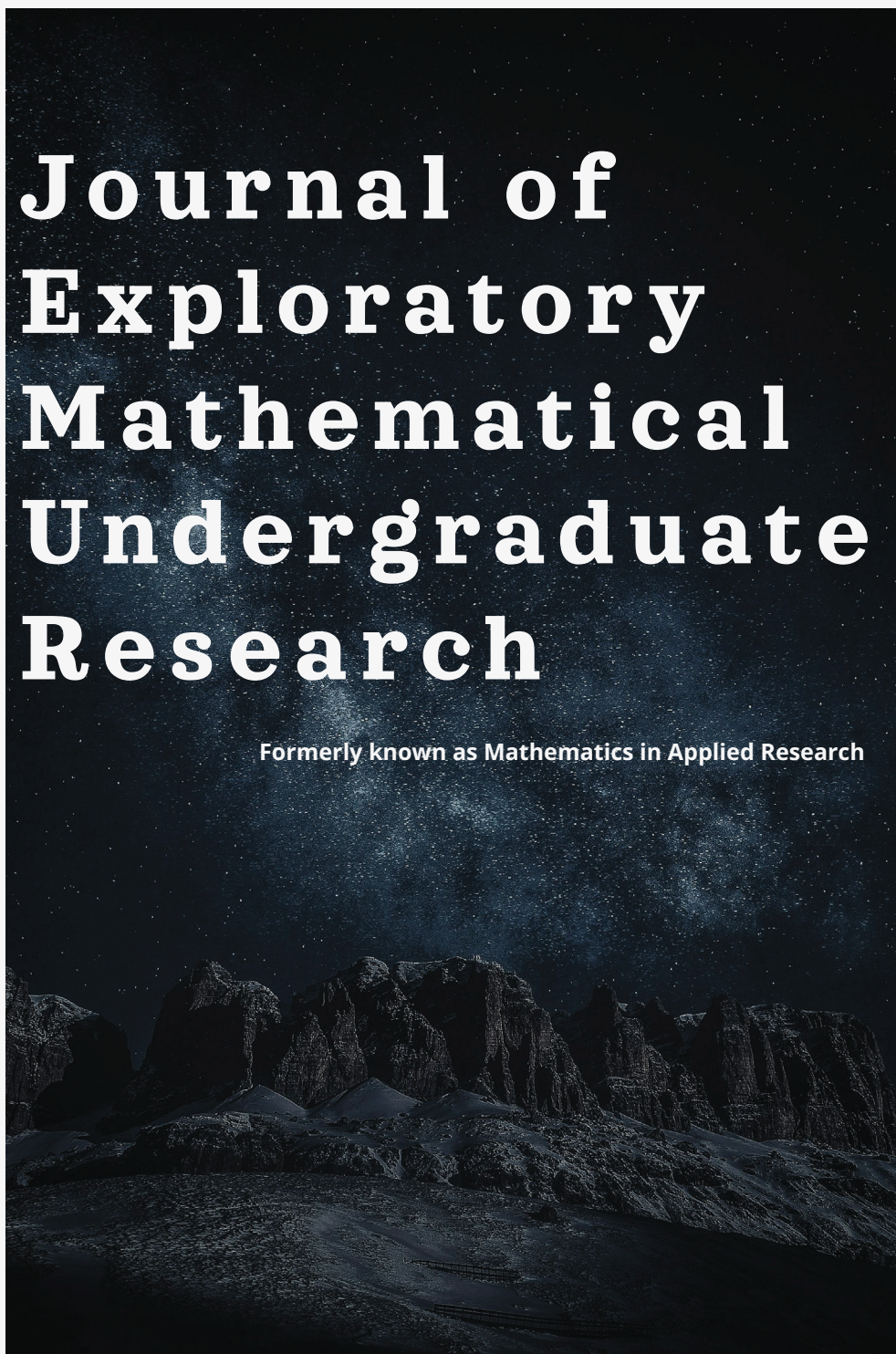
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## THE INFLUENCE OF SOCIOECONOMIC STATUS ON ACADEMIC PERFORMANCE OF UNIVERSITY STUDENTS

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### Abstract

Socioeconomic status is one of the most explored and debated variables affecting academic performance among educational professionals. The most popular claim is that students' socioeconomic status affects the quality of their academic performance. The main aim of this study was to investigate the extent to which academic performance of students differs based on socioeconomic status. This study involved 358 students from diploma and degree at UiTM Kampus Seremban. Descriptive survey research design was employed. A self-administered electronic questionnaire was used to obtain data related to socioeconomic status and academic performance of students. Data were analyzed using Descriptive statistics and one-way analysis of variance ANOVA. The results revealed that there is a significant difference in the students' academic performance between parents' level of education. Moreover, there is no significant difference in the students' academic performance between parental income and marital status. This study is crucial for promoting educational equity and improving long-term socioeconomic outcomes for individuals, especially students and society as a whole.

**Keywords:** Socioeconomic status, academic performance, education level, marital status, income level

### 1. Introduction

Many studies have been conducted by researchers to investigate the factors that influence student performance at various levels of education, including schools, colleges, and universities. The quality of student performance remains a priority for educators. Academic performance plays an important role in producing high quality graduates. Socioeconomic status and academic performance are closely linked as socioeconomic status plays a role in shaping student educational outcome. Socioeconomic status is a concept that has special importance for the growth, development, health outcomes and education of children (Vukojević et al., 2017). The household income, the education and employment of the earners, as well as the combined income against the individual income when each earner's own characteristics are considered when determining a family's socioeconomic status (Saifi and Mehmood, 2011). In the context of this country, Malaysian socioeconomic status is sorted or segregated according to categories B40, M40 and T20 or known as income classification (Department of Statistics Malaysia, 2020). The names of B40, M40 and T20, represent the country's population percentages of Bottom 40%, Middle 40% and Top 20%, respectively.

Socioeconomic status is one of the most researched and debated issues among educational professionals contributing to academic performance. The most common argument is that the socioeconomic status of students influences the quality of their academic performance (Farooq et al., 2011). Most experts argue that the low socioeconomic status negatively affects the students' academic success as their basic needs remain unfulfilled, resulting in them not performing well



academically. According to some studies, poverty significantly affects the resources available to students. Due to lack of funds, many students struggle to achieve the same level of academic achievement that students do not live in poverty (Gordon, 2014). Families with a high socioeconomic status generally have better success in preparing their children for school since parents frequently have access to a variety of resources that support and promote early children's development. Research consistently shows that the socioeconomic status of students influences the quality of their academic performance (Farooq et al., 2011; Faaz and Khan, 2017; Hassan et al, 2020; Munir et al, 2023).

Based on the socioeconomic status mentioned earlier, the socioeconomic status used in this study are the parent's marital status, the parent's level of education and the total household income. The primary goal of this study is to investigate the socioeconomic background of students at UiTM Cawangan Negeri Sembilan, Kampus Seremban. As a result, the specific objective of this study is to see if there are any disparities in academic performance of students (Cumulative Grade Percentage Average (CGPA)) based on socioeconomic status of parents (parents' marital status, the parents' level of education and parents' household income). The disparities between Socioeconomic Status and CGPA among students in Malaysia is unclear and requires further investigation. Understanding the relationship between SES and academic performance is important for the development of education policies and programs that address socio-economic disparities and promote equal educational opportunities in Malaysia. The hypothesis statements are:

Hypothesis 1: *There is a significant difference in students' academic performance between parent's marital status.*

Hypothesis 2: *There is a significant difference in students' academic performance between parents' level of education.*

Hypothesis 3: *There is a significant difference in students' academic performance between the parents' level of household income.*

## **2. Research design**

This study involved 358 students out of 5294 students from three faculties of Universiti Teknologi MARA, Kampus Seremban. In this study, convenience sampling was used to acquire the samples. This nonprobability sampling method selected the sample that can represent a captive audience. The data were collected using a self-administered electronic questionnaire (Sulaiman et al, 2020). There were two sections to the questionnaire. The respondents' profile was discussed in Section 1, which included seven questions regarding the respondents' gender, education level, faculty, current semester, CGPA, financial aid for study and accommodation during study. Section 2 on the other hand, focused on socioeconomic status namely parents' marital status, the parents' level of education and parents' household income. This section intended to know how strongly the respondents agree or disagree with the statement construct using a 5-point Likert scale about parents' marital status and parents' level of education. The descriptive statistics were analyzed to summarize the respondents' profile. Next, ANOVA test was carried out to compare parents' marital status, the parents' level of education and parents' household income towards students' academic performance.

### 3. Results and Discussions

#### 3.1. Demographic Profile

The results of descriptive statistics for 358 respondents are presented in Table 1. In this study, there are a total of 274 (76.5%) female respondents and 84 (23.5%) male respondents. The percentage shows that the female respondents are much higher than the male respondents. The majority of the respondents are Degree holders, with 69.0% (247) while 31.0% of the respondents are Diploma holders. About 52.0% of the respondents from College of Computing, Informatics and Mathematics (KPPIM), 36.3% of the respondents from Faculty of Administrative Science and Policy Studies (FSPPP) and 11.7% of the respondents from the Faculty of Sports Science Recreation (FSR).

Table 1: Demographic Profile of Respondents

| Variable                             | Category              | Frequency | Percentage |
|--------------------------------------|-----------------------|-----------|------------|
| Gender                               | Female                | 274       | 76.5       |
|                                      | Male                  | 84        | 23.5       |
| Current education level              | Degree                | 247       | 69.0       |
|                                      | Diploma               | 111       | 31.0       |
| Faculty                              | KPPIM                 | 186       | 52.0       |
|                                      | FSPPP                 | 130       | 36.3       |
|                                      | FSR                   | 42        | 11.7       |
| Current semester                     | 2                     | 59        | 16.5       |
|                                      | 3                     | 110       | 30.7       |
|                                      | 4                     | 42        | 11.7       |
|                                      | 5                     | 70        | 19.6       |
|                                      | 6                     | 66        | 18.4       |
|                                      | 7                     | 8         | 2.2        |
|                                      | 8                     | 2         | 0.6        |
| Parents' marital status              | Divorced              | 20        | 5.6        |
|                                      | Married               | 301       | 84.1       |
|                                      | Widowed               | 37        | 10.3       |
| Parents' education level             | No education          | 2         | 0.6        |
|                                      | UPSR                  | 3         | 0.8        |
|                                      | PMR/SRP               | 10        | 2.8        |
|                                      | SPM/MCE               | 113       | 31.6       |
|                                      | Certificate/STPM/STAM | 49        | 13.7       |
|                                      | Diploma               | 63        | 17.6       |
|                                      | Degree                | 82        | 22.9       |
| Parents' Income level                | Master                | 30        | 8.4        |
|                                      | PhD                   | 6         | 1.7        |
|                                      | B40                   | 205       | 57.3       |
| Financial Aid for study              | M20                   | 122       | 34         |
|                                      | T20                   | 31        | 8.7        |
|                                      | Education loan        | 169       | 47.2       |
| Students' accommodation during study | Parents               | 115       | 32.1       |
|                                      | Scholarship           | 36        | 10.1       |
|                                      | Zakat                 | 3         | 0.8        |
|                                      | None                  | 35        | 9.8        |
| Students' accommodation during study | Rental                | 186       | 52         |
|                                      | University Hostel     | 157       | 43.9       |
|                                      | Family                | 15        | 4.2        |

This study involved students from semester 2 until semester 9 only where those are students who are currently available for diplomas and degrees. However, students in semester 1 were excluded since they did not have a CGPA. The results showed that the majority of the respondents was semester 3 students 110 respondents (30.7%), followed by semester 5 with 70 respondents (19.6%), semester 6

with 66 respondents (18.4%), semester 2 with 59 respondents (16.5%), semester 7 with 8 respondents (2.2%), semester 8 with 2 respondents (0.6%) and lastly, semester 9 with only 1 respondent (0.3%).

Looking into the socioeconomic status of parents, Parent’s Highest Educational Level are categorized into nine categories which are No Education, UPSR, PMR/ SRP, MCE/ SPM, Certificate/ STPM/ STAM, Diploma, Degree, Master and Doctor of Philosophy (PhD). About 31.6% of respondents’ parents had MCE/ SPM, 22.9% had Degree, followed by Diploma, Certificate/ STPM/ STAM, Master, PMR/ SRP, Doctor of Philosophy, UPSR and lastly No Education, which represents 22.9% (82), 17.6% (63), 13.7% (49), 8.4% (30), 2.8% (10), 1.7% (6), 0.8% (3) and 0.6% (2), respectively.

In the financial aid for study segment, the majority of respondents use Education Loan and from Parents which are 169 respondents (47.2%) and 115 respondents (32.1%), respectively. A minority of respondents received Scholarships, no financial assistance (None) and received Zakat which are 36 (10.1%), 35 (9.8%) and 3 respondents (0.8%). For student accommodation during the study, 52% of respondents rented room/houses while only 4.2% of respondents live with family during their study. Parents income level is generated from total household monthly income whereby it is sorting refer to the categorical socioeconomic in Malaysia. From 358 respondents, there are 57.3% family considered as B40 or can be said that total household income is below 40% in Malaysia. Furthermore, 34% of families are from M40 and the remaining 8.7% are from T20 family.

**3.2. Differences in Academic Performance based on Socioeconomic Status**

To identify if there are any statistically significant differences between the means of three or more independent groups, the one-way analysis of variance (ANOVA) is performed. Table 2 summarized results based on ANOVA test. The test was conducted to compare significant differences in the students’ academic performance between socioeconomic status (parents’ marital status, the parents’ level of education and parents’ household income). Looking into results in Table 2, the p-values for parents’ income and marital status are more than significance level of 0.05 and indicated that there is no significant difference between parents’ income and marital status towards students’ CGPA. It can be said that parents’ income and marital status do not impact academic performance of Universiti Teknologi MARA, Kampus Seremban students.

Table 2: Demographic Profile of Respondents

| Variable                 | F Value | Significant | Decision           |
|--------------------------|---------|-------------|--------------------|
| Parents’ marital status  | 0.303   | 0.379       | Ho is not rejected |
| Parents’ education level | 2.158   | 0.03        | Ho is not rejected |
| Parents’ income          | 1.145   | 0.319       | Ho is rejected     |

In contrast, the results of ANOVA analysis suggest that there is a statistically significant difference in CGPA between the parents’ level of education. The significance value of less than 0.05 implies that the relationship is unlikely to be due to chance, and that there is evidence of a real difference in the mean CGPA scores of students based on their parent's level of education. Similar findings exist in research by Gobena (2018) found that family education level contributed to students’ academic performance.

#### 4. Conclusion

This study investigated if there are any disparities in academic performance of students (CGPA) based on socioeconomic status of parents (parents' marital status, the parents' level of education and parents' household income). The majority of respondents' parents completed SPM and MCE. There was statistically significant difference between parents' education level towards students' academic performance. However, no significant difference was found between parental income and marital status in the academic performance of students. Based on the findings of our study, it is strongly recommended that future research consider using additional socioeconomic factors of parents such as locality of parents, employment sector of parents. Moreover, family education should be prioritized as it plays an important role in the success of students' academic achievement.

#### References

- Department of Statistics Malaysia, The Key Findings Income Pverty Inequality Expenditure and Basic Amenities, 2020. Retrieved from <https://www.dosm.gov.my/v1/index.php>
- Faaz, M & Khan, K. (2017). A study of academic achievement of upper primary school students in relation to their socio-economic status. doi: 10.5958/2249-7315.2017.00336.7
- Farooq, M. S., Chaudhry, A.H., Shafiq, M., & Berhanu, Gi.. (2011). Factors affecting students' quality of academic performance: A case of secondary school level. *Journal of Quality and Technology Management*. 7. 01-14.
- Gobena, G.A. (2018). Family Socio-Economic Status Effect on Students' Academic Achievement at College of Education and Behavioral Sciences, Haramaya University, Eastern Ethiopia.
- Gordon, M., & Cui, M. (2014). School-related parental involvement and adolescent academic achievement: The role of community poverty (Vol. 5). doi: 10.1111/fare.12090
- Hassan, H., Mohamad, R., Raja Mohd Ali, R. H., Abdul Talib, Y. Y., & Mohamad Hsbollah, H. (2020). Factors Affecting Students' Academic Performance in Higher Education: Evidence from Accountancy Degree Programme. *International Business Education Journal*, 13(1), 1–16. <https://doi.org/10.37134/ibej.vol13.1.1.2020>
- Munir, J, Faiza, M & Daud, S. (2023). The Impact of Socio-economic Status on Academic Achievement. 3. 695-705. 10.54183/jssr.v3i2.308.
- Saifi, S. & Mehmood, T. (2011). Effects of socio-economic status on students achievement. *International Journal of Social Sciences & Education*, 1(2), 119-128
- Sulaiman, N. F. C., Akhir, N. H. M., Hussain, N. E., Jamin, R. M., & Ramli, N. H. (2020). Data on the impact of socioeconomic status on academic achievement among students in Malaysian public universities. *Data in brief*, 31, 106018. <https://doi.org/10.1016/j.dib.2020.106018>
- Vukojević, M., Zovko, A., Talić, I., Tanović, M., Rešić, B., Vrdoljak, I., & Splavski, B. (2017). Parental Socioeconomic Status as a Predictor of Physical and Mental Health Outcomes in Children - Literature Review. *Acta clinica Croatica*, 56(4), 742–748. <https://doi.org/10.20471/acc.2017.56.04.23>