International Journal of Nursing and Health Research
www.nursingjournal.in
Online ISSN: 2664-6420, Print ISSN: 2664-6412
Received: 18-09-2021, Accepted: 02-10-2021, Published: 19-10-2021
Volume 3, Issue 1, 2021, Page No. 23-24

A study to assess the knowledge & attitude regarding droplet infection among adults in selected areas of Rajkot city

Vipul Ravat
Department of Community Health Nursing, Kamdar College of Nursing, Rajkot, Gujarat, India

Abstract
The term "droplet", as used in this context, consists mostly of water with various inclusions, depending on how it is generated. Naturally produced droplets from humans (e.g., droplets produced by breathing, talking, sneezing, coughing) include various cells types (e.g., epithelial cells and cells of the immune system), physiological electrolytes contained in mucous and saliva (e.g., Na+, K+, Cl^-), as well as, potentially, various infectious agents (e.g., bacteria, fungi and viruses). With artificially generated droplets in a health-care setting (e.g., suction of respiratory tract), the main constituent will also be sterile water, with various electrolytes (e.g., "normal" or physiological saline, including Na+, Cl-) and often the molecules of a drug (e.g., salbutamol for asthmatics). Both these naturally and artificially generated droplets are likely to vary in both size and content. Droplets >5 μm tend to remain trapped in the upper respiratory tract (oropharynx — nose and throat areas), whereas droplets ≤5 μm have the potential to be inhaled into the lower respiratory tract (the bronchi and alveoli in the lungs).
Currently, the term droplet is often taken to refer to droplets >5 μm in diameter that fall rapidly to the ground under gravity, and therefore are transmitted only over a limited distance (e.g., ≤1 m). In contrast, the term droplet nuclei refer to droplets ≤5 μm in diameter that can remain suspended in air for significant periods of time, allowing them to be transmitted over distances >1 m. Other studies suggest slightly different definitions, with ranges for "large" droplets, "small" droplets and droplet nuclei being >60 μm in diameter, ≤60 μm in diameter and <10 μm in diameter, respectively. The concept is that the naturally and artificially produced aerosols will contain a range of droplet sizes, whose motion will depend significantly on various environmental factors, such as gravity, the direction and strength of local airflows, temperature and relative humidity (which will affect both the size and mass of the droplet due to evaporation).
Objectives: 1. To assess the knowledge regarding droplet infection among adults in selected areas of Rajkot city.
2. To assess the Attitude regarding droplet infection among adults in selected areas of Rajkot city.
3. To find out association between the knowledge and selected demographic variables regarding droplet infection among adults.

Keywords: assess, knowledge, attitude, droplet infection, adults, community area

Introduction

The term "droplet", as used in this context, consists mostly of water with various inclusions, depending on how it is generated.
A common form of transmission is by way of respiratory droplets, generated by coughing, sneezing, or talking. Respiratory droplet transmission is the usual route for respiratory infections. Transmission can occur when respiratory droplets reach susceptible mucosal surfaces, such as in the eyes, nose or mouth. This can also happen indirectly via contact with contaminated surfaces when hands then touch the face. Respiratory droplets are large and cannot remain suspended in the air for long, and are usually dispersed over short distances. The size of the particles for droplet infections are > 5 μm Organisms spread by droplet transmission include respiratory viruses such as influenza virus, parainfluenza virus, adenoviruses, rhinovirus, respiratory syncytial virus, human metapneumovirus, Bordet Ella pertussis, pneumococci, streptococcus pyogenes, diphtheria, rubella, and viruses. Spread of respiratory droplets from the wearer can be reduced through wearing of a surgical mask.
The spread of respiratory diseases has been a hot topic concerned by medical practitioners. Many researchers believe that droplet transmission is the principal means of airborne pathogen [1-3]. Patients produce droplets during breathing, speaking, coughing and sneezing. Pathogens attach to the droplets and transmit to the mouth, nasal and conjunctiva positions of susceptible populations within a close range and short time span. The susceptible population is infected and lead to the spread of the disease. Common droplet transmission diseases include the common cold, flu, tuberculosis, pathogen meningitis, etc. The mass of evidence has been shown that the spread of respiratory disease is associated with the characteristics of human droplets during the last few decades. Although studying the droplet transmission looks to be a common matter and the volume of publications in this subject over past 50 years, it is necessary to explore future direction which needs more attention [4-7]. This paper is a literature review on the droplet characteristics produced from different respiratory activities, and it aims to taking effectively disease prevention from droplet transmission and control measures (Hauling Zhang 2015).

Material and Methods

One group pre-test only was chosen for this study. The samples were selected for this study by adopting non-probability

purposive sampling technique. The samples for present study to decide to be among 1000 adults in selected areas of Rajkot. The data was collected by using knowledge questionnaires and attitude scale.

The tool was used to collect the data, which consist of three parts, Part- I consist of socio-demographic variables, Part – II consist of knowledge questionnaires and Part–III consist of attitude scale.

Results

1. With regard to demographic variables most of the adults are male, majority of the adult were belonging to Hindu religion, most of them we are married, majority of adult were living in nuclear family, most of them are vegetarian, majority of them had associated disease condition and majority of them are employed.
2. As regard to knowledge level among the 1000 adult only 70 (7%) had high knowledge, 320 (32%) had average knowledge and majority 470(47%) of them had low knowledge regarding droplet infection.
3. With regard to attitude among the 1000 adult only 310 (31%) had highly favourable attitude, 420 (42%) had favourable attitude and 270 (27%) of them had unfavourable attitude regarding droplet infection.
4. With regard to association between knowledge with their selected socio-demographic variables such as age, gender, religion, marital status, education, family type, dietary pattern, associated disease condition, ventilation and occupation, five were significant that are age, education, dietary pattern, associated disease condition and occupation remaining all were non-significant.

Conclusion

- The main conclusion from the study is that there is poor knowledge and unfavourable attitude of adults regarding droplet infection.

References

1. Amir A Aliabadi, Steven N Rogak et al, “Preventing Airborne Disease Transmission: Review of Methods for Ventilation Design in Health Care Facilities”. Advances in Preventive Medicine, 2011.
2. Ashalatha Nandkar. “Anatomy and Physiology for Nursing and Health Care”. New Delhi, India BI Publication, 2006.
3. Basvanthappa BT. Nursing research. First edition. Jaypee Brothers medical publishers (P) Ltd, 1998.
4. Basavanthappa BT. "Medical Surgical Nursing", New Delhi; Jaypee brother, 2005.
5. Basavanthappa BT, “Text book of community health nursing”. New Delhi: Bhanot Publishers, 2008.
6. Best WJ, Khan VJ. “Research in education”. 7th ed. New Delhi: Prentice Hall of India private Limited, 1993.
7. Black JM, Hawks JH. “Medical Surgical Nursing”, 7th Edition, 2004.
8. Burns N, Grove SK. “Understanding nursing research”. 4th ed. Philadelphia: Saunders Company, 2002.
9. Chadwick PR, Walker M, Rees AE. “Airborne transmission of a small round structured virus”. Lancet,1994:343(8890):171.
10. Eck, Polit. “Nursing Research: Generating and Assessing Evidence for Nursing Practice”. Wolters Kluwer, New Delhi.
11. Gulani KK. “Text book of Community Health Nursing, Principles andpractice”. Kumar publishing house, 2009.