Communicable Diseases: Causes, Control and Prevention among Pre-School Age Children

By
Oniyangi S.O

Department of Physical and Health Education, University of Ilorin, Ilorin.

Abstract

The paper discussed the causes, control and prevention of communicable diseases among pre-school age children (1-5 years). It focuses on the pre-school age children because of the existence of six killer diseases and the peculiarity of children's level of exposure to communicable diseases especially during the outdoor game. Recommendations were made on management and control of communicable diseases. These include public enlightenment, proper hygiene of food, the environment and the general body.

Introduction

Communicable diseases are as old as man and they constitute a great menace to human beings in every part of the world. They are one of the greatest problems facing children today. The diseases are silent killers unlike accident that kills instantly. Man has been trying to get rid of these diseases, for years but efforts made have proved partially abortive. Specifically, pre-school children (0-5 years old) are prone to communicable diseases because of their close interaction with one another, their non-discriminatory behaviours and also their low immunity power.

What is Communicable Disease?

Communicable disease is often called contagious or infectious disease. Anderson (1980) defined a communicable disease as a disease that can be transmitted from one person to another or from lower animal to higher animal (man). He attributed the causes of these diseases to pathogenic microorganisms. Brain (1977) also noted that communicable diseases are infectious diseases that can be passed from person to another or from an animal to a person.

Causative Agents of the Diseases

It is generally believed that nature harbours many micro organism which are very difficult to see with mere naked eyes except with the use of highly powerful microscopic lens. Those micro-organisms which harm the human body are called pathogens. Udoh, Fawole, Ajala, Okafo & Nwana (1987) confirmed that pathogens that harm the body are popularly known as germs. These invade the tissues of the human host where they produce the condition called disease. These germs/pathogens (that is virus, bacteria, protozoans and metazoa) are mostly found in dirty places where the temperature and atmosphere support their existence.

Classification of Communicable Disease

Olaoye (1978) classified communicable diseases into four namely water borne disease, air borne diseases, insect borne and other diseases that are transmitted by contacts and arthropods. Brain (1977) stated that the best way of classifying communicable diseases is by their spread, and these are; air borne or droplet infections; faecal borne or gastro-intestinal infections;
transmission from animal, from insects and by contacts. Barbara and Baurer (1977) identified three ways of transmitting communicable diseases as: transmission by contact, by vector and by air.

Causative Agents of the Communicable Diseases

Several agents have been identified as the major causes of communicable diseases among children. These are: Viruses: The smallest of the pathogenic agents and they are responsible for diseases such as poliomyelitis, influenza and infectious hepatitis e.t.c.

Bacteria: They are small unicellular organisms which can be seen only with the help of microscope. Bacteria occur in three main shapes viz: rod shaped (bacillus), spherical shaped (coccus) and spiral shaped. Bacilli are known to cause diseases such as tuberculosis, diphtheria, tetanus and other diseases. Cocci, which have spherical shape, include taphylococcus, streptococcus and gonococcus. Cocci are causes of boils, sore throats, scarlet fever and gonorrhoea. Spirals are also known as spirochete and they cause syphilis. Fungi: These are plant-like organisms known as moulds and yeast. They vary in size from microscopic unicellular forms to multi cellular, easily visible forms. They function largely as parasites living at the expense of another organisms or they sustain themselves on dead remains of organic materials. Fungi is said to cause two types of diseases and these are; superficial skin diseases such as ring worm in an athlete's feet and systematic infectious of respiratory and intestinal tract. Rickettsia: These are very small micro-organisms, which resemble both bacteria and viruses. They are parasites, which are mostly transmitted to human host through the bite of fleas and lice. They usually cause diseases such as rocky mountain, spotted fever, typhoid fever and rickettial pox. Rickettsia can be classified into protozoa and metazoa.

Protozoa: These are the simplest of animal forms causing disease. They are microscopic in size and usually single-celled and amoebic in nature, causing malaria, amoebic dysentery, sleeping sickness and trichonomiasis.

Metazoa: They are multi cellular organisms, which can infect humans. They are not considered micro-organisms because of their relative large size and visibility. These pathogens usually gain entry into human body through the consumption of foods and fluids. These can be found in beef, pork and larvae of intestinal worms.

Mode of Contacting Communicable diseases

Communicable diseases are contacted through direct and indirect sources such as droplets from the mouth, nose or skin of the victims. They could also be contacted through open sores/cuts or wound and through insect bite, drinking impure water, eating contaminated foods, milk, fruits or wearing dirty cloths or caps/ head ties (Anderson, 1980).

Mode of Transmission

Lucas and Gilles (1981) described the mode of transmission of communicable diseases as the way by which an infectious agent is transferred from one person to the other or from reservoir to the host. According to the researchers, this may occur in different ways, which include; contact, inhalation, infection, contamination of hands, food or water, penetration of skin directly by causative organisms and congenital transmission, for example, syphilis, and toxoplasmosis. Udoh et al (1987) referred to mode of transmission of disease as mechanisms by which an infectious agent is transported from reservoir to susceptible human host. There are six main modes of transmission. They are: Direct Contact: This is through personal contact with an infected person, or animal. Infection can also be through sexual intercourse, kissing or other contagious personal associations.

Indirect Contact: This is by touching contaminated object such as toys, handkerchiefs,
soiled clothing, beddings, surgical instruments, dressing, and other infective materials.

Droplet Spread: This occurs when the infected person sneezes, coughs, talks and releases infectious germs or virus. Droplets usually spread to a distance of about 90cm from the source to infected person.

Vehicle: This involves transmission of communicable diseases through water, food, milk, biological products, blood or any substance. Transfusion serves as an intermediate means by which an infectious agent is transported from a reservoir to a susceptible host. It could also be either through ingestion or inoculation.

Vector: An organism called vector transmits causative disease (pathogens) from infected person to non-infected individuals. Examples of vectors are mosquitoes, rats, cockroaches, lice, ticks and other rodents that carry diseases like malaria, yellow fever and relapsing fever from one person to another. Injecting germs into the skin or mucous membranes of an unsuspecting individual does the transmission of pathogens.

Air borne: This is inhalation of causative agents or disease by an individual. This may arise from contaminated floors, clothes, beddings, rooms, air-surface or any other particles from the soil or dead remain suspended in the air for short period of time.

Prevention and Control of Communicable Diseases

Barbara and Baurer (1977) explained that damage to embryo or foetus can result from exposure to pathogenic infections,” viruses, bacteria and other diseases producing microbes. Since communicable diseases could be contacted during pregnancy and endanger the foetus adversely, there is need for pre-natal care. This can be achieved if pregnant mothers attend pre-natal clinic regularly and use the prescribed drugs. Also, proper enlightenment of pregnant mothers as what they are expected to do during pregnancy is a major way of preventing the spread of communicable diseases.

Barbara et al (1977) confirmed that the first and immediate problem after birth is the feeding of the child especially after delivery of a baby. Nowadays artificial feeding like the use of feeding bottle is adopted very early. This constitute s a lot of danger to the child. According to the researchers, later health problems and well being of the child depend upon the mothers’ ability and willingness to feed the child properly especially with breast milk, as no other food is as good as breast milk. This may be because of the presence of the immunity substance in the mother’s breast milk which is transmitted to the child to protect it from diseases. It is recommended that breast milk should be given exclusively for the first six months because breast milk has an ideal composition for child growth and development.

Ganiyu (1980) observed that two important measures of controlling communicable diseases and improve the standard of hygiene are health education at community level and mass immunization. Lucas et al (1981) also confirmed that the purpose of health education is to raise the standard of hygiene. This should be regularly carried out through school health instruction; healthful school living; public health instruction, public health services and public healthful living. The use of mass - media like television, radio, handbills, posters, and film strips to pass information on health education is also a major means of controlling communicable diseases.

Ganiyu (1982) and Godman (1960) agreed that some contagious diseases can be controlled by keeping the patients who are still with the diseases away from other people that are healthy. Anderson (1970) also supported isolation and described it as the segregation of a patient from the community until all dangers of spreading infections are averted. This according to him blocks the route of transmission of diseases.

Anderson (1970) identified quarantine as a means of controlling communicable diseases. He suggested that a susceptible person who has been exposed to infectious disease should be taken to an Infectious Disease Hospital (I.D.H.) so as to avoid the spread of communicable diseases.

Udoh et al (1987) noted that prevention and control of communicable diseases require the cooperation and coordination of the activities of the Health Departments, medical doctors,
medical groups, parents, hospitals, schools and society at large. According to the researchers effective control of communicable diseases in the community is the special responsibility of the Health Department and the entire members of the community.

Conclusion

Communicable diseases are common among pre-age children probably because of their close proximity when playing together and lack of discrimination among them. Communicable diseases have in many occasions led to the death of children who could have contributed positively to the economic, social and political development of the society. It is therefore imperative for every individual and organizations to find solution to the problem of communicable diseases in the area of prevention and control, for an adage says prevention is better than cure.

Recommendations

The following recommendations are considered relevant to prevention and control of communicable diseases in Nigeria:

- Every individual should be fully educated about communicable diseases.
- The relevance and usefulness of adequate prenatal care, breast feeding, health education, isolation and quarantine as means of control should be known to all Nigerians.
- There should be an information centre/unit in each community to provide opportunity to the members of the community to acquire useful information to people on how to prevent and control communicable diseases.
- Public toilets should be provided in every community. Adequate immunization should be given to the members of every community to prevent communicable diseases. Adequate and proper hygiene of food, environment and general body to prevent contamination of food and drinks. Mothers should attend anti-natal care in order to protect the foetus from tetanus and other related diseases. Mothers should exclusively breast-feed their child for at least the first six months.

References