# Knowledge, Attitudes, and Practices on Sexually Transmitted Diseases among Science and Non-Science Undergraduates at Universiti Kebangsaan Malaysia

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## Introduction

Sexually transmitted diseases (STDs) are among the top causes of disease burden in young adults in developing countries.[1,2] In general, undergraduates are particularly vulnerable due to increased sexual activity, limited awareness, and behavioural risk factors associated with newfound independence. Targeted interventions for this group are essential to improve sexual health outcomes. [3]

## Objectives

To evaluate the levels of knowledge, attitude, and practices (KAP) towards STDs among Universiti Kebangsaan Malaysia (UKM) undergraduates.

## Methodology

**Ethics:** JEP-2023-896 (approved by the UKM Research Ethics Committee)
**Study design:** Cross-sectional study
**Study location:** UKM (Bangi, Jalan Raja Muda, Cheras campuses)
**Study population:** Local undergraduates of UKM
**Sampling frame:** A list of names of undergraduates studying at UKM according to faculty (science and non-science), course of study and year of study
**Unit sample:** Individual (undergraduates from UKM)
**Sample size:** 770 undergraduates (except those married/deferred)
**Sampling method:** Stratified random sampling method
**Study instrument:** Self-administered validated questionnaire[4]
**Data analysis:** SPSS version 29.0

## Results

**Descriptive analysis: sociodemographic factors**

- Of the targeted 770 respondents, **751 students** completed the self-administered questionnaire (97.5% response rate).
- The number of respondents from each faculty was equal (9.1%), except for the **Faculty of Islamic Studies**, which had **only three respondents** (0.4%) (Fig. 1A).
- The age group that has the highest number of respondents is **22-23 years old** (32.9%) (Fig. 1B).
- The year of study that has the highest number of respondents is **Year 3**. Only 1 Year 5 student (0.1%) responded to the questionnaire, as not all courses are offered for the 5-year study (Fig. 1C).
- The majority of the respondents are **female (71.6%)** (Fig. 1D)
- About **46.7% and 16.6%** of the respondents are from the **B40 and T20 groups**, respectively (Fig. 1E).
- The majority of respondents are **Malay (61.7%)** and practiced **Islam (63.5%)** (Fig. 1F & 1G).
- The majority of students **(87.2%)** have **not engaged** in any form of sexual activity (Fig. 1H).
- In terms of sexual orientation, the majority of respondents **(82.2%)** identify themselves as **heterosexual**, followed by **bisexual (5.2%)** and **homosexual (2.3%)** (Fig. 1I).




**Figure 1: Descriptive analysis of sociodemographic factors of the respondents, A: Faculty, B: Age, C: Year of study, D: Gender, E: Total household income, F: Race, G: Religion, H: Sexual behaviour and I: Sexual orientation of the respondents**

**Table 1: Descriptive analysis of KAP levels among UKM undergraduates**

| Variables | Level | Frequency, n (%) |
|---|---|---|
| Knowledge | Good | 292 (38.9) |
| | Moderate | 200 (26.6) |
| | Bad | 259 (34.5) |
| Attitude | Positive | 432 (57.5) |
| | Negative | 319 (42.5) |
| Practice | Safe | 461 (61.0) |
| | Risky | 290 (39.0) |

**Table 2: Mann-whitey U Test for comparison of KAP Levels between science and non-science students**

| Variables | Faculty | Mean Rank | U | Z | p |
|---|---|---|---|---|---|
| Knowledge | Science | 418.14 | 5277.5 | -5.822 | <0.0001* |
| | Non-Science | 325.87 | | | |
| Attitude | Science | 379.06 | 68723 | -0.423 | >0.05 |
| | Non-Science | 372.36 | | | |
| Practice | Science | 380.28 | 68225.5 | -0.599 | >0.05 |
| | Non-Science | 370.28 | | | |

**Table 3: Spearman's correlation for the correlation between KAP towards STDs among UKM undergraduates**

| Variables | Correlation (r) | p-value |
|---|---|---|
| Knowledge ↔ Attitude | 0.082 | 0.025* |
| Knowledge ↔ Practice | 0.021 | 0.574 |
| Attitude ↔ Practice | 0.038 | 0.294 |

## Discussion and Conclusion

- Despite equal number of respondents from various faculties, the low participation from the Faculty of Islamic Studies may be attributed to **cultural or religious barriers**.[3]
- The majority of respondents express a **moderate (26.6%) to good (38.9%) level of knowledge** regarding STDs (Table 1), which aligns with ongoing STD awareness and intervention efforts by the Ministry of Health Malaysia.[5]
- Most of the respondents portray a **positive attitude (57.5%)** and maintain **safe practices (61.0%)** regarding STDs, consistent with similar studies across Malaysia.[4,6]
- **Knowledge**: Students in the **science field** scored a **significantly higher mean rank (418.14)** (Table 2). A statistically significant difference in knowledge scores was found between fields of study ($p<0.001$), consistent with local studies on STDs. [4,6]
- **Attitude:** Students in the **science field** have a **higher mean rank (379.06)** (Table 2), but this difference is **not statistically significant (p>0.05)**, which aligns with the findings reported by Sham et al. (2020).[6]
- **Practice**: Students in the **science field** have a **slightly higher mean rank (380.28)** (Table 2). However, this difference is **not statistically significant (p>0.05)**. This outcome corresponds with a similar research conducted by Arinah et al. (2016). [5]
- Based on Table 3, only **knowledge and attitude** show a **weak but statistically significant correlation (p<0.05)**. **No significant correlation** exists between **knowledge and practice (p>0.05)** or **attitude and practice (p>0.05)**. This phenomenon was also reported in previous studies regarding STDs in Malaysia.[4,5,6]
- In conclusion, KAP regarding STDs among UKM undergraduates are **moderate to high**, showing awareness and concern about STDs among the student population. Furthermore, students in the **science field** of study have **significantly higher knowledge** scores than those in the non-science field. However, **no significant differences** were found **between the fields of study for attitude and practices.**
- Lastly, there is **a weak** but significant positive correlation between **knowledge and attitude**. However, **no significant correlation** was found between **knowledge and practice,** or between **attitude and practice**. Therefore, more comprehensive and targeted public health interventions, especially for students from non-science streams, are crucial to enhance awareness and strengthen STD prevention practices among university students.

## Acknowledgement


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