

Knowledge about urology in the general population of Jeddah, Saudi Arabia

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Abstract

Introduction: The knowledge of the general population about the medical specialties is not well studied in our community. Our aim is to explore the amount of knowledge known about urology by the general population.

Materials and Methods: A questionnaire was completed by 154 respondents in Jeddah, Saudi Arabia. After measuring the amount of knowledge in our population, we looked forward to compare it with English as well as French speaking population in North America (NA). We translated to Arabic the same questionnaire used in their study. Two extra questions were added to further serve our aim.

Results: Of the 154 respondents, 66% (102) said that they know little or nothing about urology, and 43% (66) did not know that urology involves surgery. When asked to mention three diseases within the field of urology, only 37% (57) were able to do so. Fourteen percent (21) were unable to mention even one disease. When asked about naming modalities of treatment in urology, 67% (104) were able to mention one or more. The rest were unable to mention even one modality. Most of the wrong answers were related to mixing urology with anatomically related fields rather than pronunciation similarity. Most of the results were better when compared to the studies done in NA.

Conclusion: Although significant proportion of our population know little about the field of urology, the overall result is better when compared to North American population. The clarity of Arabic terminology related to the field may explain the difference.

Key Words: Disease, organs, treatment, urology

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INTRODUCTION

Urology is the branch of medicine and surgery involved with the study, diagnosis and treatment of diseases of the genito-urinary tract of the male and the urinary tract of the female.^[1] The knowledge about medical specialties is not well studied before in our community. The language of

the population and the clarity of terminologies used in that population may play a role in their ability to know about the medical specialties.

Our aim is to assess the knowledge of our population in the field of urology and also to compare our result with the western population in North America (NA).

MATERIALS AND METHODS

Our study included 154 respondents living in Jeddah, an Arabic speaking city in Saudi Arabia.

Data were collected through a written Arabic translated questionnaire, which was used in the study that on NA;^[2] the questionnaire [Figure I] contained three questions related to

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استبيان عن مدى المعرفة بتخصص المسالك البولية

➤ العمر

➤ هل يعالج هذا التخصص الرجال أم النساء أم كلاهما؟

➤ الجنس

➤ 1 ذكر

➤ 2 أنثى

➤ المدينة

➤ هل يعالج هذا التخصص الصغار أم الكبار أم كلاهما؟

➤ المستوى التعليمي

➤ ثانوي وما دون

➤ جامعي (تخصص غير طبي)

➤ جامعي تخصص طبي

➤ ما مدى معرفتك بتخصص المسالك البولية؟

➤ 1 لاشيء

➤ 2 القليل

➤ متوسط

➤ أعرف الكثير

➤ هل هو تخصص جراحي؟

➤ 1 نعم

➤ 2 لا

➤ 3 لا أعلم

➤ عدد ثلاث أعضاء من جسم الإنسان ضمن تخصص المسالك البولية:

➤ 1

➤ 2

➤ 3

➤ عدد ثلاث طرق علاجية في تخصص المسالك البولية

➤ 1

➤ 2

➤ 3

Figure 1: The Arabic version of the questionnaire

personal information, five questions related to urology and we added two more questions related to urology to serve our aim. [Tables I-5]

The questionnaires were distributed randomly to university students, school students and private company employees. The response rate was 77%. The participants completed the questionnaire without direct contact with the member of the research team. The responses were recorded and statistical analysis was done.

RESULTS

The mean age of the respondents was 28 years (SD+/-11.8) ranging from 12 to 85. Over half of the respondents (58%, n=90) were men and 49% (75) had high school education or less [Table I].

Of the 154 respondents, 66% (102) said that they know little or nothing about urology, 43% (66) did not know that urology involves surgery and about 90% knew that urology provides the service for both males and females and both adults and children [Table 2].

Also, when asked to mention three organs within the scope of urology, 58% (90) mentioned them. Only 7%(11) were

unable to do so. The most popular organs mentioned were bladder 34%, kidney 30% and ureter 27%. The wrong answers included bowel, anus and ovary [Tables 2 and 3].

In addition, when asked to mention three diseases within the field of urology, 37% (57) were able to do so. Fourteen percent (21) were unable to mention even one disease. The most popular disease included urinary tract infection 22%, renal failure

Table 1: The respondent's demographic data

| Location → | Jeddah, SA | Burlington, US | Sherbrooke, Ca |
|--------------------------|------------|----------------|----------------|
| Language | Arabic | English | French |
| Mean age (years) | 28 | 47 | 50 |
| Gender, % (no.) | | | |
| Male | 58 (90) | 49 (37) | 45(34) |
| Female | 42 (64) | 51 (38) | 55 (41) |
| Education level, % (no.) | | | |
| High school or less | 49(75) | 57 (43) | 51 (38) |

Table 2: The respondent's answer about their knowledge about urology

| Location → | Jeddah, SA | Burlington, US | Sherbrooke, Ca |
|--|------------|----------------|----------------|
| Does urology involve surgery? | | | |
| Yes | 57% (88) | 33% (25) | 40% (30) |
| No | 18% (27) | 31% (23) | 19% (14) |
| Don't know | 25% (39) | 36% (27) | 41% (31) |
| Is urology a discipline that treats men, women or both? | | | |
| Men | 4% (6) | 5% (4) | 7% (5) |
| Women | 2% (3) | 1% (1) | 3% (2) |
| Both | 90% (138) | 81% (61) | 81% (61) |
| Don't know | 5% (7) | 12% (9) | 9% (7) |
| Is urology a discipline that treats children, adults or both? | | | |
| Children | 0% (0) | | |
| Adults | 9% (13) | | |
| Both | 86% (133) | | |
| Don't know | 5% (8) | | |
| Write the name of three organs concerned by urology | | | |
| Zero answers | 7% (11) | 35% (26) | 43% (32) |
| One answer | 8% (12) | 15% (11) | 13% (10) |
| Two answers | 27% (41) | 29% (22) | 20% (15) |
| Three answers | 58% (90) | 21% (16) | 24% (18) |
| Write the name of three diseases concerned by urology | | | |
| Zero answers | 14% (21) | 57% (43) | 61% (46) |
| One answer | 19%(29) | 24% (18) | 13% (10) |
| Two answers | 30% (47) | 15% (11) | 16% (12) |
| Three answers | 37% (57) | 4% (3) | 9% (7) |
| Write the name of three modality of treatment concerned by urology | | | |
| Zero answers | 33% (50) | | |
| One answer | 20% (31) | | |
| Two answers | 25% (39) | | |
| Three answers | 22% (34) | | |

Table 3: Organs concerned by urology

| Our results | | Ganon <i>et al.</i> results | |
|----------------|----------|-----------------------------|---------|
| Correct answer | % (No.) | Correct answer | % (No.) |
| Bladder | 34 (120) | Bladder | 44 (66) |
| Kidney | 30 (105) | Kidney | 34 (51) |
| Ureter | 27 (96) | Urethra | 17 (26) |
| Penis | 5 (17) | | |
| Urethra | 3 (9) | | |
| Testes | 3 (8) | | |
| Prostate | 2 (5) | | |
| Wrong answers | No. | Wrong answers | No. |
| Bowel | 9 | Brain | 6 |
| Anus | 5 | Bowel | 5 |
| Ovary | 3 | Heart | 5 |
| Pubis | 2 | Uterus | 5 |
| Vagina | 1 | Vagina | 5 |
| Pelvis | 1 | Liver | 3 |
| Stomach | 1 | Stomach | 3 |
| Liver | 1 | Lungs | 2 |
| Appendix | 1 | Spleen | 2 |
| | | Spinal cord | 1 |

Table 4: Diseases concerned by urology

| Our results | | Ganon <i>et al.</i> results | |
|-------------------------|---------|-----------------------------|---------|
| Correct answer | % (No.) | Correct answer | % (No.) |
| Urinary tract infection | 22 (60) | Prostate cancer | 17(25) |
| Renal failure | 19 (54) | Urinary tract infection | 14 (21) |
| Stones disease | 19 (54) | Bladder cancer | 7 (10) |
| Dysurea | 10 (28) | Urinary incontinence | 7 (10) |
| Urinary incontinence | 7 (18) | | |
| Wrong answers | No. | Wrong answers | No. |
| Hemorrhoids | 11 | Diabetes | 5 |
| Gynecological disease | 4 | Alzheimer's disease | 2 |
| Phenylketonurea | 4 | Vaginitis | 2 |
| Irregular bowel motion | 3 | Parkinson's disease | 1 |
| Atherosclerosis | 3 | Skull fracture | 1 |
| Phenyleketonurea | 3 | | |
| Diabetes milletus | 3 | | |

Table 5: Modality of treatment concerned by urology

| Correct answers | Wrong answers |
|-------------------|-----------------|
| Conservative | Dialysis |
| 73 | 13 |
| Hydration | Herbal medicine |
| 55 | 7 |
| Regular urination | Psychotherapy |
| 7 | 1 |
| Diet control | Fleet enema |
| 11 | 1 |
| Medication | |
| 35 | |
| Surgery | |
| 34 | |
| Endoscopy | |
| 24 | |
| Lithotripsy | |
| 9 | |
| Transplant | |
| 7 | |
| Consultation | |
| 7 | |
| Laser | |
| 2 | |

19% and stones disease 19%. The wrong answers included hemorrhoids and gynecological disease [Tables 2 and 4].

Most of the wrong answers were related to mixing urology with nephrology, gastroenterology, general surgery and obstetrics and gynecology.

Overall, our group showed better knowledge about the field of urology when compared with Sherbrook and Burlington group.

DISCUSSION

The mean age of our group was lower than that of the North American groups. Otherwise, there was no significant demographic difference. The mean age of the population in our country is lower than that in NA.^[3]

Although there is a difference in the level of education of the population in our country and that in NA,^[4] the education level in our respondents was comparable with that of the NA study. That might reflect the difference in the educational level of our population at different part of our country.

The difference noticed between our group and the North American groups in the previous study may suggest that the language and cultures may play an important role. None of our respondent mixed between urology and neurology. On the other hand, the North American study showed that the respondents were mixing between urology and neurology.

The results demonstrate good knowledge about the organs, disease and modality of treatment within the realm of urology among our population. The main observation is that only 15% of said that they know nothing about urology and 57% knew that urology involves surgery [Figure 2 and Table 2].

Although our study showed acceptable knowledge of our general population about the field of urology, they showed better results than that in NA. Only 7% (11) of our group were unable to mention three organs within the scope of urology. On the other hand, 43% (32) and 35% (26) in a French speaking city and in an English speaking city respectively were not able to do so.

There are several respondents in our group who mixed the urology services with the services which are covered by other specialties. That may be due to the anatomical relationship. Most of the wrong answers were related to mixing urology with nephrology, gastroenterology, general surgery and obstetrics and gynecology. The same was noticed also in the North American study.

There was no noticed difference in the answers of our respondents when they were classified according to their education level [Table 6]. Only two of our responders were from the paramedical field and the results would not affect the statistics. The rest of our respondents were from the non-medical field. The relation between the knowledge of the population and their educational level needs further evaluation.

The population knowledge about the diseases might be affected by the prevalence of that disease within the population. Our

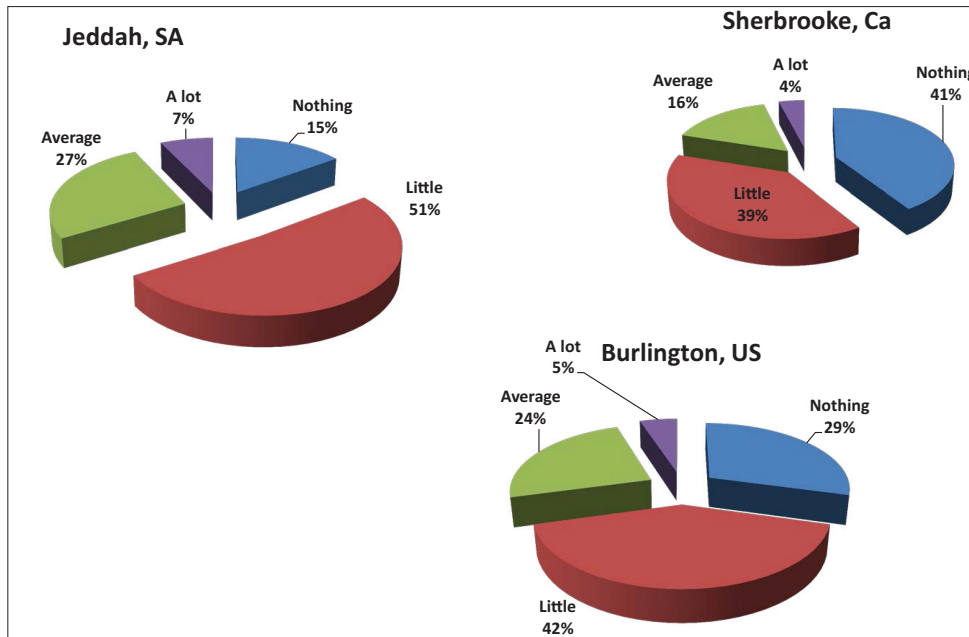


Figure 2: How much does the respondent consider themselves knowing about urology?

Table 6: The difference between our respondents' answers according to their education level

| Level of education | Secondary school or lower | Higher than secondary school |
|--|---------------------------|------------------------------|
| Does urology involve surgery? | | |
| Yes | 60% (45) | 54% (43) |
| No | 15% (11) | 23% (13) |
| Don't know | 25% (19) | 23% (13) |
| Is urology a discipline that treats men, women or both? | | |
| Men | 3% (2) | 5% (4) |
| Women | 4% (3) | 0% (0) |
| Both | 85% (64) | 93% (74) |
| Don't know | 8% (6) | 2% (1) |
| Is urology a discipline that treats children, adults or both? | | |
| Children | 0% (0) | 0% (0) |
| Adults | 12% (9) | 3% (2) |
| Both | 80% (60) | 94% (75) |
| Don't know | 8% (6) | 3% (2) |
| Write the name of three organs concerned by urology | | |
| 0 answers | 3% (2) | 7% (6) |
| 1 answer | 6% (4) | 7% (6) |
| 2 answers | 25% (19) | 24% (18) |
| 3 answers | 66% (50) | 62% (49) |
| Write the name of three diseases concerned by urology | | |
| 0 answers | 15% (12) | 12% (9) |
| 1 answer | 15% (12) | 12% (9) |
| 2 answers | 35% (25) | 28% (23) |
| 3 answers | 35% (26) | 48% (38) |
| Write the name of three modality of treatment concerned by urology | | |
| 0 answers | 34% (26) | 32% (25) |
| 1 answer | 26% (20) | 31% (25) |
| 2 answers | 32% (24) | 30% (24) |
| 3 answers | 8% (5) | 7% (5) |

respondents mentioned stone disease more than the North American groups. On the other hand, the North American groups mentioned more prostate cancer than ours. The prevalence of stone disease is higher in our population than the west while we have lower prevalence of prostate cancer than the west.^[5-7]

The knowledge of the general population about the medical specialty is an important factor in the patient-physician communication. In addition, it plays an important role in disease prevention and compliance to treatment strategies, and the effect of health education via media, internet and journals might be beneficial.

The limitation of our study includes a small sample size (154), selection bias and the questionnaire include an open ended question.

CONCLUSION

Although significant proportion of our population know little about the field of urology, the overall result is better when compared to North American population. The language of the population and the description of the medical terminology might play an important role in the population knowledge about the medical specialty.

Anatomical and physiological relationship between urology and different specialties may cause some confusion and misperception about the field.

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