Irrelevant Usage of Sanitizer and Facemask Among Urban Population During the Outbreak of COVID-19 Infection — A Survey

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ABSTRACT

Introduction: The spread of COVID-19 has become a major threat to the whole world and has shown a vast spread all over. The important source of the spread of the virus is the droplets from the nose and mouth. The virus causes damage more than the respiratory infection and it spreads all through the lungs in a fast manner. Researchers have informed that not only droplets from the nose and mouth even small particles from the air can cause the infection. The sanitizers and facemask are the most used products during the outbreak to protect us from getting affected by the virus; these have become the major things we believe that protects us from the virus. There are two main types of face masks that are produced N95 and P100. Sanitizers that protect us from getting attacked by the viruses have certain contents like 60% alcohol to be present in the sanitizer. The use of sanitizer and face mask has become a basic habit of people nowadays during the outbreak. But due to lack of knowledge, there is irrelevant usage of masks and sanitizers prevalent among urban society.

Materials and Methods: A questionnaire was designed online using Google docs which consisted of 15 questions. The study population included was the urban population of South India. The data were analyzed statistically.

Results: From this survey, it is evident that the urban South Indian Population is much aware of the usage of self-protective aids during a pandemic situation.

Conclusion: Awareness is the first step to fight against disease. Awareness has to be created for the rural population too. A similar survey has to be done with the rural population in the future.

Key Words: Awareness, Face mask, Knowledge, Non-Pharmaceuticals, Sanitizer, Survey

INTRODUCTION

Covid-19 which is also known as Coronavirus was reported in Wuhan, China which created a major outbreak in almost every country. Plans were made for the pandemic situation and for the protection of the people across the globe. The manufacturers have given serious attention to the manufacture of the non-pharmaceuticals for prevention. A number of studies have been conducted recently to strengthen the scientific basis for the recommendation on the use of specific interventions^{1,2,3}. The only talk of the day COVID-19 has become a major threat to the whole world. The sanitizers and facemask are the mostly used products during the outbreak; these have become the major things we believe that protects

us from the virus. There are two main types of face masks that are produced N95 and P100. Sanitizers that protect us from getting attacked by the viruses have certain contents like 60% alcohol should be present in the sanitizer. Use of sanitizer and face mask has become a basic habit of people nowadays during the outbreak.

Hand hygiene is connected or associated with the respiratory disease and the prevention from it, but its role and significance in this pandemic are different and its usage and its uses are unclear^{4,5,6}. Community-based prevention strategies for seasonal and pandemic influenza are essential to minimize their potential threat to public health^{7,8}. Face mask is recommended for a disease transmitted through droplets and respirators for

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respiratory aerosols, yet recommendations and terminology vary between guidelines.^{9,10,11} Hand hygiene has been proven to prevent many infectious diseases like influenza. Whether or not hand hygiene has proven effectiveness against influenza virus transmission but, specifically because of its potential to reduce infections and thereby reduce pressure on health care services is remarkable.^{12,13,14}

Previous research concluded that the use of facemask and sanitizer can reduce the spread of the virus and some researchers recommend that the non-pharmaceuticals are used for prevention. Homemade face masks are also recommended by the researchers.

The Sanitizer can be misused and can cause heavy damage. So, the main aim of this survey is to:

- Incorporate Knowledge about the non-pharmaceuticals so that the people become aware and protect them from getting affected by the virus.
- To analyze the usage of facemask and sanitizer and to educate the people about the right ways to use it.

MATERIALS AND METHODS

A survey was conducted with self-prepared questionnaire comprising 15 questions with a sample of 100 urban teenagers. The questionnaire was prepared with questions comprising about sanitizer, face mask, the questions helped to determine the level of awareness about the Non-pharmaceuticals among the urban population. The responses recorded using an online platform “The results from Google Forms” (https://docs.google.com/forms/d/e/1FAIpQLSemC5c0Chh-vKSTcSvHxaOgpDOCvY-U6V2TC9MNGBA8X3L_PcQ/viewform?usp=sf_link)

Statistical Analysis

Results were analyzed using the statistical software SPSS version 2.0 charts in the software and the results were represented using the pie charts. Bar graphs were represented by using Chi-square test.

RESULTS AND DISCUSSION

Figure 1: The distribution of participants based on their knowledge about sanitizer containing alcohol, where 70%(red) of the study participants were aware of the usage of alcohol, and 30% (blue) of the participants were unaware of the usage of alcohol in sanitizers.

Figure 2: The distribution of participants based on their knowledge about the use of N95 types of Face masks by the common people, where 72% (red) of the study participants were aware that N95 type of mask should be used to avoid infection whereas 28% (blue) study participants were basically unaware.

Figure 3: The distribution of participants based on their awareness to use facemask and sanitizer to protect them from getting affected by the virus, where 76% (red) believe that the non-pharmaceuticals protect them from the virus whereas 24% (blue) of the study participants think that face masks and sanitizers aren't enough to protect them from the virus.

Figure 4: Bar graph representing the correlation between gender and knowledge about different kinds of masks produced.

Bar graph representing the individual's knowledge about different kinds of masks produced based on gender. X-axis represents gender and Y-axis represents individuals who were

aware (red) and unaware (blue). Out of 100 participants, 58 male and 6 female have knowledge about different kinds of masks produced. Out of 100 participants, 58 male and 6 female participants were aware of various types of masks and their uses, while 33 male and 3 female participants were not aware of the types of masks. Males seem to be more aware of types and uses of masks than females, however, it is statistically not significant.

Pearson's Chi square value: .031.;DF: 1.;p value = 0.861 and not Statistically significant.

Figure 5: Bar graph representing the correlation between gender and knowledge about the use of alcohol in sanitizer.

Bar graph representing the individuals' knowledge about the use of alcohol in sanitizer based on gender. X-axis represents gender and Y-axis represents individuals who were aware (red) and unaware (blue). Out of 100 participants, 65 male and 5 female have knowledge about the use of alcohol in sanitizer (blue). Out of 100 participants, 65 males and 5 female participants were aware of the presence of alcohol in sanitizers, while 26 male and 4 female participants were not aware of the presence of alcohol in sanitizers. Males seem to be more aware of types and uses of masks than females; however, it is statistically not significant.

Pearson's Chi-square value: 0.983; DF: 1.;P value = 0.322 and not Statistically significant.

Figure 6: Bar graph representing the correlation between gender and their preference to use masks and sanitizers to protect from COVID-19.

Bar graph representing the individual's belief in the non-pharmaceutical to protect from COVID-19 based on gender. X-axis represents gender and Y-axis represents individuals who were aware (red) and unaware (blue). Out of 100 participants, 69 male and 7 female believe that the non-pharmaceuticals will protect them from getting affected by the virus. 22 males and 2 female participants don't care about using masks or sanitizers. Males seem to be more aware of using masks and sanitizers than females; however, it is statistically not significant.

Pearson's Chi square value: 0.017.; DF: 1.; P value = 0.869 and not Statistically significant.

The responses were collected and the data were analyzed based on the awareness and usage of face mask and hand sanitizer. The responses were positive proving that the people were well aware of the non-pharmaceuticals.

The participants were asked about the various habits and precautions they took to protect them from getting affected by the virus. About 90% of the participants use sanitizer to maintain their hand hygiene. About 69% of the participants use a facemask to protect them from getting infected by the particles present in the air. About 74% of the participants were aware that exposure of the sanitizer to fire can create fire accidents. About 52% of the participants believe that handmade face masks are safe to use and will provide the same protection as the machine-made one's. Since sanitizers are not affordable by everyone so we asked if they have tried making handmade sanitizers and about 39% of participants have answered yes. About 32% of the participant's reuse the used face masks and about 56% of the patients think that overuse of sanitizer can cause infections.

The participants were asked if they knew that sanitizer contains alcohol. [Fig: 1] depicts that 70% of the respondents were aware. According to articles^{15,16,17}, the participants were well aware of the usage of alcohol in sanitizer. Since there are two types of basic mask produced we asked the participants about which type of mask should be used by the common people. About 72% of the participants were aware that N95 types of the mask should be used [Fig:2]. According to the article^{18,19,20} the study participants were aware of the usage of the N95 type of face mask. About 76% of the study participants believe that non-pharmaceuticals can protect them from getting affected by the virus. According to the articles^{21,22,23}, the study participants have given similar responses. [Fig:4] when asked about different kinds of masks produced. Out of 100 participants 58 male and 6 female participants were aware of various types of masks and their uses, while 33 male and 3 female participants were not aware of the types of masks. Males seem to be more aware of types and uses of masks than females, however, it is statistically not significant. [Fig:5] when asked about the addition of alcohol in sanitizers, out of 100 participants 65 males and

5 female participants were aware of the presence of alcohol in sanitizers, while 26 male and 4 female participants were not aware of the presence of alcohol in sanitizers, however, it is statistically not significant. [Fig:6] When asked about the importance of the use of masks and sanitizers as a preventive tool, out of 100 participants, 69 males and 7 females believe that the non-pharmaceuticals will protect them from getting affected by the virus. 22 males and 2 female participants don't care about using masks or sanitizers. Therefore, the responses were positive and the people were aware of the usage of the Face masks and Hand Sanitizers will definitely protect them against infection.

FUTURE SCOPE

- Awareness created on the unwanted and over usage of chemicals needs to be prevented. Proper Knowledge and guidance should be given to everyone.

CONCLUSION

The survey has incorporated knowledge and awareness about the proper uses of the non-pharmaceuticals to the common people and also educated the study participants about the benefits of using face masks and sanitizer to protect themselves from getting affected by the virus. Even though we depend on modern medicine nowadays, in this pandemic situation preventive measures have played a major role and have protected the people from getting affected by the virus.

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