

60. KNOWLEDGE, ATTITUDES, AND BARRIERS TOWARD MEDICAL RESEARCH AMONG AL-NEELAIN MEDICAL STUDENTS, SUDAN

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BACKGROUND: Early involvement of medical students in research during school years has led to excellence in the research field and clinical practice during their careers. Previous studies try to evaluate knowledge and attitudes toward medical research in medical students in many countries. Limited studies are conducted in Sudan. In This study, we aimed to assess knowledge to, and attitudes towards and identify barriers to medical research among medical students at Al-neelain University. **METHODS:** The cross-sectional study was conducted among medical students of Al-Neelain University from October 21 2023, to January 2, 2024. This survey involved medical students in 4th and 5th academic years. An online self-administered questionnaire was used to assess knowledge related to and attitude towards and identify barriers to medical research. SPSS version 26 was used to analyze the data. **RESULTS:** The study included 139 students. 95(68.3%) of them were female. 61 (43.9%) of them were final-year students. The mean age was (22.95±1.1). Most students were single 135 (97.1%). Students showed an average attitude score of mean (3±1.2) (out of 5). Meanwhile, a low knowledge score is revealed with (45.9%) the percentage of correct answers. Younger students had better knowledge (spearman's rho = -0.228, p=0.006). Students with higher GPAs in their previous year had better knowledge (spearman's rho = 0.293, p=0.000). The following barriers were the most agreed upon by students: lack of time due to being overburden with educational activities (64.8% agreed) lack of knowledge and skills (64.1% agreed), lack of facilities (60.4% agreed), lack of research

funding (56.1% agreed). **CONCLUSION:** This study showed a low level of knowledge and an average attitude toward medical research. Many perceived barriers were also addressed. Curriculum change and raising awareness about the importance of research among students are mandatory to ensure the improvement of the quality and quantity of research among medical students.

Table: Medical Students' Knowledge and Attitudes Toward Medical Research: Perception of Science and Research-Related Barriers at Al-Neelain University, Sudan.

| ITEMS | Disagree* n(%) | Undecided n(%) | Agree** n(%) | Score Mean±SD |
|--|----------------|----------------|--------------|---------------|
| 1- Science has prolonged human life | 38(27.3) | 20(14.4) | 81(58.3) | 3.40±1.3 |
| 2- There would be no progress of humankind without the progress of science. | 32(23) | 13(9.4) | 94(67.6) | 3.63±1.3 |
| 3- Valid discoveries are impossible without scientifically sound research. | 30(21.6) | 25(18) | 84(60.5) | 3.52±1.2 |
| 4- Science gives us a better understanding of the world | 22(15.8) | 8(5.8) | 109(78.4) | 4.05±1.2 |
| 5-Scientific approach facilitates better understanding of problems | 19(13.7) | 17(12.2) | 103(74.1) | 3.86±1.1 |
| 6 - Use of scientific methodology is the basis of medical progress | 22(15.8) | 18(12.9) | 99(71.2) | 3.73±1.1 |
| 7 - Every physician has to be well acquainted with the scientific methodology. | 31(22.3) | 20(14.4) | 88(63.3) | 3.55±1.2 |
| 8 - The knowledge of scientific methodology is essential for obtaining accurate and objective data. | 22(15.8) | 18(12.9) | 99(71.2) | 3.71±1.1 |
| 9 - A fact can be established only by a scientific approach. | 45(32.3) | 35(25.2) | 59(42.5) | 3.12±1.2 |
| 10 - Scientists are creative and interesting people. | 28(20.1) | 25(18) | 86(61.8) | 3.57±1.1 |
| 11 - Physicians believing only in science are small-minded. | 59(42.4) | 41(29.5) | 39(28.1) | 2.80±1.1 |
| 12 - The scientific approach limits a physician's choices. | 64(46) | 43(30.9) | 32(23) | 2.7±1.1 |
| 13 - Science is the main cause of the ecological catastrophe we face. | 68(48.9) | 40(28.8) | 31(22.3) | 2.6±1.1 |
| 14 - If science continues in the same direction it has so far, it will lead to the destruction of humankind. | 78(56.1) | 34(24.5) | 27(19.5) | 2.5±1.1 |
| 15 - The scientific approach lacks humanity. | 71(51.1) | 39(28.1) | 29(20.9) | 2.6±1.1 |
| 16 - Scientific methods impose unnecessary rules. | 62(44.6) | 47(33.8) | 30(21.6) | 2.7±1.1 |
| 17 - Scientific methodology only makes the implementation of medical research more difficult. | 82(59) | 27(19.4) | 30(21.6) | 2.5±1.1 |
| 18 - Negative effects of science exceed positive ones | 87(62.6) | 29(20.9) | 23(16.6) | 2.3±1.1 |
| 19 - If there were no science, we would lead less troubled and healthier lives. | 91(65.5) | 22(15.8) | 26(18.7) | 2.2±1.2 |
| 20 - The scientific way of thinking is dull and boring. | 75(57.6) | 31(22.3) | 28(20.1) | 2.5±1.2 |

Key Words: Medical research; Medical student; Knowledge; Attitudes.