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Research Article

**KNOWLEDGE, ATTITUDE AND PRACTICE OF DOCTORS  
AGAINST COMMON COLD AND ITS MANAGEMENT**<sup>1</sup>Dr. Fatima Zahid Butt, <sup>2</sup>Dr. Muteen Ahmed, <sup>3</sup>Shabi ul Khadeeja Cheema<sup>1</sup>House Officer, Lahore General Hospital<sup>2</sup>Services Institute of Medical Sciences, Services Hospital Lahore<sup>3</sup>Indus Hospital, Manawan, Email: [shabi\\_49@hotmail.com](mailto:shabi_49@hotmail.com)**Article Received:** September 2019 **Accepted:** October 2019 **Published:** November 2019**Abstract:**

**Background:** Misuse of antimicrobials upper respiratory tract infections like common cold is across the board in clinical practice. Abundant prescription of antibiotics by physicians resulted in increased number of antibiotics resistance. This leads to the objective of evaluating the percentage of doctors in Lahore prescribing antibiotics for the management of common cold and to access about their knowledge in the prevention of the spread of this disease.

**Methods:** It is a cross-sectional descriptive study, conducted in Lahore over a period of 06 months –from May to November, 2018. Preformed questionnaire about the disease spread and its management was distributed among 100 randomly selected doctors across the Lahore city from both public and private sector.

**Results:** Twenty one percent of the doctors prescribe antibiotics for common cold. 43 (43%) doctors correctly answered that mean incubation duration for common cold is 1–2 days. Seventy three (73%) responded correctly that cold weather enhance susceptibility to common cold. 48 (48%) responded right by opting that regular frequent hand-washing habit with good quality soaps is the most effective method to prevent spread of this disease in day-to-day life.

**Conclusion:** Antibiotics are being prescribed for treatment of common cold by a large proportion of doctors. There is insufficient knowledge among health care providers which is one of factors aggravate or alleviate common cold symptoms as well as the methodology by which these infections can be prevented.

**Keywords:** Antibiotics; Antimicrobial Resistance; Common Cold; Upper Respiratory Tract Infections (URTIs); Viruses.

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**INTRODUCTION:**

Common cold is defined as the upper respiratory tract infection (URTI), predominantly affecting the nasal part of the respiratory mucosa. "Common cold" and "flu", these two have similar symptoms and are caused by viremia, but difficult to define correctly because of great fluctuation in the severity, duration, symptoms.<sup>1</sup> The usual clinical picture of common cold is sneezing, rhinorrhea (runny nose), headache and general malaise. In addition, 50% of patients suffer from sore throat and 40% experience cough.<sup>2,3</sup> The main symptoms include nasal discharge, sneezing, obstructed nasal passages and moderate pharyngitis without fever.<sup>4,5</sup>

The severity of symptoms upsurges rapidly, peaking 2–3 days after infection, with 7–10 days as the mean duration of symptoms. However, some symptoms persist for more than 3 weeks, which commonly includes cough.<sup>2,6–8</sup>

Studies have shown that it is impossible to identify the virus on the basis of the symptoms, since similar symptoms are caused by different viruses.<sup>9</sup> Many a times, no infecting organism can be identified at all.

Rhinoviruses account for the majority (30–50%) of all colds, and coronaviruses, the second most common agent, accounts for 10–15%. Others for example influenza viruses account for 5–15%, whereas cold viruses such as respiratory syncytial virus, are responsible for much flu-like illnesses, representing an overlap in causation and symptomatology of common cold and flu syndromes.<sup>6–11</sup>

Common cold, although causing no mortality or serious morbidity, is still responsible for considerable amount of discomfort, lost work, and medical costs. It results in decreased productivity; time loss from work or school; visits to healthcare providers; and expenditure on the increased volume of drugs prescribed.<sup>12,13</sup>

Colds account for 22 million physician visits and 250 million restricted activity days per year even though most people (87%) tend to treat their colds at home.<sup>14,15</sup>

Despite extensive documentation of viral etiology and the lack of effectiveness of antibiotics in the treatment of common cold, general practitioners (GPs) frequently prescribe antibiotics for these patients in response to patients' expectation or doctors' perceptions of this expectations.<sup>16–19</sup>

Overuse and misuse of antibiotics for conditions where there is no proven benefit of such therapy leads to the development of antimicrobial resistance as well as to a number of adverse events, such as the unnecessary expense to patients and to the healthcare system as a whole.

The objective of this study was to determine the percentage of doctors in Lahore prescribing antibiotics for the treatment of common cold and to know about their knowledge in the preventing disease spread.

**MATERIAL AND METHODS:**

Through a non-probability convenient sampling technique, we included 100 doctors Lahore. Confidentiality of all information gathered was assured. Doctors from both public and private hospitals were asked to fill a questionnaire regarding the mode of transmission, incubation period, and whether moist weather and humidity increase or decrease the spread of this disease.

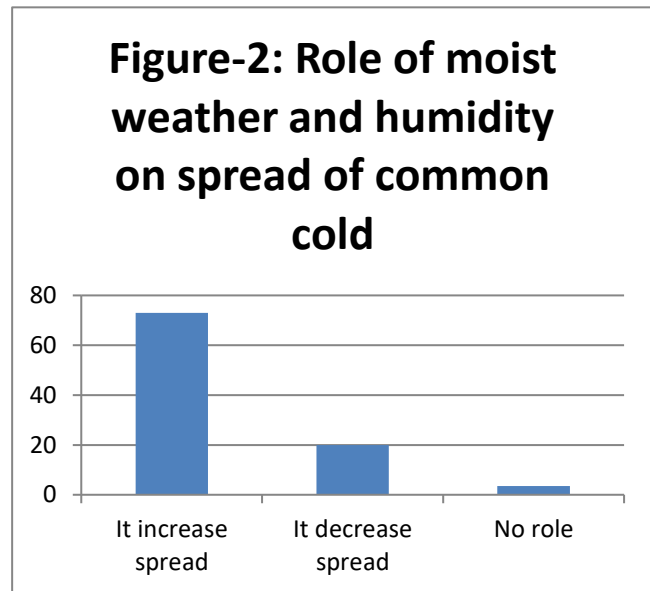
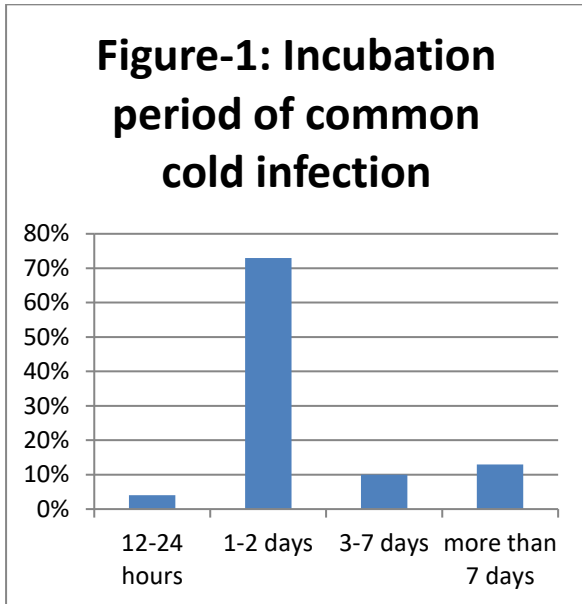
With regards to the treatment of the common cold, we inquired the respondents about the role of antibiotics, vaccines, antiviral therapy and steam inhalation. Lastly, we asked about the most effective method of preventing common cold in everyday life. The data was entered into, and analyzed by SPSS version 23.

Our study included house officers, general practitioners and doctors undergoing postgraduate medical training; however, all those doctors who had obtained FCPS or equivalent degree in any specialty were excluded. Moreover, those doctors were also excluded who had been to foreign countries for more than a period of 6 months for medical education.

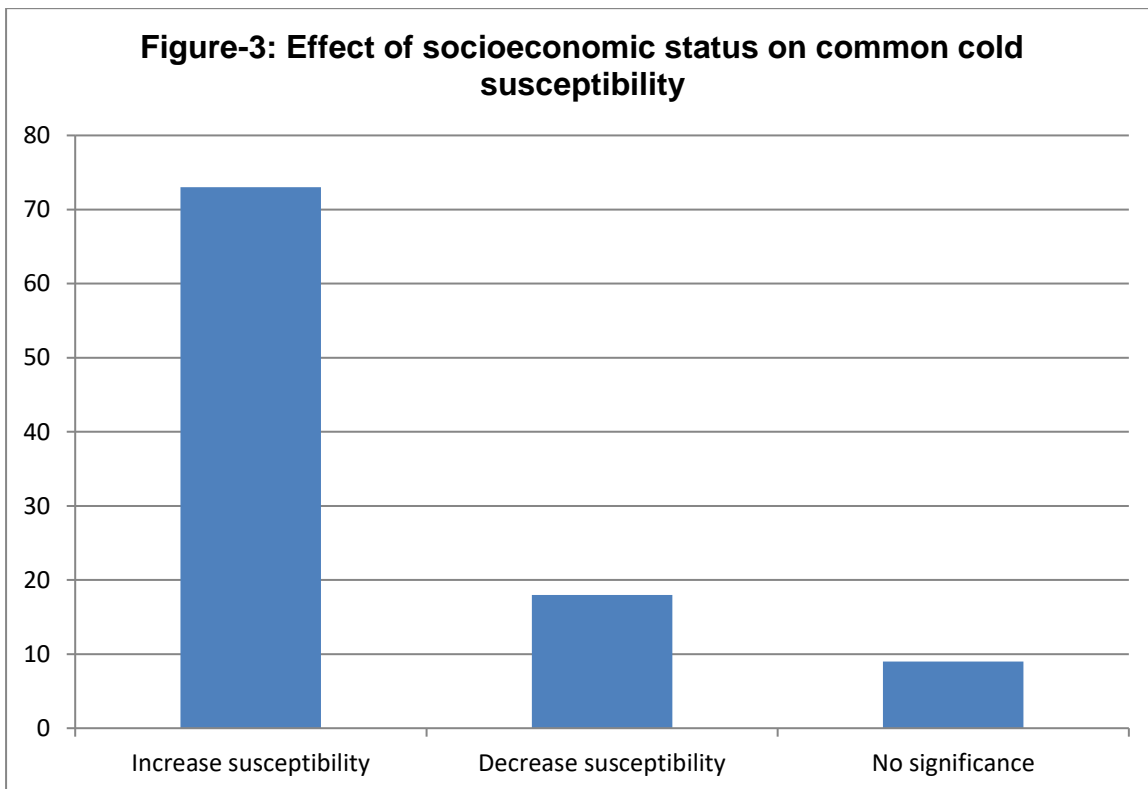
**RESULTS:**

Out of the 100 doctors included in our study, 39 were house officers, 28 were general practitioners while 33 were post graduate trainees in various clinical fields. The response rate was 100%.

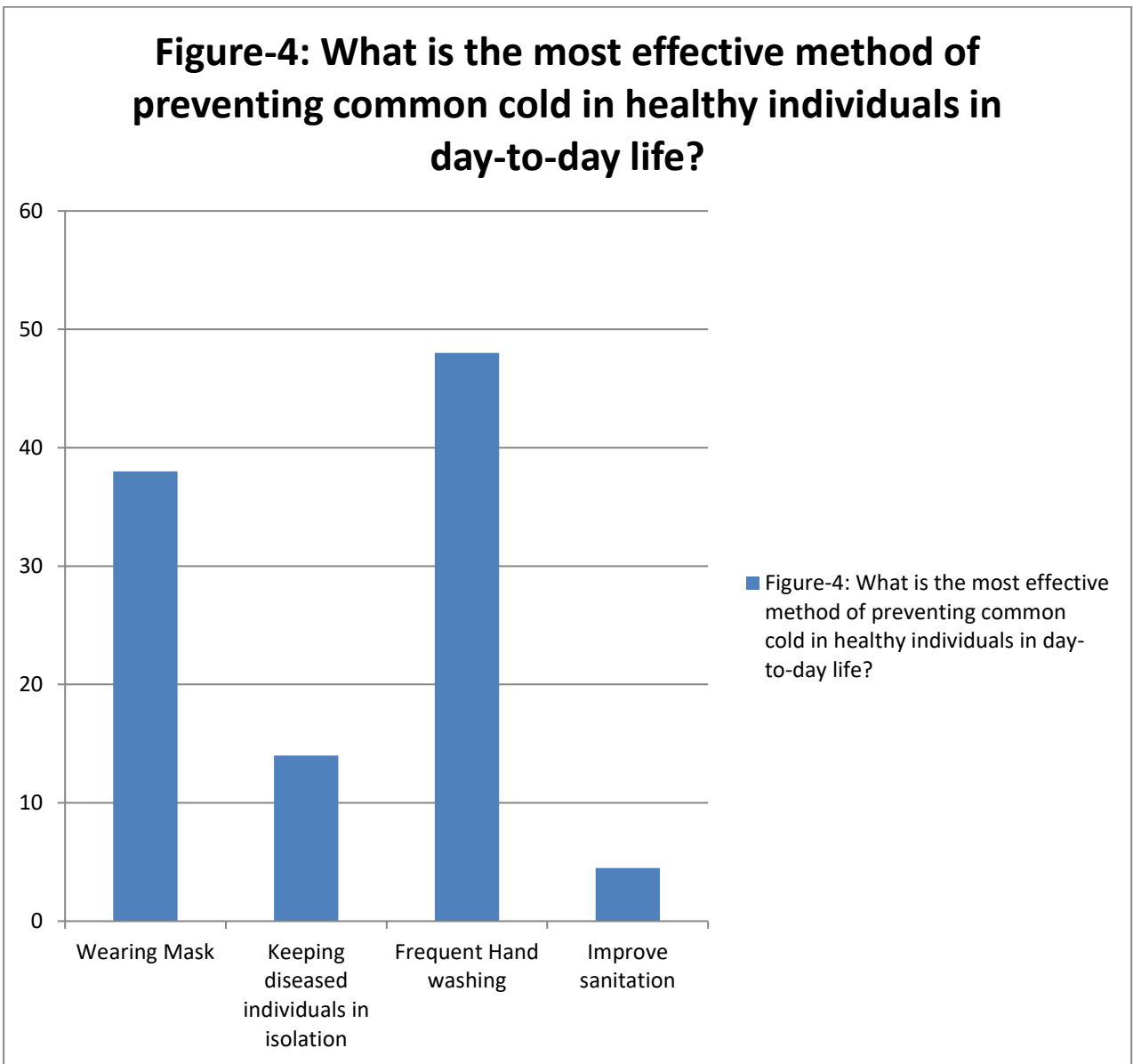
We asked the doctors about the average incubation period of common cold viruses and the role of moist weather and humidity on spread of common cold. Their responses are shown in figures 1 and 2.



When inquired about the effect of socioeconomic status of common cold susceptibility, 73 (73%) doctors responded correctly that poor socioeconomic status increases susceptibility to common cold while 27 (27%) responded incorrectly by saying that poor socioeconomic status decreases susceptibility to common cold. (Figure-3)



Concerning the counteractive action of spread of common cold, only 84 (28%) responded rightly by opting that regular and frequent hand-washing with good quality soaps was the most effective way to prevent spread of this disease in day-to-day life (Figure 4)



**DISCUSSION:**

Common cold infections spare very few humans each year and several people inevitably suffer from multiple infections every year. On average, common cold inflicts adults 2–5 times per year while school children are affected 7–10 times per year.<sup>20</sup> Therefore; the physicians are expected to have a sound knowledge regarding the common cold and its treatment.

We aimed to know about the trends of management of patients suffering from common cold in Pakistani doctors through this study. However, the limitations of our study included the time and financial constraints. Since the sampling technique used was non-probability convenient sampling, the questionnaires were distributed only amongst the doctors. We did not approach the doctors in rural areas.

Relating to the average incubation period of the viruses which cause common cold, the respondents of our study had a fairly good idea that it was 1–2 days.<sup>2,6–8</sup> 43% doctors responded correctly. Having knowledge about the incubation period is important as far as the counseling of patients and their family members about prevention of disease spread is concerned.

Socioeconomic status is also an important factor in determining the susceptibility of a person to common colds. Previous researches have shown that better socioeconomic status, be it in terms of income, education or occupation, has been associated with lower rates of morbidity in people suffering from common colds.<sup>21</sup> Our study on Pakistani doctors has shown that 73% of the doctors believed that poor socioeconomic status is associated with increases susceptibility to common colds. Moreover, physiological stress can also increase the susceptibility of an individual to common cold.<sup>22</sup>

There is a fallacy that cold weather is the cause of common cold; however, research has shown that cold weather only increases the susceptibility to common cold.<sup>23</sup> The present study also showed that Pakistani doctors were well-conversant with this fact.

Our study revealed a strikingly interesting result as far as the role of moist weather and humidity is concerned in the spread of common cold. It is known that moisture and humidity in environment suppresses the spread of infective respiratory droplets.<sup>1,3,6,15</sup> Our results show that 73% of the doctors were aware of the fact that moisture and humidity led to decreased prevalence of common cold in moist weather be it summer or winter, as is

observed during monsoon in the Indian subcontinent or in otherwise rainy days.

An important objective of our study was to know the percentage of doctors in Pakistan who prescribe antibiotic medication to people suffering from common cold. Due to widespread prescription of antibiotics and easy availability of over-the-counter antibiotic medications, antibiotic resistance is on the rise.<sup>24–26</sup> In a country like Pakistan, clinicians prescribe more than one antibiotics, which increases the chances of development of antimicrobial resistance in pathogens.<sup>27</sup> People also widely self-medicate antibiotics, which produce some severe adverse effects like nausea, vomiting, diarrhea, skin-rashes and other severe hypersensitivity reactions.<sup>13,25</sup> This unnecessary use of antibiotics must be discouraged since common colds are viral in etiology and antibiotics have absolutely no role in treating common colds.<sup>27</sup> A study conducted in Multan showed that doctors need further training in managing cases of upper respiratory tract infections.<sup>28</sup> Our study also shows that still there are 21% doctors in Pakistan who wrongly prescribe antibiotics to people suffering from common cold.

Then comes the issue of the use of vaccines for prophylactic prevention of common cold in everyday life. It is known that there are some 200 strains of viruses which can cause common colds. The incidence of some of the major viruses causing common colds is given below Each of these viruses further has different etiological strains. So a vaccine is going to provide immunity against only a few strains.<sup>12,13</sup> That's the reason why neither a vaccine has yet been developed against all the etiological agents of common cold, nor is their use a viable option. Vaccines do, however, prove effective if immunity against only a few viral causes is needed.<sup>15</sup>

A recent study concluded that Adenovirus-36 (Ad-36), which is a common causative agent of common cold is known to cause obesity by enhancing the growth and differentiation of adipocytes.<sup>30</sup>

Another method of providing symptomatic relief to people suffering from common cold has, since long, been steam inhalation. 90% doctors in our study believe that this is a viable method of common cold treatment. The theory behind steam inhalation is that the viruses causing common cold can only survive in the relatively cooler environment of upper respiratory tract. Steam provides heat the upper respiratory tract which kills the viruses and provides relief.<sup>31</sup>

Keeping good hydration also helps in providing symptomatic relief 32, as was correctly identified by 87% of respondents.

Since cold viruses can be passed from person to person by hand contact or by touching contaminated surfaces such as door handles, you can help prevent infection by washing your hands. Different researches have shown that washing hands can decrease the spread of common cold within the family. Wearing face masks also prevents the transmission of disease from infected to healthy individuals, but it is not as effective and convenient as hand-washing with soap.<sup>33</sup>

To the best of our knowledge, no such study has been conducted in the country in the past. A similar study conducted in China in 2012 showed that there is misapprehension in knowledge regarding common cold and its treatment among doctors from various levels of hospitals in China.<sup>34</sup>

### CONCLUSION:

Antibiotics are being prescribed for treatment of viral infections like common cold by a large proportion of doctors in our country. Doctors in our setup prescribe antibiotics to their patients may be because of patient's expectations of getting some medications from the doctor. Others also prescribe antibiotics because they believe that superadded bacterial infections may be avoided, however prior researches have shown that antibiotics have no beneficial effect. There is insufficient knowledge among our health care providers regarding the aggravating factors of common cold symptoms as well as the methodology by which prevention from these infections can be achieved, such as hand-washing with soap.

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