

Preventive Role of Wearing Facemask in of Droplet Infection

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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 droplet infection 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.

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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 faculty 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)

Use of face mask	Gender of Students		Total
	Female	Male	
No	11	22	33
Yes	15	12	27
Total	26	34	60

Table 2: risk of infection per year by using facemask (cross tabulation)

Use of face mask	Infection per year		Total
	1	2	
No	26	7	33
Yes	19	8	27
Total	45	15	60

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

Gender of Students	Infection per year		Total
	1	2	
Female	16	10	26
Male	29	5	34
Total	45	15	60

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

Use of face mask	Knowledge about benefit of use of face mask		Total
	No	Yes	
No	11	22	33
Yes	1	26	27
Total	12	48	60

Table 5: Chi-Square tests.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.148 ^a	1	.004
Continuity Correction	6.402	1	.011
Likelihood Ratio	9.484	1	.002

DISCUSSION

Idea of respiratory infection is not new it is constant defined threat for society affecting many people causing school absenteeism, limited daily activities and productivity loss. It's not only increased morbidity but also mortality⁵. Our study conducted in superior university Raiwind road Lahore, 60 students are included in study out of which 34(56%) were male and 27(43%) were female most of them were of age above 20 years most of them use facemask, in which female shows more positive association to them rather than male (Table 1). These findings are similar to study conducted in Beijing china which shows health care staff working in large hospital and particularly female health care workers more focus about wearing mask and vaccination during respiratory infection⁶.

Our study reflect that student who do not use facemask are more prone to infection per year 55% as compared to those who use facemask during infection 45% (Table 3). These results are similar to study conducted in community and healthcare settings where they found that early use, compliance

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.

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