

**Supplementary Table 1. List of the included universities in the study.**

Universities
<ul style="list-style-type: none"><li>• Cairo University</li><li>• Ain Shams University</li><li>• Al Azhar Cairo University</li><li>• Helwan University</li><li>• Minya University</li><li>• Al Azhar Assiut University</li><li>• Assiut University</li><li>• Sohag University</li><li>• South Valley University</li><li>• Aswan University</li><li>• Alexandria University</li><li>• Benha University</li><li>• Tanta University</li><li>• Al Azhar Damietta University</li><li>• Mansoura University</li><li>• Menofia University</li><li>• Suez Canal University</li><li>• Kafr El Sheikh University</li><li>• Zagazig University</li><li>• Fayoum University</li><li>• Port said University</li></ul>

## Supplementary Table 2. Knowledge, attitude, and practice questionnaire

### Knowledge Domain (Correct answers are **underlined in Bold**)

#### 1- Pharyngitis

##### 1| Etiology

1. **What contributes to pharyngitis more frequently?**  
Bacteria – **Viral** – Both contribute equally – I don't know.
2. **Which of the following is the most common cause of bacterial pharyngitis?**  
**GAS** – Pneumococci – Staph aureus – Neisseria meningitidis – Haemophiles influenzae – I don't know.
3. **What is the most common method by which bacterial pharyngitis is transmitted?**  
**Droplets** – Aerosol – Direct contact with skin lesions – All of them – I don't know.
4. **What is the most common age group affected with bacterial pharyngitis?**  
(<5) – **(5 to 15)** – (16 to 44) – (>44) – I don't know.

##### 2| Diagnosis

5. **Does the presence of rhinorrhea more commonly suggest bacterial or viral pharyngitis?**  
Bacterial – **Viral** – Both equally – I don't know.
6. **Does the presence of tonsillitis more commonly suggest bacterial or viral pharyngitis?**  
Bacterial – **Viral** – Both equally – I don't know.
7. **Does the presence of conjunctivitis more commonly suggest bacterial or viral pharyngitis?**  
**Bacterial** – Viral – Both equally – I don't know.
8. **Does the presence of cough more commonly suggest bacterial or viral pharyngitis?**  
Bacterial – **Viral** – Both equally – I don't know.
9. **Does the presence of exudate with pharyngitis more commonly suggest bacterial or viral pharyngitis?**  
**Bacterial** – Viral – Both equally – I don't know.
10. **Do patients with bacterial pharyngitis most commonly present with fever?**  
**Yes** – No – Maybe or maybe not – I don't know.
11. **Do patients with bacterial pharyngitis most commonly present with cervical lymphadenopathy?**  
Yes – No – **Maybe or maybe not** – I don't know.
12. **Which technique is recommended initially for the diagnosis of clinically suspected bacterial pharyngitis?**  
**Rapid antigen test** – Throat culture – Gram stain – Bacterial anti-body titer – Antibiotic testing – PCR –  
I don't know.

13. If the initial diagnostic test for suspected bacterial pharyngitis was negative in a child with pharyngitis, what is the next step in management?

Confirm by another test – Start antibiotics – Conservative management – I don't know.

14. If the initial test for suspected bacterial pharyngitis was positive in a child with pharyngitis, what is the next step in management?

Confirm by another test – Start antibiotics – Conservative management – I don't know.

### 3| Management

15. What is the drug of choice for the treatment of bacterial pharyngitis?

Penicillin – Cephalosporins – Azithromycin – Clindamycin – I don't know.

16. What is the drug of choice for the treatment of allergic patients to first-line treatment?

Penicillin – Cephalosporins – Azithromycin – Clindamycin – I don't know.

17. What is the recommended duration of antibiotic therapy for bacterial pharyngitis?

3 days – 5 days – 7 days – 10 days – I don't know.

## 2- Acute rheumatic fever

### 1| Etiology

1. What is the primary bacterial infection that led eventually to acute rheumatic fever?

Pharyngitis – Skin infection – Both can contribute – Neither of them contributes – I don't know.

2. When does acute rheumatic fever usually develop following the primary infection?

(<1) week – (1-5) weeks – (6-12) weeks – (3-6) months – (6-12) months – (>1) year – I don't know.

3. Which age group is most affected by acute rheumatic fever?

(<3) – (3 to 14) – (15 to 44) – (>44) – I don't know.

4. Can acute rheumatic fever turn into a chronic disease?

Yes – No – I don't know.

### 2| Diagnosis

5. Which of the following are considered major symptoms for diagnosing acute rheumatic fever?

(CHECK-BOXES)

- Polyarthritis
- Polyarthralgia
- Monoarthritis
- Monoarthralgia

- Pericarditis

- Myocarditis

- Endocarditis

- Valve regurgitation

- Valve stenosis

- Subcutaneous nodules

- Bilateral painful shin (knee) nodules

- Annular non-pruritic transient rash

- Diffuse maculopapular rash
- **Jerky involuntary movements of limbs**
- Ataxia

6. **Is the diagnosis of acute rheumatic fever supported by increased ESR/CRP?**

**Yes** – No – I don't know

7. **Is the diagnosis of acute rheumatic fever supported by the presence of fever?**

**Yes** – No – I don't know

8. **Is laboratory evidence of previous bacterial infection required for a diagnosis of acute rheumatic fever?**

**Yes** – No – I don't know

9. **In evidence of previous bacterial infection, how many criteria (major or minor) should be present for the diagnosis of acute rheumatic fever?**

- (1 major alone) or (2 minors alone)
- **(2 majors alone) or (1 major + 2 minors)**
- (3 majors alone) or (2 majors + 1 minor)
- (1 major + 1 minor) or (3 minors alone)
- I don't know.

### **3| Management**

10. **Is acute rheumatic fever preventable by adequate antibiotic therapy for the primary bacterial infection?**

**Yes** – No – I don't know.

11. **Should antibiotics be used during the management of acute rheumatic fever in the absence of active bacterial infection?**

**Always** – Only in certain cases – No – I don't know.

### **Attitude Domain**

**Answer choices for all questions are:** Strongly agree – Agree – Not sure – Disagree – Strongly disagree.

**Questions with (R): reverse coding**

#### **1- Perception of neglect**

1. Sore throat is usually neglected by patients in Egypt.
2. Patients in Egypt with bacterial pharyngitis would complete the full course of antibiotics recommended by their primary healthcare physician. **(R)**
3. Acute rheumatic fever and rheumatic heart diseases are underreported in Egypt. **(R)**
4. Acute rheumatic fever is diagnosed early in Egypt.

#### **2- Perception of barriers**

5. Teaching about acute rheumatic fever and rheumatic heart disease in Egyptian medical schools is sufficient and actively contributes to decreasing the prevalence of the disease.
6. Low socioeconomic status is a risk factor for the development of acute rheumatic fever. **(R)**

7. Current guidelines are adequate for accurate diagnosis of pharyngitis. **(R)**
8. Current guidelines are adequate for accurate diagnosis of acute rheumatic fever. **(R)**
9. Current research on acute rheumatic fever/rheumatic heart disease in Egypt is satisfactory and actively eradicating the problem. **(R)**
10. Specialists' contribution to public health awareness about rheumatic fever/rheumatic heart disease in Egypt is satisfactory and actively eradicates the problem. **(R)**
11. Government funding for public health awareness about rheumatic fever/rheumatic heart disease in Egypt is satisfactory and actively eradicates the problem. **(R)**
12. Price is an important contributing barrier to patients' compliance with acute pharyngitis/acute rheumatic fever treatments.
13. Availability of medications is an important contributing barrier to patients' compliance with acute pharyngitis/acute rheumatic fever treatments.
14. Cultural misconceptions about the disease or treatment's importance are important contributing barriers to patients' compliance with acute pharyngitis/acute rheumatic fever treatments.
15. Lack of adequate education about the disease or treatment importance is an important contributing barrier to patients' compliance with acute pharyngitis/acute rheumatic fever treatments.

### **Practice Domain**

Answer choices for all questions are: Always – Often – Sometimes – Less likely to – Never.

Questions with **(R)**: reverse coding

1. Would you seek medical advice if you had an episode of a sore throat?
2. Would you ask anyone with a sore throat to visit a doctor?
3. Would you ask a patient with a sore throat to take a home prescription directly? **(R)**
4. Would you prescribe empiric antibiotics to a patient with pharyngitis before confirming it is of bacterial origin? **(R)**
5. Would you recommend Echocardiography with Doppler for all cases of suspected acute rheumatic fever before confirmation?
6. Would you recommend Echocardiography with Doppler for all cases of confirmed acute rheumatic fever even with no evidence of carditis?
7. How likely are you to admit a patient with suspected acute rheumatic fever to the hospital?
8. How often do you educate your patients about rheumatic fever and its complications?
9. How often do you educate your patients about the importance of home measures like self-hygiene in the prevention of sore throat?
10. Regarding antibiotic administration, how likely are you to administer antibiotics orally? **(R)**
11. Regarding antibiotic administration, how likely are you to administer antibiotics parenterally?
12. How likely are you to follow up with your patients until you make sure they complete their antibiotic course?
13. How likely are you to advocate for the establishment of a rheumatic heart disease registry in Egypt?
14. How likely are you to participate in a research project on acute rheumatic fever/rheumatic heart disease?

**Supplementary Table 3. Responses of the participants to the knowledge questions**

<b>Knowledge about pharyngitis</b>	<b>N (%) (N= 629)</b>
<p><b>1- What contributes to pharyngitis more frequently?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Bacteria</li> <li><input type="radio"/> Viral</li> <li><input type="radio"/> Both contribute equally.</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>213 (33.9%) 342 (54.4%) 64 (10.2%) 10 (1.5%)</p>
<p><b>2- Which of the following is the most common cause of bacterial pharyngitis?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Group A streptococcus</li> <li><input type="radio"/> Staph aureus</li> <li><input type="radio"/> Streptococcus pneumonia</li> <li><input type="radio"/> Haemophiles influenzae</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>466 (74.1%) 84 (13.4%) 42 (6.7 %) 11 (1.7 %) 26 (4.1%)</p>
<p><b>3- What is the most common method by which bacterial pharyngitis is transmitted?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Droplets</li> <li><input type="radio"/> Aerosol</li> <li><input type="radio"/> Direct contact with skin lesions</li> <li><input type="radio"/> All of them</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>440 (70%) 45 (7.2%) 13 (2.1%) 116 (18.4%) 15 (2.3%)</p>
<p><b>4- What is the most common age group affected with bacterial pharyngitis?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> &lt;5</li> <li><input type="radio"/> 5-15</li> <li><input type="radio"/> 16-44</li> <li><input type="radio"/> &gt;44</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>127 (20.2%) 444 (70.6%) 20 (3.2%) 3 (0.5%) 35 (5.5%)</p>
<p><b>5- Does the presence of rhinorrhea more commonly suggest bacterial or viral pharyngitis?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Bacterial</li> <li><input type="radio"/> Viral</li> <li><input type="radio"/> Both equally</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>29 (4.6%) 508 (80.8%) 67 (10.7%) 25 (3.9%)</p>
<p><b>6- Does the presence of tonsillitis more commonly suggest bacterial or viral pharyngitis?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Bacterial</li> </ul>	<p>420 (66.8%)</p>

<ul style="list-style-type: none"> <li>○ Viral</li> <li>○ Both equally</li> <li>○ I don't know.</li> </ul>	<p>87 (13.8%)</p> <p>104 (16.5%)</p> <p>18 (2.9%)</p>
<p><b>7- Does the presence of conjunctivitis more commonly suggest bacterial or viral pharyngitis?</b></p> <ul style="list-style-type: none"> <li>○ Bacterial</li> <li>○ Viral</li> <li>○ Both equally</li> <li>○ I don't know.</li> </ul>	<p>74 (11.8%)</p> <p>430 (68.4%)</p> <p>65 (10.3%)</p> <p>60 (9.5%)</p>
<p><b>8- Does the presence of cough more commonly suggest bacterial or viral pharyngitis?</b></p> <ul style="list-style-type: none"> <li>○ Bacterial</li> <li>○ Viral</li> <li>○ Both equally</li> <li>○ I don't know.</li> </ul>	<p>116 (18.4%)</p> <p>252 (40.1%)</p> <p>219 (34.8%)</p> <p>42 (6.7%)</p>
<p><b>9- Does the presence of exudate with pharyngitis more commonly suggest bacterial or viral pharyngitis?</b></p> <ul style="list-style-type: none"> <li>○ Bacterial</li> <li>○ Viral</li> <li>○ Both equally</li> <li>○ I don't know.</li> </ul>	<p>517 (82.2%)</p> <p>42 (6.7%)</p> <p>61 (9.7%)</p> <p>9 (1.4%)</p>
<p><b>10- Do patients with bacterial pharyngitis most commonly present with fever?</b></p> <ul style="list-style-type: none"> <li>○ Yes</li> <li>○ No</li> <li>○ Maybe or maybe not</li> <li>○ I don't know.</li> </ul>	<p>490 (77.9%)</p> <p>15 (2.4%)</p> <p>109 (17.3%)</p> <p>15 (2.4%)</p>
<p><b>11- Do patients with bacterial pharyngitis most commonly present with cervical lymphadenopathy?</b></p> <ul style="list-style-type: none"> <li>○ Yes</li> <li>○ No</li> <li>○ Maybe or maybe not</li> <li>○ I don't know.</li> </ul>	<p>298 (47.4%)</p> <p>55 (8.7%)</p> <p>246 (39.1%)</p> <p>30 (4.8%)</p>
<p><b>12- Which diagnostic test is recommended initially for diagnosis of a clinically suspected bacterial pharyngitis?</b></p> <ul style="list-style-type: none"> <li>○ Rapid antigen test</li> <li>○ Throat culture</li> </ul>	<p>139 (22.1%)</p> <p>248 (39.4%)</p> <p>49 (7.8%)</p>

<ul style="list-style-type: none"> <li>○ Gram stain</li> <li>○ Bacterial anti-body titer</li> <li>○ Antibiotic testing</li> <li>○ PCR</li> <li>○ I don't know.</li> </ul>	<p>79 (12.6%)</p> <p>30 (4.8%)</p> <p>8 (1.3%)</p> <p>76 (12%)</p>
<p><b>13- If the initial diagnostic test for a suspected bacterial pharyngitis was negative in a child with pharyngitis, what is the next step in management?</b></p> <ul style="list-style-type: none"> <li>○ Confirm by another test.</li> <li>○ Start antibiotics.</li> <li>○ Conservative management</li> <li>○ I don't know.</li> </ul>	<p>211 (33.5%)</p> <p>79 (12.6%)</p> <p>298 (47.4%)</p> <p>41 (6.5%)</p>
<p><b>14- If the initial test for a suspected bacterial pharyngitis was positive in a child with pharyngitis, what is the next step in management?</b></p> <ul style="list-style-type: none"> <li>○ Confirm by another test.</li> <li>○ Start antibiotics.</li> <li>○ Conservative management</li> <li>○ I don't know.</li> </ul>	<p>43 (6.8%)</p> <p>547 (87%)</p> <p>19 (3%)</p> <p>20 (3.2%)</p>
<p><b>15- What is the drug of choice for the treatment of bacterial pharyngitis?</b></p> <ul style="list-style-type: none"> <li>○ Penicillin</li> <li>○ Cephalosporins</li> <li>○ Azithromycin</li> <li>○ Clindamycin</li> <li>○ I don't know.</li> </ul>	<p>527 (83.8%)</p> <p>49 (7.8%)</p> <p>23 (3.7%)</p> <p>7 (1.1%)</p> <p>23 (3.6%)</p>
<p><b>16- What is the drug of choice for the treatment of allergic patients to first line treatment?</b></p> <ul style="list-style-type: none"> <li>○ Penicillin</li> <li>○ Cephalosporins</li> <li>○ Azithromycin</li> <li>○ Clindamycin</li> <li>○ I don't know.</li> </ul>	<p>27 (4.3%)</p> <p>153 (24.3%)</p> <p>325 (51.7%)</p> <p>68 (10.8%)</p> <p>56 (8.9%)</p>
<p><b>17- What is the recommended duration of antibiotic therapy for bacterial pharyngitis?</b></p> <ul style="list-style-type: none"> <li>○ 1-3 days</li> <li>○ 3-5 days</li> <li>○ 5-7 days</li> <li>○ 10 days</li> <li>○ I don't know.</li> </ul>	<p>12 (1.9%)</p> <p>67 (10.7%)</p> <p>341 (54.2%)</p> <p>186 (29.6%)</p> <p>23 (3.6%)</p>



Knowledge about ARF	N (%) (N= 629)
<p><b>1- What is the primary bacterial infection that led eventually to acute rheumatic fever?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Pharyngitis</li> <li><input type="radio"/> Skin infection</li> <li><input type="radio"/> Both can contribute.</li> <li><input type="radio"/> Neither of them contributes</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>396 (63%)</p> <p>10 (1.6%)</p> <p>198 (31.5%)</p> <p>9 (1.4%)</p> <p>16 (2.5%)</p>
<p><b>2- When does acute rheumatic fever usually develop following the primary infection?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> (&lt;1) week</li> <li><input type="radio"/> (1-5) weeks</li> <li><input type="radio"/> (6-12) weeks</li> <li><input type="radio"/> (3-6) months</li> <li><input type="radio"/> (6-12) months</li> <li><input type="radio"/> (&gt;1) year</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>25 (4%)</p> <p>339 (53.9%)</p> <p>91 (14.5%)</p> <p>32 (5.1%)</p> <p>19 (3%)</p> <p>10 (1.6%)</p> <p>113 (17.9%)</p>
<p><b>3- Which age group is most affected by acute rheumatic fever?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> (&lt;3)</li> <li><input type="radio"/> (3-14)</li> <li><input type="radio"/> (15-44)</li> <li><input type="radio"/> (&gt;44)</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>28 (4.5%)</p> <p>513 (81.5%)</p> <p>63 (10%)</p> <p>3 (0.5%)</p> <p>22 (3.5%)</p>
<p><b>4- Can acute rheumatic fever turn into a chronic disease?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Yes</li> <li><input type="radio"/> No</li> <li><input type="radio"/> I don't know.</li> </ul>	<p>564 (89.7%)</p> <p>28 (4.5%)</p> <p>37 (5.8%)</p>
<p><b>5- Which of the following symptoms are considered major symptoms for the diagnosis of acute rheumatic fever? (CHECK-BOX)</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Polyarthritis</li> <li><input type="checkbox"/> Polyarthralgia</li> <li><input type="checkbox"/> Monoarthritis</li> <li><input type="checkbox"/> Monarthralgia</li> <li><input type="checkbox"/> Pericarditis</li> <li><input type="checkbox"/> Myocarditis</li> <li><input type="checkbox"/> Endocarditis</li> </ul>	<p>511 (81.2%)</p> <p>138 (21.9%)</p> <p>103 (16.4%)</p> <p>16 (2.5%)</p> <p>355 (56.4%)</p> <p>394 (62.6%)</p> <p>443 (70.4%)</p>

<ul style="list-style-type: none"> <li>○ Valve regurgitation</li> <li>○ Valve stenosis</li> <li>○ Subcutaneous nodules</li> <li>○ Bilateral painful shin (knee) nodules</li> <li>○ Annular non-pruritic transient rash</li> <li>○ Diffuse maculopapular rash.</li> <li>○ Jerky involuntary movements of limbs</li> <li>○ Ataxia</li> </ul>	<p>183 (29.1%)</p> <p>114 (18.1%)</p> <p>424 (67.4%)</p> <p>116 (18.4%)</p> <p>135 (21.5%)</p> <p>136 (21.6%)</p> <p>301 (47.9%)</p> <p>127 (20.2%)</p>
<p><b>6- Is diagnosis of acute rheumatic fever supported by increased ESR/CRP?</b></p> <ul style="list-style-type: none"> <li>○ Yes</li> <li>○ no</li> <li>○ I don't know.</li> </ul>	<p>558 (88.7%)</p> <p>49 (7.8%)</p> <p>22 (3.5%)</p>
<p><b>7- Is diagnosis of acute rheumatic fever supported by the presence of fever?</b></p> <ul style="list-style-type: none"> <li>○ Yes</li> <li>○ No</li> <li>○ I don't know.</li> </ul>	<p>496 (78.9%)</p> <p>96 (15.3%)</p> <p>37 (5.8%)</p>
<p><b>8- Is laboratory evidence of previous bacterial infection required for a diagnosis of acute rheumatic fever?</b></p> <ul style="list-style-type: none"> <li>○ Yes</li> <li>○ No</li> <li>○ I don't know.</li> </ul>	<p>419 (66.6%)</p> <p>140 (22.3%)</p> <p>70 (11.1%)</p>
<p><b>9- In evidence of previous bacterial infection, how many criteria (major or minor) should be present for diagnosis of acute rheumatic fever?</b></p> <ul style="list-style-type: none"> <li>○ (1 major alone) or (2 minors alone)</li> <li>○ (2 majors alone) or (1 major + 2 minors)</li> <li>○ (3 majors alone) or (2 majors + 1 minor)</li> <li>○ (1 major + 1 minor) or (3 minors alone)</li> <li>○ I don't know.</li> </ul>	<p>72 (11.4%)</p> <p>448 (71.2%)</p> <p>43 (6.8%)</p> <p>35 (5.6%)</p> <p>31 (5%)</p>
<p><b>10- Is acute rheumatic fever preventable by adequate antibiotic therapy to the primary bacterial infection?</b></p> <ul style="list-style-type: none"> <li>○ Yes</li> <li>○ No</li> <li>○ I don't know.</li> </ul>	<p>536 (85.2%)</p> <p>56 (8.9%)</p> <p>37 (5.9%)</p>

<b>11- Should antibiotics be used during the management of acute rheumatic fever in the absence of active bacterial infection?</b>	
○ Always	220 (35%)
○ Only in certain cases	227 (36.1%)
○ No	95 (15.1%)
○ I don't know.	87 (13.8%)

**Supplementary Table 4. Participants' responses to the attitude questions (N= 629)**

<p><b>1- Sore throat is usually neglected by patients in Egypt.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>190 (30.2%) 306 (48.7%) 44 (7%) 78 (12.4%) 11 (1.7%)</p>
<p><b>2- Patients in Egypt with bacterial pharyngitis would complete the full course of antibiotics recommended by their primary health care physician.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>105 (16.7%) 124 (19.7%) 143 (22.7%) 183 (29.1%) 74 (11.8%)</p>
<p><b>3- Acute rheumatic fever is diagnosed early in Egypt.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>20 (3.2%) 103 (16.4%) 212 (33.7%) 260 (41.3%) 34 (5.4%)</p>
<p><b>4- Acute rheumatic fever and rheumatic heart diseases are underreported in Egypt.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>125 (19.9%) 289 (45.9%) 149 (23.7%) 57 (9.1%) 9 (1.4%)</p>
<p><b>5- Low socioeconomic status is a risk factor for the development of acute rheumatic fever.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>278 (44.2%) 288 (45.8%) 50 (7.9%) 12 (1.9%) 1 (0.2%)</p>
<p><b>6- Teaching about acute rheumatic fever and rheumatic heart disease in Egyptian medical schools is sufficient and actively contributing to decrease the prevalence of the disease.</b></p>	

<ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>95 (15.1%)</p> <p>242 (38.5%)</p> <p>139 (22.1%)</p> <p>136 (21.6%)</p> <p>17 (2.7%)</p>
<p><b>7- Current guidelines are adequate for accurate diagnosis of pharyngitis.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>66 (10.5%)</p> <p>304 (48.3%)</p> <p>185 (29.4%)</p> <p>58 (9.2%)</p> <p>16 (2.6%)</p>
<p><b>8- Current guidelines are adequate for accurate diagnosis of acute rheumatic fever.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>77 (12.2%)</p> <p>329 (52.3%)</p> <p>169 (26.9%)</p> <p>43 (6.8%)</p> <p>11 (1.8%)</p>
<p><b>9- Current research on acute rheumatic fever/rheumatic heart disease in Egypt is satisfactory and actively eradicating the problem.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>36 (5.7%)</p> <p>162 (25.8%)</p> <p>272 (43.2%)</p> <p>140 (22.3%)</p> <p>19 (3%)</p>
<p><b>10- Specialists' contribution to public health awareness about rheumatic fever/rheumatic heart disease in Egypt is satisfactory and actively eradicating the problem.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>35 (5.6%)</p> <p>196 (31.2%)</p> <p>226 (35.9%)</p> <p>151 (24%)</p> <p>21 (3.3%)</p>
<p><b>11- Government funding for public health awareness about rheumatic fever/rheumatic heart disease in Egypt is satisfactory and actively eradicating the problem.</b></p>	

<ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>36 (5.7%)</p> <p>141 (22.4%)</p> <p>220 (35%)</p> <p>185 (29.4%)</p> <p>47 (7.5%)</p>
<p><b>12- Price is an important contributing barrier to patients' compliance with acute pharyngitis/acute rheumatic fever treatments.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>168 (26.7%)</p> <p>330 (52.5%)</p> <p>89 (14.1%)</p> <p>35 (5.6%)</p> <p>7 (1.1%)</p>
<p><b>13- Availability of medications is an important contributing barrier to patients' compliance with acute pharyngitis/acute rheumatic fever treatments.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>145 (23%)</p> <p>319 (50.7%)</p> <p>88 (14%)</p> <p>69 (11%)</p> <p>8 (1.3%)</p>
<p><b>14- Cultural misconceptions about the disease or treatment importance are important contributing barriers to patients' compliance with acute pharyngitis/acute rheumatic fever treatments.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>151 (24%)</p> <p>349 (55.5%)</p> <p>109 (17.3%)</p> <p>17 (2.7%)</p> <p>3 (0.5%)</p>
<p><b>15- Lack of adequate education about the disease or treatment importance is an important contributing barrier to patients' compliance with acute pharyngitis/acute rheumatic fever treatments.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Strongly agree.</li> <li><input type="radio"/> Agree</li> <li><input type="radio"/> Not sure</li> <li><input type="radio"/> Disagree</li> <li><input type="radio"/> Strongly disagree.</li> </ul>	<p>194 (30.9%)</p> <p>343 (54.5%)</p> <p>76 (12.1%)</p> <p>14 (2.2%)</p> <p>2 (0.3%)</p>

**Supplementary Table 5. Participants' responses to the practice questions (N= 629)**

<p><b>1- Would you seek medical advice if you had an episode of sore throat?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Always</li> <li><input type="radio"/> Often</li> <li><input type="radio"/> Sometimes</li> <li><input type="radio"/> Less likely to</li> <li><input type="radio"/> Never.</li> </ul>	<p>89 (14.2%) 178 (28.3%) 182 (28.9%) 143 (22.7%) 37 (5.9%)</p>
<p><b>2- Would you ask anyone with a sore throat to visit a doctor?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Always</li> <li><input type="radio"/> Often</li> <li><input type="radio"/> Sometimes</li> <li><input type="radio"/> Less likely to</li> <li><input type="radio"/> Never.</li> </ul>	<p>137 (21.8%) 214 (34%) 171 (27.2%) 96 (15.3%) 11 (1.7%)</p>
<p><b>3- Would you ask a patient with a sore throat to take a home prescription directly?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Always</li> <li><input type="radio"/> Often</li> <li><input type="radio"/> Sometimes</li> <li><input type="radio"/> Less likely to</li> <li><input type="radio"/> Never.</li> </ul>	<p>82 (13%) 208 (33.1%) 200 (31.8%) 93 (14.8%) 46 (7.3%)</p>
<p><b>4- Would you prescribe empiric antibiotics to a patient with pharyngitis before confirming it is of bacterial origin?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Always</li> <li><input type="radio"/> Often</li> <li><input type="radio"/> Sometimes</li> <li><input type="radio"/> Less likely to</li> <li><input type="radio"/> Never.</li> </ul>	<p>56 (8.9%) 162 (25.8%) 169 (26.9%) 126 (20%) 116 (18.4%)</p>
<p><b>5- Would you recommend Echocardiography with Doppler for all cases of suspected acute rheumatic fever before confirmation?</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Always</li> <li><input type="radio"/> Often</li> <li><input type="radio"/> Sometimes</li> </ul>	<p>121 (19.2%) 181 (28.8%) 138 (21.9%)</p>

<input type="radio"/> Less likely to <input type="radio"/> Never.	144 (22.9%) 45 (7.2%)
<b>6- Would you recommend Echocardiography with Doppler for all cases of confirmed acute rheumatic fever even with no evidence of carditis?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Less likely to <input type="radio"/> Never.	221 (35.1%) 197 (31.3%) 111 (17.7%) 77 (12.2%) 23 (3.7%)
<b>7- How likely are you to admit a patient with suspected acute rheumatic fever to the hospital?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Less likely to <input type="radio"/> Never	113 (18%) 190 (30.2%) 198 (31.5%) 94 (14.9%) 34 (5.4%)
<b>8- How often do you educate your patients about rheumatic fever and its complications?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Less likely to <input type="radio"/> Never.	160 (25.4%) 215 (34.2%) 179 (28.4%) 57 (9.1%) 18 (2.9%)
<b>9- How often do you educate your patients about the importance of home measures like self-hygiene in the prevention of sore throat?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Less likely to <input type="radio"/> Never.	206 (32.8%) 222 (35.3%) 143 (22.7%) 42 (6.7%) 16 (2.5%)
<b>10- Regarding antibiotic administration, how likely are you to administer antibiotics orally?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes	115 (18.3%) 285 (45.3%) 178 (28.3%)



<input type="radio"/> Less likely to <input type="radio"/> Never.	40 (6.4%) 11 (1.7%)
<b>11- Regarding antibiotic administration, how likely are you to administer antibiotics parenteral?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Less likely to <input type="radio"/> Never.	48 (7.6%) 146 (23.2%) 243 (38.6%) 164 (26.1%) 28 (4.5%)
<b>12- How likely are you to follow up with your patients until you make sure they completed their antibiotic course?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Less likely to <input type="radio"/> Never.	111 (17.6%) 211 (33.5%) 182 (28.9%) 101 (16.2%) 24 (3.8%)
<b>13- How likely are you to advocate for the establishment of a rheumatic heart disease registry in Egypt?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Less likely to <input type="radio"/> Never.	111 (17.6%) 193 (30.7%) 213 (33.9%) 82 (13%) 30 (4.8%)
<b>14- How likely are you to participate in a research project on acute rheumatic fever/rheumatic heart disease?</b> <input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Less likely to <input type="radio"/> Never.	70 (11.1%) 145 (23.1%) 187 (29.7%) 140 (22.3%) 87 (13.8%)