

# Multinational KAP Study: Patient Rights among Medical Students, 2023

Mohammed Haydar Awad<sup>1\*</sup> , Moram Amir Ahmed<sup>2</sup>, Safa Adil Osman<sup>3</sup>,  
Hala Abdulkareem Alserhan<sup>4</sup>, Norah Mustafa Bukhamsin<sup>5</sup>, Hassan Ali Ayid<sup>6</sup>,  
Nareman Ayman Abuodeh<sup>7</sup>

<sup>1</sup>Collage of Medicine, Karary University, Omdurman, Sudan

<sup>2</sup>Collage of Medicine, Hayatt University Collage, Khartoum, Sudan

<sup>3</sup>Collage of Medicine, National University, Khartoum, Sudan

<sup>4</sup>Collage of Medicine, Balqa Applied University, Salt, Jordan

<sup>5</sup>Collage of Medicine, Vision Collage, Riyadh, Saudi Arabia

<sup>6</sup>Collage of Dentistry, King Khalid University, Abha, Saudi Arabia

<sup>7</sup>Collage of Medicine, Cairo University, Cairo, Egypt

Email: \*moh.haydar167@gmail.com

**How to cite this paper:** Awad, M. H., Ahmed, M. A., Osman, S. A., Alserhan, H. A., Bukhamsin, N. M., Ayid, H. A., & Abuodeh, N. A. (2023). Multinational KAP Study: Patient Rights among Medical Students, 2023. *Open Journal of Philosophy*, 13, 668-680.

<https://doi.org/10.4236/ojpp.2023.134042>

**Received:** August 13, 2023

**Accepted:** October 8, 2023

**Published:** October 11, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

## Abstract

**Background:** The right to lead a healthy life is widely considered to be a fundamental human right. All individuals need and use healthcare services throughout their lives, and hence the provision of health care services must be reasonably non-discriminatory and respectful of human rights and dignity. Patients' rights are a set of norms derived from the bases and principles of medical ethics and human dignity, and professional commitments to patients are founded on these rights. **Materials & Methods:** A descriptive cross-sectional community-based study was carried out among 1540 medical students in Sudan, Saudi Arabia, Egypt and Jordan by using simple random technique and self administrative questionnaires, the data was analyzed using SPSS version 25. **Results:** The majority of participants were female (78.4%), ranging in age between 18 - 21 years (50.1%) and in second year educational level (22.4%). The majority had high knowledge (1305 students, 84.7%), high attitude (756 students, 49.1%) and high practise (817 students, 53.1%). There was significant relationship ( $P$  value < 0.05) between age, sex and educational level with knowledge, attitude and practise. **Conclusion:** Most of the medical students had high knowledge, attitude and practise. The research finding among medical students was good, with additional education, good monitoring and guiding the result will be higher.

## Keywords

Knowledge, Attitude, Practise, Patient Rights, Medical Students, Ethics

## 1. Introduction

The right to lead a healthy life is widely considered to be a fundamental human right (Council of Europe Treaty Office, n.d.). As such, promoting and assuring patients' rights is an essential part of modern healthcare. In 1994, the World Health Organization (WHO) published a detailed declaration outlining the primary principles of patients' rights in Europe (World Health Organization, 1998).

According to the definition of the American Health Association, by considering patients' rights, we mean observing their legal and logical physical, mental, spiritual and social needs that are compiled as standard medical rules and regulations and the medical team are responsible and obliged to implement and observe them (Parsapoor et al., 2009).

All individuals need and use healthcare services throughout their lives, and hence the provision of health care services must be reasonably non-discriminatory and respectful of human rights and dignity (Ahari et al., 2012). Patients' rights are a set of norms derived from the bases and principles of medical ethics and human dignity, and professional commitments to patients are founded on these rights (Shamsi et al., 2020; Olejarczyk & Young, 2021).

The Patients' Rights Charter aims to ensure that human dignity is respected by protecting patient health, especially in medical emergencies without discrimination of race, age, sex, or financial status, and with the provision of respectful and quality care (Ahari et al., 2012).

Medical ethics is defined as a structured system which aims to present appropriate strategies for solving the ethical problems in medical sciences and dentistry (Larijani et al., 2005).

In all countries, laws are endorsed for adjusting the performance of health specialists (Dogas, n.d.). In fact, these laws have been enacted in order to support the members of the society against the inefficient specialists and, at the same time, accurately describe the performance of the qualified ones (Dogas, n.d.). Emphasis on the human rights in healthcare, particularly respecting the patients' dignity, is of utmost importance in particularly when patients' vulnerability exposes them to the violations (Bandman & Bandman, n.d.).

Today, the patients' rights consist of both individual and social aspects. More emphasis has been put on care and treatment rights, sufficient social coverage, proper information on healthcare services, and the right to utilize the social developments. Moreover, economic signs, modern medicine, and patients' expectations all affect the identification of the patients' rights. Thus, it is quite necessary to develop principles to support the individuals in healthcare with emphasis on the patients' rights (Lenin & Giures, 1999).

On the other hand, lack of respect to patient rights may lead to hazards for security and health situation of patients, may decrease efficiency, effectiveness, and suitable care of patients (Mastaneh & Mouseli, 2013).

Although Patients' rights are a fundamental human rights and lack of respect to patient rights may lead to decreases efficiency, effectiveness, and suitable care

of patients, we realized there is a international lack of its application in hospitals, specially from medical students. So assess knowledge, attitude and practise of patient right among medical students is the first step and corner stone to full this lack.

The study goal to assess knowledge, attitude and practise of patient right among medical students, to orient the efforts toward the manipulation factors influencing them. Also fill the gap of fewer recent studies about knowledge, attitude and practise of patient right among medical students, specially the multinational studies.

## 2. Materials & Methods

A descriptive cross-sectional community-based study was carried out in Sudan, Saudi Arabia, Egypt and Jordan. Targeted populations were all medical students in Sudan, Saudi Arabia, Egypt and Jordan. All medical students in Sudan, Saudi Arabia, Egypt and Jordan who showed willingness to participated were included. Medical students whom didn't show willingness to participate were excluded.

Dependent variables were knowledge, attitude and practise of patient right among medical students. Independent variables were Sex, Age and educational level.

Sample size was calculated by using the equation:

$$n = z^2 * p * q / d^2$$

*n*: Sample size

*z*: Standard deviation (1.96)

*p*: Proportion of population

*q*: Error sample (1 – *p*)

*d*: Degree of precision (0.05) (Pourhoseingholi et al., 2013)

$$n = (1.96)^2 * 0.5 * 0.5 / (0.05)^2 = 385 \text{ [for each country].}$$

For all countries:  $385 * 4 = 1540$ .

A probability simple random technique was used. The data was collected by online self administrated questionnaire, the questionnaire was designed by the researchers from the literature review and given to the experts and professors in the related field and its validity and reliability was confirmed. Finally, the questionnaire was given to the students whom were willing to take part in the research. The questionnaire consists of:

- General characteristic: sex, age and level of education.
- Knowledge of patient rights questions—five questions.
- Attitude towards patient rights questions—five questions.
- Practice of patient rights questions—five questions. “**APPENDIX**”

The questionnaire answer score by: 2 for Correct answer, 1 for Sometimes or Neutral, 0 for Incorrect answer.

The data was analyzed by SPSS version 25 descriptive analysis, Pearson chi-square test of significance was conducted to determine the statistical signifi-

cance. A  $P$  value  $< 0.05$  level was considered statistically significant knowledge, attitude and practise score Indicators were: high knowledge, attitude or practise = 8 - 10 of total score. Moderate knowledge, attitude or practise = 6 or 7 of total score. Low knowledge, attitude or practise  $< 6$  of total score.

### 3. Results

#### 3.1. General Characteristics of the Study Participants

Out of 1540 questionnaires were taken from medical students, 385 questionnaires from each country (Sudan, Saudi Arabia, Egypt and Jordan).

Regarding medical students sex were male: 20.3%, 43.4%, 51.4%, 26.8% in Sudan, Saudi Arabia, Egypt and Jordan respectively. Female were: 79.7%, 56.9%, 48.6%, 73.2% in Sudan, Saudi Arabia, Egypt and Jordan respectively. In all countries male were 35.5% and female were 64.5% “Table 1”.

The majority of the medical students age were between 22-25 years in Sudan (53.8%) and between 18 - 21 years in Saudi Arabia, Egypt and Jordan (44.7%, 53.0%, 64.9% respectively). In all countries the majority were between 18 - 21 years (50.1%) then 22 - 25 years (39.8%) after that more than 25 years (5.5%) and the least were less than 18 years (4.6%) “Table 1”.

In medical students educational level the majority were in the sixth year in Sudan and Saudi Arabia (23.6%, 19.2% respectively) and in the first year in Egypt (20.8%) and in the second year in Jordan (40.8%). In all countries the majority were in the second year (22.4%) and the least number were in the first year (14.7%) “Table 1”.

**Table 1.** Shows distribution of sociodemographic characteristics of medical students in Sudan, Saudi Arabia, Egypt and Jordan in 2023 (n = 385 (for each country), 1540 for all countries).

Characteristics	Value	Country				
		Sudan n (%)	Saudi Arabia n (%)	Egypt n (%)	Jordan n (%)	All n (%)
Sex	Male	78 (20.3)	167 (43.4)	198 (51.4)	103 (26.8)	546 (35.5)
	Female	304 (79.7)	218 (56.6)	183 (48.6)	282 (73.2)	994 (64.5)
Age “Years”	Less than18	9 (2.3)	17 (4.4)	2 (0.5)	43 (11.2)	71 (4.6)
	18 - 21	145 (37.7)	172 (44.7)	204 (53.0)	250 (64.9)	771 (50.1)
	22 - 25	207 (53.8)	153 (39.7)	174 (45.2)	80 (20.8)	614 (39.8)
	More than 25	24 (6.2)	43 (11.2)	5 (1.3)	12 (3.1)	84 (5.5)
Educational level	1 <sup>st</sup> Year	36 (9.4)	49 (12.7)	80 (20.8)	61 (15.8)	226 (14.7)
	2 <sup>nd</sup> Year	54 (14.0)	61 (15.8)	73 (19.0)	157 (40.8)	345 (22.4)
	3 <sup>rd</sup> Year	53 (13.8)	67 (17.4)	51 (13.2)	68 (17.7)	239 (15.5)
	4 <sup>th</sup> Year	72 (18.7)	63 (16.4)	46 (11.9)	48 (12.5)	229 (14.9)
	5 <sup>th</sup> Year	79 (20.5)	71 (18.4)	67 (17.4)	33 (8.6)	250 (16.2)
	6 <sup>th</sup> year	91 (23.6)	74 (19.2)	68 (17.7)	18 (4.7)	251 (16.3)

### 3.2. Assessment of Medical Students Knowledge

It is a patient right to be treated with respect, consideration, and dignity, medical students said the right answer “Agree” were 93.0%, 90.9%, 96.1%, 83.9%, and 91.0% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 2”.

It is a patient right to select the medical team taking care of him, medical students said the right answer “Agree” were 65.5%, 55.6%, 79.7%, 60.3% and 65.3% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 2”.

It is a patient right to receive information from his medical provider concerning his illness, condition, treatment, including possible side effects, and plans for his care, medical students said the right answer “Agree” were 87.8%, 81.6%, 93.0%, 80.5% and 85.7% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 2”.

It is a patient right to have his privacy respected, medical students said the right answer “Agree” were 94.3%, 77.1%, 94.3%, 79.2% and 86.2% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 2”.

It is a patient right to agree to or refuse any health care service and to be informed of medical consequences of services refused, medical students said the

**Table 2.** Shows distribution of medical students knowledge characteristics in Sudan, Saudi Arabia, Egypt and Jordan in 2023 (n = 385 (for each country), 1540 for all countries).

Characteristics	Value	Country				
		Sudan n (%)	Saudi Arabia n (%)	Egypt n (%)	Jordan n (%)	All n (%)
It is a patient right to be treated with respect, consideration, and dignity	Agree	358 (93.0)	350 (90.9)	370 (96.1)	323 (83.9)	1401 (91.0)
	Neutral	23 (6.0)	30 (7.8)	15 (3.9)	53 (13.8)	121 (7.9)
	Disagree	4 (1.0)	5 (1.3)	0 (0.0)	9 (2.3)	18 (1.2)
It is a patient right to select the medical team taking care of him	Agree	252 (65.5)	214 (55.6)	307 (79.7)	232 (60.3)	1005 (65.3)
	Neutral	110 (28.6)	146 (37.9)	61 (15.8)	129 (33.5)	446 (29.0)
	Disagree	23 (6.0)	25 (6.5)	17 (4.4)	24 (6.2)	89 (5.8)
To receive information from his medical provider concerning his illness, condition, treatment, including possible side effects, and plans for his care.	Agree	338 (87.8)	314 (81.6)	358 (93.0)	310 (80.5)	1320 (85.7)
	Neutral	42 (10.9)	59 (15.3)	23 (6.0)	60 (15.6)	184 (11.9)
	Disagree	5 (1.3)	12 (3.1)	4 (1.0)	15 (3.9)	36 (2.3)
To have his privacy respected.	Agree	363 (94.3)	297 (77.1)	363 (94.3)	305 (79.2)	1328 (86.2)
	Neutral	14 (3.6)	77 (20.0)	21 (5.5)	62 (16.1)	174 (11.3)
	Disagree	8 (2.1)	11 (2.9)	1 (0.3)	18 (4.7)	38 (2.5)
To agree to or refuse any health care service and to be informed of medical consequences of services refused	Agree	289 (75.1)	285 (74.0)	147 (38.2)	288 (74.8)	1009 (65.5)
	Neutral	80 (20.8)	78 (20.3)	223 (57.9)	85 (22.1)	466 (30.3)
	Disagree	16 (4.2)	22 (5.7)	15 (3.9)	12 (3.1)	65 (4.2)

right answer “Agree” were 75.1%, 74.0%, 38.2%, 74.8% and 65.5% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 2”.

### 3.3. Assessment of Medical Students Attitude

In if the patient asked to be transferred to another health facility, will you accept?, medical students said the right answer “Yes” were 59.5%, 75.6%, 49.0%, 62.3% and 61.7% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 3”.

In if the patient asked for another doctor to treat him, will you accept?, medical students said the right answer “Yes” were 80.8%, 63.1%, 57.1%, 61.6% and 65.6% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 3”.

In if the patient asked for full medical information about his illness, will you give them?, medical students said the right answer “Yes” were 78.2%, 74.8%, 88.1%, 70.1% and 77.8% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 3”.

In if the patient asked to conceal vital information from other relatives and other health worker, will you accept?, medical students said the right answer “Yes” were 46.2%, 53.8%, 45.7%, 51.9% and 49.4% in Sudan, Saudi Arabia,

**Table 3.** Shows distribution of medical students attitude characteristics in Sudan, Saudi Arabia, Egypt and Jordan in 2023 (n = 385 (for each country), 1540 for all counties).

Characteristics	Value	Country				
		Sudan n (%)	Saudi Arabia n (%)	Egypt n (%)	Jordan n (%)	All n (%)
If the patient asked to be transferred to another health facility, will you accept?	Yes	229 (59.5)	291 (75.6)	190 (49.0)	240 (62.3)	950 (61.7)
	Sometimes	146 (37.9)	89 (23.1)	190 (49.0)	133 (34.5)	558 (36.2)
	No	10 (2.6)	5 (1.3)	5 (1.3)	12 (3.1)	32 (2.1)
If the patient asked for another doctor to treat him, will you accept?	Yes	311 (80.8)	243 (63.1)	220 (57.1)	237 (61.6)	1011 (65.6)
	Sometimes	70 (18.2)	124 (32.2)	160 (41.6)	24 (6.2)	478 (31.0)
	No	4 (1.0)	18 (4.7)	5 (1.3)	270 (70.1)	51 (3.3)
If the patient asked for full medical information about his illness, will you give them?	Yes	301 (78.2)	288 (74.8)	339 (88.1)	270 (70.1)	1198 (77.8)
	Sometimes	77 (20.0)	80 (20.8)	40 (10.4)	84 (21.8)	281 (18.2)
	No	7 (1.8)	17 (4.4)	6 (1.6)	31 (8.1)	61 (4.0)
If the patient asked to conceal vital information from other relatives and other health worker, will you accept?	Yes	178 (46.2)	207 (53.8)	176 (45.7)	200 (51.9)	761 (49.4)
	Sometimes	145 (37.7)	141 (36.6)	189 (49.1)	134 (34.8)	609 (39.5)
	No	62 (16.1)	37 (9.6)	20 (5.2)	51 (13.2)	170 (11.0)
If the patient asked to not allow student to examine him or look at his medical record, will you see his medical record?	Yes	176 (45.7)	197 (51.2)	90 (23.4)	201 (52.2)	664 (43.1)
	Sometimes	95 (24.7)	93 (24.2)	70 (18.2)	108 (28.1)	336 (23.8)
	No	114 (29.6)	95 (24.7)	225 (58.4)	76 (19.7)	510 (33.1)

Egypt, Jordan and all countries respectively “Table 3”.

In if the patient asked not allow student to examine him or look at his medical record, will you see his medical record?, medical students said the right answer “No” were 29.6%, 24.7%, 58.4%, 19.7% and 33.1% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 3”.

### 3.4. Assessment of Medical Students Practise

In do you tell the patients your full name and that you are a student?, medical students said the right answer “Yes” were 74.8%, 82.9%, 82.6%, 68.6% and 77.2% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 4”.

In do you tell the patients their examination findings or diagnosis?, medical students said the right answer “Yes” were 55.6%, 64.7%, 87.8%, 57.4% and 66.4% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 4”.

In do you examine the patients males and females equally?, medical students said the right answer “Yes” were 61.3%, 51.2%, 82.9%, 68.1% and 65.8% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 4”.

In if a different gender patient asked not to be examined by you, will you examine them anyway?, medical students said the right answer “No” were 74.0%, 50.1%, 56.9%, 51.9% and 58.2% in Sudan, Saudi Arabia, Egypt, Jordan and all

**Table 4.** Shows distribution of medical students practise characteristics in Sudan, Saudi Arabia, Egypt and Jordan in 2023 (n = 385 (for each country), 1540 for all counties).

Characteristics	Value	Country				
		Sudan n (%)	Saudi Arabia n (%)	Egypt n (%)	Jordan n (%)	All n (%)
Do you tell patients your full name and that you are a student?	Yes	288 (74.8)	319 (82.9)	318 (82.6)	264 (68.6)	1189 (77.2)
	Sometimes	80 (20.8)	49 (12.7)	47 (12.2)	88 (22.9)	264 (17.1)
	No	17 (4.4)	17 (4.4)	20 (5.2)	33 (8.6)	87 (5.6)
Do you tell patients their examination findings or diagnosis?	Yes	214 (55.6)	249 (64.7)	338 (87.8)	221 (57.4)	1022 (66.4)
	Sometimes	128 (33.2)	98 (25.5)	39 (10.1)	124 (32.2)	389 (25.3)
	No	43 (11.2)	38 (9.9)	8 (2.1)	40 (10.4)	129 (8.4)
Do you examine patients, males and females equally?	Yes	236 (61.3)	197 (51.2)	319 (82.9)	262 (68.1)	1014 (65.8)
	Sometimes	84 (21.8)	75 (19.5)	35 (9.1)	93 (24.2)	287 (18.6)
	No	65 (16.9)	113 (29.4)	31 (8.1)	30 (7.8)	239 (15.5)
If a different gender patient asked not to be examined by you, will you examine them anyway?	Yes	47 (12.2)	78 (20.3)	129 (33.5)	84 (21.8)	338 (21.9)
	Sometimes	53 (13.8)	114 (29.6)	37 (9.6)	101 (26.2)	305 (19.8)
	No	285 (74.0)	193 (50.1)	219 (56.9)	200 (51.9)	897 (58.2)
Do you tell your friends about patients you saw at rounds?	Yes	79 (20.5)	65 (16.9)	40 (10.4)	127 (33.0)	311 (20.2)
	Sometimes	154 (40.0)	94 (24.4)	88 (22.9)	143 (37.1)	479 (31.1)
	No	152 (39.5)	226 (58.7)	257 (66.8)	115 (29.9)	750 (48.7)

countries respectively “Table 4”.

In do you tell your friends about patients you saw at rounds?, medical students said the right answer “No” were 39.5%, 58.7%, 66.8%, 29.9% and 48.7% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 4”.

### 3.5. Overall Score of Assessment of the Mother Knowledge and Practise and Child Health

The assessment of the medical students knowledge:

- High knowledge were 88.1%, 80.0%, 92.5%, 78.4% and 84.7% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.
- Moderate knowledge were 9.1%, 14.3%, 5.7%, 15.3% and 11.1% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.
- Low knowledge were 2.9%, 5.7%, 1.8%, 6.2% and 4.2% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.

The assessment of the medical students attitude:

- High attitude were 51.7%, 50.4%, 53.8%, 40.5% and 49.1% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.
- Moderate attitude were 35.6%, 35.6%, 37.9%, 35.3% and 36.1% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.
- Low attitude were 12.7%, 14.0%, 8.3%, 24.2% and 14.8% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.

The assessment of the medical students practise:

- High practise were 51.2%, 48.6%, 73.5%, 39.0% and 53.1% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.
- Moderate practise were 34.5%, 34.5%, 19.2%, 37.4% and 31.4% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.

**Table 5.** Shows distribution of medical students knowledge, attitude and practise score characteristics in Sudan, Saudi Arabia, Egypt and Jordan in 2023 (n = 385 (for each country), 1540 for all counties).

Characteristics	Value	Country				
		Sudan n (%)	Saudi Arabia n (%)	Egypt n (%)	Jordan n (%)	All n (%)
Knowledge	High	339 (88.1)	308 (80.0)	356 (92.5)	302 (78.4)	1305 (84.7)
	Moderate	35 (9.1)	55 (14.3)	22 (5.7)	59 (15.3)	171 (11.1)
	Low	11 (2.9)	22 (5.7)	7 (1.8)	24 (6.2)	64 (4.2)
Attitude	High	199 (51.7)	194 (50.4)	207 (53.8)	156 (40.5)	756 (49.1)
	Moderate	137 (35.6)	137 (35.6)	146 (37.9)	136 (35.3)	556 (36.1)
	Low	49 (12.7)	54 (14.0)	32 (8.3)	93 (24.2)	228 (14.8)
Practise	High	197 (51.2)	187 (48.6)	283 (73.5)	150 (39.0)	817 (53.1)
	Moderate	133 (34.5)	133 (34.5)	74 (19.2)	144 (37.4)	484 (31.4)
	Low	55 (14.3)	65 (16.9)	28 (7.3)	91 (23.6)	239 (15.5)



- Low practise were 14.3%, 16.9%, 7.3%, 23.6% and 15.5% in Sudan, Saudi Arabia, Egypt, Jordan and all countries respectively “Table 5”.

### 3.6. Cross Tabulation of the Participant's Characteristics

A bivariate analysis of medical students knowledge, attitude and practice with sex, age and educational level was done. In this analysis Pearson chi-square test of significance was conducted to determine the statistical significance between medical students knowledge, attitude and practice with sex, age and educational level. The results in “Table 6” indicate:

- knowledge:
  - 1) Knowledge and sex: significant relationship in Saudi Arabia, Jordan and all countries ( $P$ value: 0.001, <0.001, <0.001 respectively).
  - 2) Knowledge and age: significant relationship in Egypt, Jordan and all countries ( $P$ value: 0.003, <0.001, <0.001 respectively).
  - 3) Knowledge \* educational level: significant relationship in Sudan, Egypt, Jordan and all countries ( $P$ value: 0.010, 0.002, 0.029, <0.001 respectively).
- Attitude:
  - 1) Attitude and sex: significant relationship in Egypt and all countries ( $P$

**Table 6.** Shows Chi-square test and  $P$  value of crosstabulation of medical students knowledge, attitude and practise score with sex, age and educational level characteristics in Sudan, Saudi Arabia, Egypt, Jordan and all countries in 2023 (n = 385 (for each country), 1540 for all countries).

Country	Crosstabulation	Sex		Age		Educational level	
		Chi-x <sup>2</sup>	$P$ value	Chi-x <sup>2</sup>	$P$ value	Chi-x <sup>2</sup>	$P$ value
Sudan	Knowledge	1.583	0.812	11.337	0.078	23.334	0.010
	Attitude	6.521	0.163	15.499	0.017	30.378	0.001
	Practise	2.394	0.664	9.454	0.150	15.007	0.129
Saudi Arabia	Knowledge	18.080	0.001	6.988	0.322	17.695	0.060
	Attitude	1.634	0.803	9.245	0.160	18.472	0.048
	Practise	11.580	0.021	16.037	0.014	18.821	0.043
Egypt	Knowledge	6.387	0.172	20.181	0.003	28.089	0.002
	Attitude	14.679	0.005	13.266	0.039	16.830	0.078
	Practise	8.311	0.081	26.693	<0.001	54.554	<0.001
Jordan	Knowledge	57.766	<0.001	74.586	<0.001	20.044	0.029
	Attitude	5.365	0.252	18.656	0.005	11.640	0.310
	Practise	17.842	0.001	26.341	<0.001	52.893	<0.001
All countries	Knowledge	60.011	<0.001	35.680	<0.001	33.877	<0.001
	Attitude	11.615	0.020	33.968	<0.001	47.403	<0.001
	Practise	21.793	<0.001	39.342	<0.001	22.067	0.015

value: 0.005, 0.020 respectively).

2) Attitude and age: significant relationship in Sudan, Egypt, Jordan and all countries ( $P$  value: 0.017, <0.039, 0.005, <0.001 respectively).

3) Attitude and educational level: significant relationship in Sudan, Saudi Arabia and all countries ( $P$  value: 0.001, <0.048, <0.001 respectively).

- Practise:

1) Practise and sex: significant relationship in Saudi Arabia, Jordan and all countries ( $P$  value: 0.021, 0.001, <0.001 respectively).

2) Practise and age: significant relationship in Saudi Arabia, Egypt, Jordan and all countries ( $P$  value: 0.014, <0.001, <0.001, <0.001 respectively).

3) Practise and educational level: significant relationship in Saudi Arabia, Egypt, Jordan and all countries ( $P$  value: 0.043, <0.001, <0.001, 0.015 respectively).

#### 4. Discussion

All individuals need and use healthcare services throughout their lives, and hence the provision of health care services must be reasonably non-discriminatory and respectful of human rights and dignity. Patients' rights are a set of norms derived from the bases and principles of medical ethics and human dignity, and professional commitments to patients are founded on these rights.

This multinational descriptive cross-sectional community-based study was carried out among 1540 medical students by using simple random technique to assess knowledge attitude and practise of patient rights among medical students in Sudan, Saudi Arabia, Egypt and Jordan. The students were asked about their knowledge, attitude and practise of patient rights by online self-administrative questionnaire and the data was analyzed by SPSS version 25.

In general medical students had high knowledge, high attitude and high practise in all countries were 84.7%, 49.1% and 53.1% respectively.

Most of medical students sex were female (64.5%), this was similar to a study was conducted by [Tabei et al. \(2013\)](#) that found the majority of them was female (78.4%). The majority of medical students age were ranges between 18 - 21 years (50.1%) and The majority of medical students education level were the second year (22.4%).

In medical students knowledge the majority were high knowledge (1305 students, 84.7%) then moderate knowledge (171 students, 11.1%) and the least number was low knowledge (64 students, 4.2%) this was difference to [Mohamed et al. \(2012\)](#) study that found the majority had unsatisfactory knowledge. This difference can be due to the comparable study with small sample size and in one hospital only. In addition the study was similar to [Tabei et al. \(2013\)](#) study that shows 71% of the students were acquainted with the patients' rights. Medical students knowledge were highest among Egypt students (92.5%) followed by Sudan students (88.1%) then Saudi Arabia students (80.0%) and the least number in Jordan students (78.4%).

In medical students attitude the majority were high attitude (756 students, 49.1%) then moderate attitude (556 students, 36.1%) and the least number was low attitude (228 students, 14.8%) This might be due they haven't been fully responsible for a patient before. Medical students attitude were highest among Egypt students (53.8%) followed by Sudan students (51.7%) then Saudi Arabia students (50.4%) and the least number in Jordan students (40.5%).

In medical students practise the majority were high practise (817 students, 53.1%) then moderate practise (484 students, 31.4%) and the least number was low practise (239 students, 15.5%) this was difference to [Mohamed et al. \(2012\)](#) study that found the majority had unsatisfactory practise. This difference can be due to the comparable study with small sample size and in one hospital only. Medical students practise were highest among Egypt students (73.5%) followed by Sudan students (51.2%) then Saudi Arabia students (48.6%) and the least number in Jordan students (39.0%).

## 5. Limitations

There was a problem to reach to all medical students and give us their attention to participate in the study, so a lot of time required for data collection.

## 6. Recommendation

We recommended universities, ministry of health, ministry of high education and government to adopt appropriate strategies and programme in medical ethics for medical student since first year and observe medical students practise towards patients in clinical years.

## 7. Conclusion

The majority of participants were female (78.4%), ranging in age between 18 - 21 years (50.1%) and in second year education level (22.4%).

The majority of medical students knowledge, attitude and practise score, were high knowledge, attitude and practise. There was significant relationship ( $P$  value < 0.05) between age, sex and educational level with knowledge, attitude and practise among medical students in all countries.

The research finding among medical students was good and with additional education, good monitoring and guiding the result will be higher.

## Acknowledgments

We are sincerely indebted to the support of our families and supervisors.

## Ethical Consideration

The participants were informed about details of the research and informed consent was obtained in the questionnaire. The responses were kept completely confidential and used only for the purpose of the research.

## Funding

This study was funded independently by the authors.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Ahari, S., Tazakori, Z., Habib zadeh, S., Yahyavi, O., Novrouzi, V., & Namadi Vosogh, M. (2012). Respecting Patients' Rights and Expectations' of Patients in Hospitals of Medical Sciences University of Ardabil in 2012. *Journal of Sabzevar University of Medical Sciences*, 22, 472-480.
- Bandman, L., & Bandman, B. (n.d.). *Nursing Ethics along Life*, (Vol. 1375, pp. 98-105). Bashari Publication.
- Council of Europe Treaty Office (n.d.). *Details of Treaty No. 005: Convention for the Protection of Human Rights and Fundamental Freedoms*. <http://conventions.coe.int/treaty/en/Treaties/Html/005.html>
- Dogas, D. (n.d.). *Principle of Patient Care, Comprehensive Overview on Nursing* (Vol. 1386, pp. 180-190). Investigation Assistance of Ministry of Health and Medical Education.
- Larijani, B., Ghafurifard, S., & Zahedi, F. (2005). Ethical Considerations in Clinical Medical Education. *Iranian Journal of Diabetes and Lipid*, 1383, 105-109.
- Lenin, D., & Giures, P. (1999). *Comparative Survey of Patients' Rights in European Countries* (pp. 72-76). Alhura Pub.
- Mastaneh, Z., & Mouseli, L. (2013). Patients' Awareness of Their Rights: Insight from a Developing Country. *International Journal of Health Policy and Management*, 1, 143-146. <https://doi.org/10.15171/ijhpm.2013.26>
- Mohamed, A. M., Ghanem, M. A., & Kassem, A. A. (2012). Knowledge, Perceptions and Practices towards Medical Ethics among Physician Residents of University of Alexandria Hospitals, Egypt. *Eastern Mediterranean Health Journal*, 18, 935-945. <https://doi.org/10.26719/2012.18.9.935>
- Olejarczyk, J. P., & Young, M. (2021). *Patient Rights and Ethics*. StatPearls Publishing, Treasure Island (FL).
- Parsapoor, A. R., Bagheri, A. R., & Larijani, B. (2009) Manshore hoghooghe bimar dar Iran. *Iranian Journal of Medical Ethics and History of Medicine*, 3, 39-47.
- Pourhoseingholi, M. A., Vahedi, M., & Rahimzadeh, M. (2013). Sample Size Calculation in Medical Studies. *Gastroenterology and Hepatology from Bed to Bench*, 6, 14-17.
- Shamsi, G. E., Parsapoor, A., Asghari, F., et al. (2020). Developing "Code of Ethics for Medical Professionals, Medical Council of Islamic Republic of Iran". *Archives of Iranian Medicine*, 23, 658-664. <https://doi.org/10.34172/aim.2020.83>
- Tabei, S., Azar, M., Mahmoodian, F., Mohammadi, N., Farhadpour, H., Ghahramani, Y., & Al-E-Yasin, Z. (2013). Investigation of the Awareness of the Students of Shiraz Dental School Concerning the Patients' Rights and the Principles of Ethics in Dentistry. *Journal of dentistry (Shiraz, Iran)*, 14, 20-24.
- World Health Organization-Europe, 1994 (1998). Declaration of the Promotion of Patient's Rights in Europe (Partim). *Acta Chirurgica Belgica*. 98, 23-25. <https://doi.org/10.1080/00015458.1998.12098373>

## Appendix

### Questionnaire

Multinational KAP Study: Patient Rights among Medical Students, 2023.

We are group of researcher from Sudan, Saudi Arabia, Egypt and Jordan. We confirm that all answers written in this questionnaire will be treated with confidentiality and only used for research purposes. Please answer the following questions regarding your knowledge, attitude and practice about patient rights. Please give as the true answers as possible as you can for the best research results, also keep in mind that this is not mandatory but your contribution is warmly appreciated.

1. Are you agree to participate in this study? I Agree \_\_\_\_\_
2. Sex: Male \_\_\_\_\_ Female \_\_\_\_\_
3. Educational level: First year \_\_\_\_\_ Second year \_\_\_\_\_ Third year \_\_\_\_\_  
Forth year \_\_\_\_\_ Fifth year \_\_\_\_\_ Sixth year \_\_\_\_\_

### A. Knowledge

What in your opinion of the following is a patient right?	Agree	Neutral	disagree
1-It is a patient right to be treated with respect, consideration, and dignity.			
2-It is a patient right to select the medical team taking care of him.			
3-To receive information from his medical provider concerning his illness, condition, treatment, including possible side effects, and plans for his care.			
4-To have his privacy respected.			
5-To agree to or refuse any health care service and to be informed of medical consequences of services refused			

### B. Attitude

If the patient asked:	yes	sometimes	no
6-To be transferred to another health facility, will you accept?			
7-For another doctor to treat him, will you accept?			
8-For full medical information about his illness, will you give them?			
9-To conceal vital information from other relatives and other health workers, will you accept?			
10-To not allow students to examine him or look at his medical record, will you see his medical record?			

### C. Practise

Do you:	Yes	Sometimes	No
11-Tell patients your full name and that you are a student?			
12-Tell patients their examination findings or diagnosis?			
13-Examine patients, males and females equally?			
14-If a different gender patient asked not to be examined by you, will you examine them anyway?			
15-Tell your friends about patients you saw at rounds?			

Thank you