

Awareness About Robotic-Assisted Surgeries Among Adults in the UAE

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1. Introduction

- The use of robots in complex surgeries has been widely adopted in Europe and the USA in multiple specialties.
- According to Intuitive Surgical, the manufacturer of the da Vinci® Surgical System, the number of robotic-assisted surgery (RAS) has significantly increased in the last decade.
- Three da Vinci Si Surgical Systems are available in the UAE; two are in Abu Dhabi, and one at Al-Qassimi Hospital in Sharjah. (Buabbas, A.J., Aldousari, S. & Shehab, A.A., 2020).
- An apparent willingness to adopt RAS is essential, not only from the healthcare organizations operating it but also from the public who will utilize it.

2. Aim

The main aim of this study is to evaluate adults' **awareness, perception, and knowledge** about RAS in the UAE, along with the factors related to their level of awareness.

3. Methodology

- Design:** A descriptive cross-sectional study.
- Sample:** The computed sample size was 433 adults aged above 18 years old living in the UAE.
- Instrument:** A self-administered questionnaire was distributed via social media platforms, consisting of 20 questions covering three sections; demographics, awareness about RAS, and attitudes towards RAS.
- Analysis:** Percentages, means, Chi-square tests, odds ratio, and Fisher test were conducted using SPSS 22 program. The significance was set to be 5% (p -value < 0.05).

4. Results

Demographics:

- A total of 433 participants were included; 59.68% (n = 258) were females; 60.3% (n = 261) were 18-30 years old; 47.8% (n = 207) were Non-Emirati Arabs; 36.3% (n = 157) were living in Sharjah; 45.5% (n = 197) had a Bachelor's degree; 48% (n = 208) were students; and 61.2% (n = 265) were in the non-medical field.

Awareness:

- 33% (n = 143) of participants were slightly aware, 5.3% (n = 23) were extremely aware, and 11.5% (n = 50) were not aware.

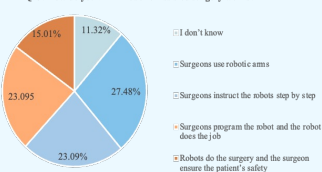
Attitudes:

- Individuals with adequate knowledge were 14.5 times extremely likely to undergo RAS than those with inadequate knowledge.

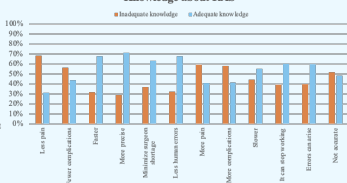
Knowledge:

- 81.06% of the participants showed inadequate knowledge about RAS.
- Participants with a postgraduate degree were 2.1 times more likely to have adequate knowledge than participants with bachelor's degrees (30.4%, and 16.8%, respectively) (p =0.034).
- Participants working in the medical field had adequate knowledge compared to individuals with a non-medical field occupation (25.4%, and 15.8%, respectively) (p =0.028).
- People with proficient levels of technology were 2.5 times more knowledgeable than individuals with basic literacy (p = 0.003).

Q13: How do you think Robotic-Assisted surgery works?



Knowledge about RAS



5. Discussion

- We expected that most participants would show inadequate awareness about RAS since it is not a well-known technology and used in a few hospitals in UAE.
- Our findings reveal inadequate knowledge about RAS among adults. This finding is inconsistent with a previous study in the USA, which had a better level of awareness. This could be due to better surgical technology in the US healthcare system (Boys JA et al. 2015).
- We found that individuals with medical field occupations have superior knowledge regarding RAS in comparison to those in the non-medical field as they are more likely to be exposed to this technology. A study in Kuwait had consistent findings, reporting that the understanding of RAS was better by participants among medical or medically related professions (21.2%) (Buabbas, A.J., Aldousari, S. & Shehab, A.A., 2020).

5. Discussion (Contd.)

Limitations:

- Bias may result due to the self-administrable nature of the questionnaire.
- Limited variation in age groups; since the questionnaire was shared via social media, the majority of participants were of young age.

6. Conclusion

- An awareness and knowledge gap was discovered among the United Arab Emirates population regarding robotic surgery. Education, occupation, and technology literacy all influence an individual's level of awareness. From the responses, it appeared that few participants would undergo RAS.
- We recommend conducting future studies to investigate RAS further to enhance awareness.
- Furthermore, we encourage the development of social media campaigns to spread awareness about RAS.

For References & Affiliations
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