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The Use of Medical Applications among Anesthesia Technology Students at Umm Al-Qura University In 2020

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Abstract: Background: Smart devices became important and essential part in our daily life's, we noticed that there are unaware or miss use of this wealth among anesthesia students in UQU, so we wanted to direct their attention to the presence of medical applications that may benefit them in their life's and there medical practice.

Objective: The objective of this study was to assess and measure prevalence of medical applications among anesthesia technology students and the extent of their benefit from them. **Methods:** This cross-sectional questionnaire survey was carried out among anesthesia technology students at Facility of applied Medical Sciences-Umm Al-Qura university, makkah, Saudi Arabia. The Target population included Anastasia technology department student year 2020, they were 121 male student. **Conclusion:** The use of medical applications on mobile devices is not common among anesthesia Technology students of UQU university. Medical applications make smartphones useful tools in the practice of evidence-based medicine in their daily life at work, In addition it's an easy access and available at almost every smart device. Also, smartphones can play a very important role in patient education, makes medical formula calculations available anywhere anytime.

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Keywords: health personnel; smart phones; emergency departments; healthcare quality; policy

1. Introduction

Background

Nowadays Smart devices rather it was a laptop or smart phone, or a tablet became Essential part of our life's.

Despite the development reached educational methods and diversity of Obtaining information, although we noticed that Anastasia technology students in Umm Al-Qura University unaware enough or miss use lots of Applications that may Help them in their studies and medical practice, because we think this applications Will be beneficial to them and saves them a lot of time and effort, and we believe that it's part of our responsibility to Direct their attention and educate them about it.

Objectives

To study the prevalence of medical apps usage among the anesthesia technology students.

To Measure how useful, the medical apps can be from the anesthesia Technology students Point of view. Knowing the diversity of aspects that benefited the students.

2. Methods

This cross-sectional questionnaire survey was carried out among anesthesia technology students at Facility of applied Medical Sciences-Umm Al-Qura university, makkah, Saudi Arabia. We collected the data using an anonymous questionnaire that was constructed some of it from previously published studies {1}.{2} The Target population included Anastasia technology department students year 2020, they were 121 male student.

Ethical Approval

We have received ethical approval.

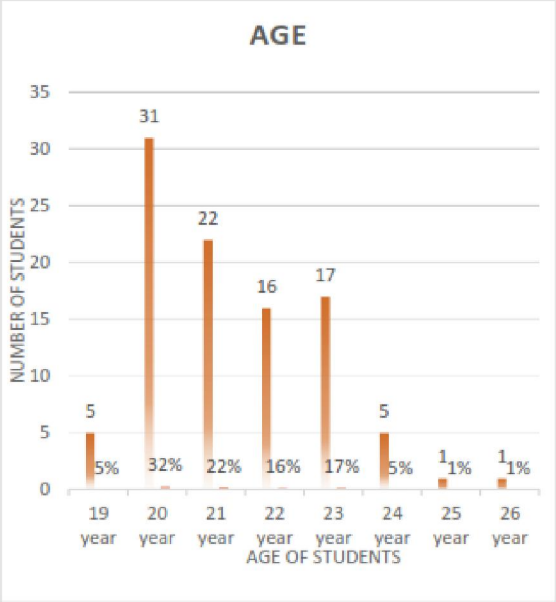
Data collection

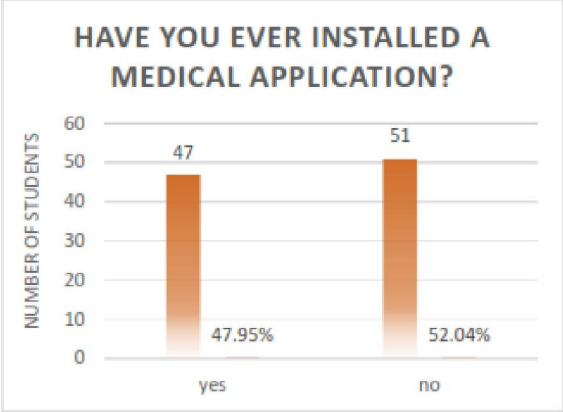
The study survey was sent to the leaders of each year of Anesthesia Technology department, It was published via link and they share it on their groups, it was published on Thursday 27 February 2020, The survey tool was made available only in Arabic as all the target Anastasia Technology students were proficient In verbal and written Arabic.

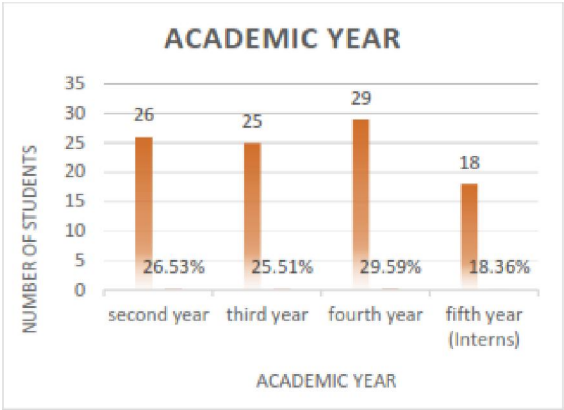
Study population

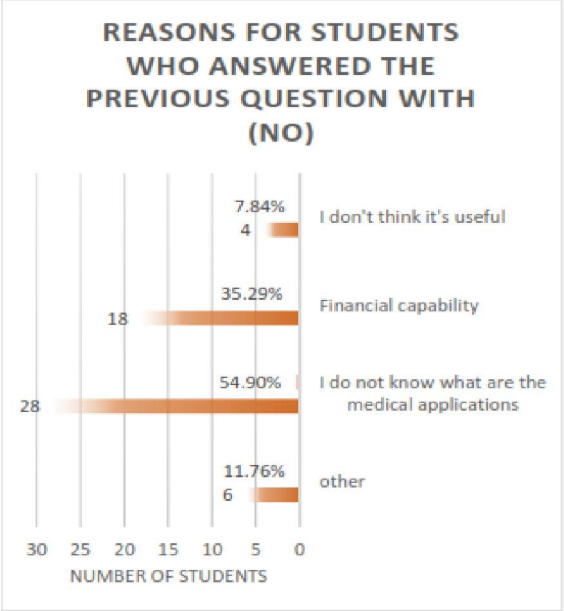
A total of 121 students Studying at Anastasia technology department during the period of data collection, Including 26 studying in the second year of Anastasia program,28 in the third year,30 in the fourth year, and 37 in the fifth year (interns).

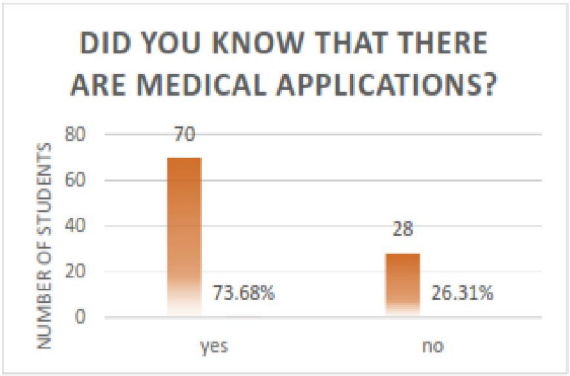
3. Results

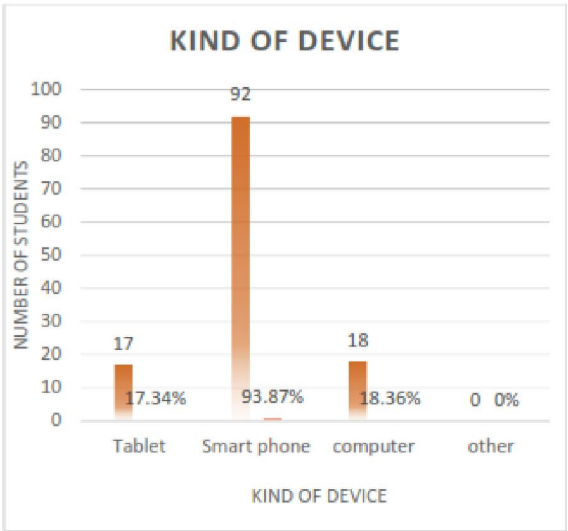

AGE
NUMBER OF STUDENTS
35
30
25
20
15
10
5
0
31
22
16
17
5
5
1
1
5%
32%
22%
16%
17%
5%
1%
1%
19 year
20 year
21 year
22 year
23 year
24 year
25 year
26 year
AGE OF STUDENTS

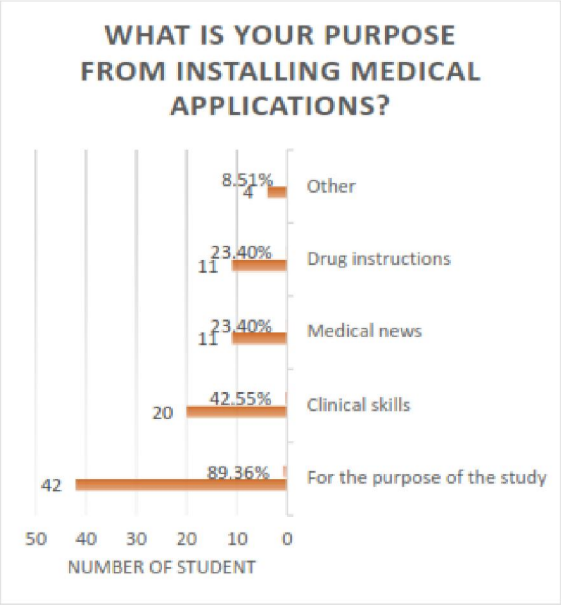

HAVE YOU EVER INSTALLED A MEDICAL APPLICATION?
NUMBER OF STUDENTS
60
50
40
30
20
10
0
47
51
47.95%
52.04%
yes
no

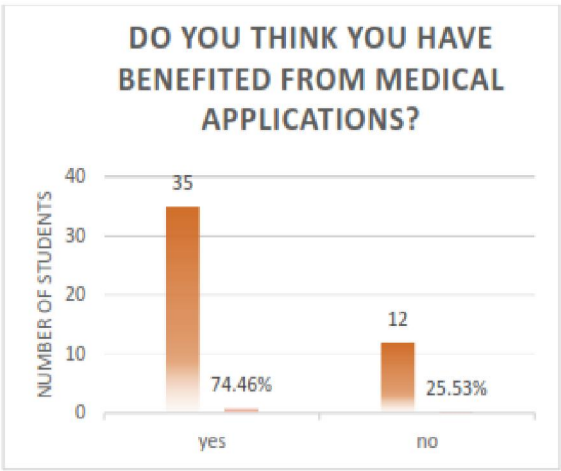

ACADEMIC YEAR
NUMBER OF STUDENTS
35
30
25
20
15
10
5
0
26
25
29
18
26.53%
25.51%
29.59%
18.36%
second year
third year
fourth year
fifth year (Interns)
ACADEMIC YEAR

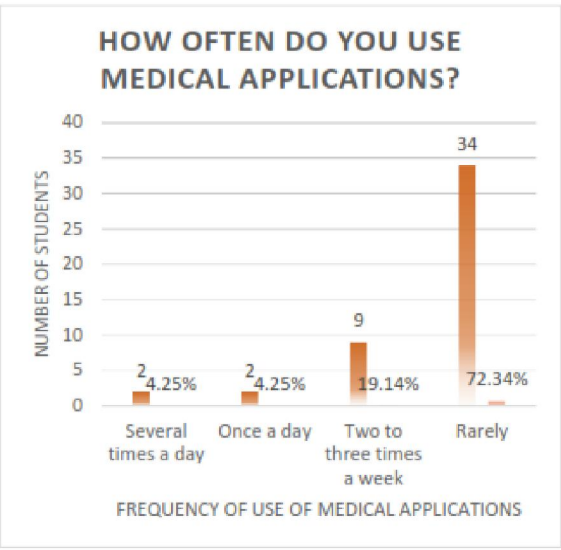

REASONS FOR STUDENTS WHO ANSWERED THE PREVIOUS QUESTION WITH (NO)
7.84%
4
I don't think it's useful
35.29%
18
Financial capability
54.90%
28
I do not know what are the medical applications
11.76%
6
other
30 25 20 15 10 5 0
NUMBER OF STUDENTS

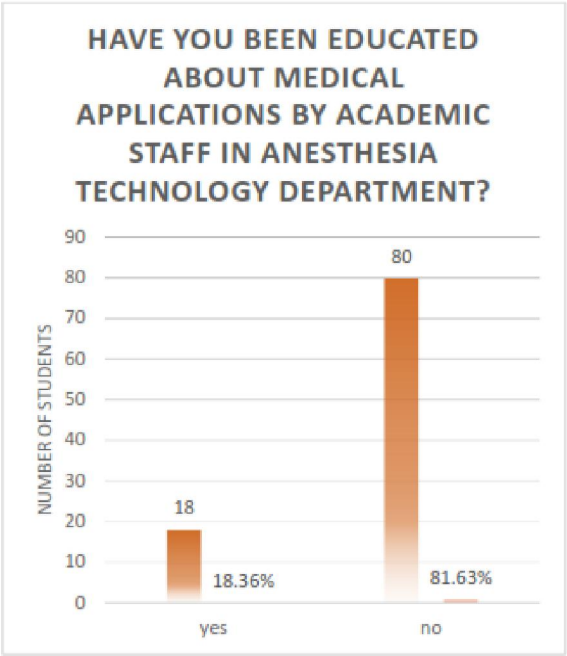

DID YOU KNOW THAT THERE ARE MEDICAL APPLICATIONS?
NUMBER OF STUDENTS
80
60
40
20
0
70
28
73.68%
26.31%
yes
no


KIND OF DEVICE
NUMBER OF STUDENTS
100
90
80
70
60
50
40
30
20
10
0
92
17
18
17.34%
93.87%
18.36%
0 0%
Tablet
Smart phone
computer
other
KIND OF DEVICE









Data analysis

The data retrieved from monkeysurvey98 responses from 121, The data collected from 26 students from the Second year, and 25 students from the third year, and 29 from the fourth year, And 18 from the fifth year (interns). The questionnaire was designed of 10 questions, The first question was about the age, There was a scale from 19 to 26 year old, The average was 21 years old, 31 of them is 20 years old,22 were 21 years old, 18 were 23 years old,16 were 22 years old, 5 were 24 years old, 4 were 19 years old, 1 was 25 years old, and 1 was 26 years old, Second question was about the Academic year, The fourth year students represent 29.59% of the questionnaire responses, the Second year students represent 26.53%, The third year students represent 25.51%, and fifth year students (interns) represent 18.36%, third question is about measuring their knowledge of existence of medical applications, 71.43% of students said yes and 28.57% said no, fourth question was asking about if the students have ever installed any medical applications, 52.04% of them said they haven't, 47.96% said they did install medical applications, fifth question was to find out the reasons that they didn't install the medical applications, The majority 54.90% didn't even know The medical applications,35.29% of them because of their financial Capability, there was some student 7.84% saw it useless, and 11.76% had other reasons, sixth question was about the type of devices that the students installed the medical applications in, most of

them are using smartphones and they represent 93,87%, 18.36% use computers, and 17.34% use tablet devices, seventh question was about the purpose from installing the medical applications, the majority of the students 89.36% install it for study purpose, 42.55% of them install it for clinical skills, similar percentage for two groups with 23.40% install it for medical news and drug instruction, and 8.51% for other purposes, The eighth question asks about if the students had benefited from the medical applications,74,46% believes that they are benefited, and On the contrary 25.53% think they have not, The ninth question was to find out how frequent are they using the medical applications, the majority of the students are rarely using it and they represent 72,34%, 19.14% were using it Two to three times a week, And the percentage was equivalent for those who use it once a day and who use it several times a day by 4.25%, The tenth question was asking if any of your academic staff members educated you about medical applications, and unfortunately 81,63% said no، and 18,36% have been educated about the medical applications.

4. Discussion

Despite the fact that all of anesthesia technology students have a Smart devices, 26.31% of them didn't even know about the medical applications, even the students who know about the medical applications only 47.95% installed at least one app, there are multiple reasons for the students lack of knowledge about the medical applications, 81.63% from total students didn't educated by Academic staff about the medical applications, while 35.29% from the students has the financial limitations, most of the students were unaware of the medical applications and were not using their phones for academic purposes, in our survey 74.46% from the students who used the medical applications think they had benefited from it, we strongly suggest that we need to increase the awareness among anesthesia technology students of medical applications, this awareness can be brought about by funding students, integration of a lecture in the orientation classes of students and by arranging workshops periodically, the survey proved that 47.95%are installed medical application in their forms.

We compared our results with other universities and Studies such as King Abdul-Aziz university in Jeddah,89.1%{1} of their medical students installed medical applications, Monash university in Melbourne{2}, Showed that 79% of their medical students installed medical applications, and about the frequency of use we compared our results with{2} and turn out there is high in using medical applications, the majority of our survey was rarely using medical applications 72.34 %, In {2} site the students who rarely using the apps are 18.1%, and students who are using the medical apps several times a day in our study were (4.25%) and in the British research was (14.4%), we found that the majority of Anesthesia technology students in our survey installing The medical apps for studying reasons (89.36%) while in the king Abdul-Aziz study the majority was for looking up a medical information (67.3%).

The primary criteria for choice of app is often cost; users may prefer to download a free app but will replace or upgrade it later, if necessary, with one that requires payment.{3} Some free apps are fully functional, while others are nonfunctional or partially functional unless a subscription is purchased.{3}Many well-known medical journals and medical textbooks can be purchased as mobile apps after payment of a subscription fee. Although some medical apps may initially be costly, they can ultimately be cost-effective if updates are included. For example, medical textbook apps are often updated annually, eliminating the need to buy newer editions. {3}.

Conclusion

The use of smartphones is getting more attention in healthcare day by day. Medical applications make smartphones useful tools in the practice of evidence-based medicine in their daily life at work, IN addition it is an easy access and available at almost every smart device.

Also, smartphones can play a very important role in patient education, makes medical formula calculations available anywhere anytime, and provides access to evidence-based medical resources including disease diagnosis guides, drug references.

Moreover, performing simple medical exams such as visual acuity test is also viable using a smartphone.

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