Preventive Role of Wearing Facemask in of Droplet Infection

SEHAR ALTAF, IMTIAZ AHMAD, HAFIZ M. AHMAD, NIDA KHIZRA, RIDA AKBAR, SEHRISH NOOR, SAAD MUNIR, SARFRAZ HUSSAIN

ABSTRACT
Aim: To find the protective role of wearing facemask in prevention of droplet infection.
Methodology: Cross sectional descriptive study was done among 60 students of superior university.
Result: Among 60 students 56% were male and 43% were female. Female use facemask more frequently 55%. Students who use facemask is in less risk of infection per year 45%. Most of them were male who are more liable to infection 56.6%. Students who knows benefits of using facemask shows positive association and that is statistically significant too (p<0.05).
Key words: Facemask, protective role, droplet infections.

INTRODUCTION
Droplet infection is major health problem. Droplet infection spread from one person to other by sneezing or coughing1. Annually, 15 million death of child from ARI. Abundant pediatric outpatient attendance and many hospital admissions are due to ARI globally2. Although advance in medical field shared lot of burden at mass level, but at individual level personal hygiene and facemask played great role in prevention of droplet infection. Facemask acts as physical barrier between people and environment. Pneumonia, influenza, tuberculosis, polio and whooping cough are spread by respiratory droplets3. Mass gathering have potential to transmit droplets more rapidly than expected and alarming for travelers and the place of public gathering. These droplet ejected forcibly through the mouth of patient suspend in environment for a while and provide potential seed to grow droplet infection in society3. High recommendation for people living in high risk area is to avoid crowded setting or try to complaint wearing mask. Harvard medical school also supported the idea that simply wearing mask during period of epidemic cut the transmission to half4. Significant numbers of people are affected by droplet infection and causing great financial burden, recently many study conducted on that topic but limited data available about protective role wearing of mask, so it’s pertinent to conduct study to know the protective role of mask and help the people through health education to promote positive attitude of wearing of mask. The objective of the study was to find out the protective role of wearing facemask in prevention of droplet infection.

METHODOLOGY
A descriptive cross sectional study was conducted in superior university Raiwind road Lahore during month of April to May, 2017. After having ethical clearance, from institutional review board (IRB), three senior facility member, students participants were explained basis and method of data collection. After getting informed consent from 34 male and 26 were female data analyzed using e SPSS, version 20. Different variables were cross matched and chi square test was applied to find any statistically significant.

RESULTS
A total of 60 students 56% were male and 43% were female most of them were above of age 20. Main area of focus in our study is to find protective role of facemask in droplet infection. Female used facemask more frequently 55% as compared to male 44% (Table 1). By comparing role of facemask with risk of infection per year it is reflected that students who use facemask is in less risk of infection per year 45% as compared to those of 55% who do not use facemask (Table 2). Most of them were male who are more liable to infection 56.6% (Table 3). In our study large part of students known benefits of using facemask shows positive association in wearing face mask (p<0.05) (Table 5).

Table1: Facemask and its relation to gender (cross tabulation)

<table>
<thead>
<tr>
<th>Use of face mask</th>
<th>Gender of Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>Yes</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>34</td>
</tr>
</tbody>
</table>
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settings

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role in reducing incident of infections. People who are

well aware of risk of droplet infections and benefits of

using facemask show positive association in use of

facemask. So we should promote encouraging approach of using facemask in our community to

control epidemic and making our community safer to live for better healthy life.

REFERENCE


DISCUSSION

Table2: risk of infection per year by using facemask (cross tabulation)

<table>
<thead>
<tr>
<th>Use of face mask</th>
<th>Infection per year 1</th>
<th>2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>26</td>
<td>7</td>
<td>33</td>
</tr>
<tr>
<td>Yes</td>
<td>19</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>15</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 3: relation of gender with risk of infection per year

<table>
<thead>
<tr>
<th>Gender of Students</th>
<th>Infection per year 1</th>
<th>2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>16</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>Male</td>
<td>29</td>
<td>5</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>15</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 4: Frequency of use facemask by knowing benefit of using facemask

<table>
<thead>
<tr>
<th>Use of face mask</th>
<th>Knowledge about benefit of use of face mask No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>11</td>
<td>22</td>
<td>33</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>48</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 5: Chi-Square tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>8.148*</td>
<td>1</td>
<td>0.04</td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>6.402</td>
<td>1</td>
<td>0.011</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>9.484</td>
<td>1</td>
<td>0.002</td>
</tr>
</tbody>
</table>

to facemask and hand hygiene may decrease risk of infection in community settings7. Majority of students

know the benefits of using facemask shows positive association, to use facemask, which is statistically

significant too (p<0.05) (Table 5). These findings are

similar to a study conducted in Hong Kong, their they divided people in three classes based on their compliance to preventive behavior. It appears that as knowledge increased about epidemic, people modified their preventive behavior and become more vigilant8. It is reflected that female who use facemask are less affected from infection per year, these findings are may be due to positive attitude or self-consciousness of female toward herself.

CONCLUSION

Our study concluded that facemask played vigilant role in reducing incident of infections. People who are

well aware of risk of droplet infections and benefits of using facemask show positive association in use of

facemask. So we should promote encouraging approach of using facemask in our community to control epidemic and making our community safer to live for better healthy life.