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HEALTH CONSEQUENCES OF POOR HAND WASHING HYGIENE: IMPLICATION FOR PROPER HAND WASHING EDUCATION

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ABSTRACT

This paper focuses on the health consequences of poor hand washing hygiene and implication for proper hand washing education. Hand washing is the single most important method of preventing infectious disease such as diarrhoea among children and young people.Hands can be contaminated with faces, fluids, dust, germs and viruses which can be transferred to things we handle such as chairs, door knob, handles, tape holders, electronic devices, keys and the floor. Infectious disease-causing agents can enter the body when the unwashed hands touch the nose, month, eye, ears among others.Everyone has a role to play to ensure clean hands are within reach. Hand washing is the single most important method of preventing infectious disease such as diarrhoea among children and young people. Hand hygiene has been identified as the simplest and the most cost-effective method of preventing most common infections diseases that cause mortality and morbidity in human population. Some of the items used for hand washing and preventing diseases spread for illnessinclude, Soap and water, Ash and mould, Hand antiseptic, Solid antiseptic anti-bacterial soap, Alcohol-gel. In conclusions,health education greatly enhanced the knowledge, attitude, and behaviour of people, studentsand the community membersand it was recommended among others that Schools, religious centres, health facilities and other public sectors should provide hand washing stations with soap near connivences and kitchen area. This will help the public practice healthy hand washing.

KEYWORDS: Handwashing, Health consequences, Hand hygiene, Infectious diseases, Health education

Introduction

A persistent problem on the public health agenda in emerging nations is the rising burden of communicable diseases among people as a result of inadequate personal hygiene habits. The habit of washing one's hands is a requirement for maintaining the health of all citizens, including instructors and students. The World Health Organization (2023) states that good hand hygiene, when practiced at the appropriate times throughout the provision of healthcare, saves millions of lives annually.It's also a wise investment because you get a great return on every dollar you put in.In addition to protecting the health of patients and other healthcare providers, clean care is a show of respect for people who seek it. Hands can be contaminated with faces, fluids, dust, germs and viruses which can be transferred to other things such as chairs, door knob, handles, tape holders, electronic devices, keys and the floor. However, in 2023 the Global Handwashing theme is "Clean hands are within Reach". The campaign says, "Through strong leadership and collective efforts, we can close gaps in access and practice to achieve hand hygiene for all. Everyone has a role to play to ensure clean hands are within reach (United Nations 2023). Hand washing is the single most important method of preventing infectious disease such as diarrhoea among children and young people.

Handwashing is crucial in halting the spread of illnesses like diarrhea, respiratory infections, cholera, Ebola, COVID-19, and other neglected tropical diseases, according to UNICEF (2023). UNICEF Pacific considers the additional ramifications of inadequate hand hygiene as well. Children are frequently unable to attend school when viruses and diseases spread, which also results in a loss of important teaching and learning time. As a part of school health services, the goal of the school-based hand washing program is to assist students in maintaining the best possible health so they can fully benefit from their education. Hand washing practices in schools are part of school health services that address health assessments, health education, communicable disease control, record keeping, and

supervision.The purpose of the school-based hand washing practice which is a sub set of school health services is to help students at school to achieve the maximum health possible for them to obtain full benefit from their education. School health services in the form of hand washing practice deal with health appraisals, health education, control of communicable diseases, record keeping and supervision of the health of students and personnel (Kuponiyi, Amoran and Kuponiyi, 2016).

Consequently, according to Hartford Healthcare Report, these are five distinct risks that people take when they neglect to wash their hands or engage with unwashed individuals were highlighted by officials stating:

1. Airborne infections: Meningitis, Chicken Pox, and Cold and Flu: When an infected person coughs or sneezes, or even just speaks, droplets are released into the air, which is how most respiratory infections spread. Poor hand hygiene is another way that these bacteria spread. This year, the anticipated second wave of COVID-19 coincides with the cold and flu season. Have your hand sanitizer and soap handy.

2. Norovirus: A type of viral diarrhea: When hand hygiene is neglected, norovirus, the virus that causes viral gastroenteritis, can spread quickly across a facility. Typical symptoms include nausea, vomiting, diarrhea, and stomach pain.

3. Escherichia coli, or E. Coli: Although E. Coli is primarily found in the intestines, it can also be contracted by eating tainted meat or coming into contact with contaminated surfaces. E. coli can spread to everything a person touches if they do not wash their hands thoroughly after using the restroom (Michigan State research revealed that 95% of people do not wash their hands enough to destroy hazardous bacteria). Vomiting, cramping in the abdomen, and diarrhea are common symptoms for those who are sick. Pneumonia or urinary tract infections can also be brought on by certain strains of E. Coli.

4. E. Coli: Consuming tainted food—typically poultry or other animal products—can lead to unpleasant cramps and pains in the abdomen, diarrhea, and fever.In animal intestines, salmonella thrives. (Human intestines are home to it as well.) Additionally, it can be contracted by touching raw chicken or eggs at a store.

5. The Acute Hepatitis: Going back to the restroom: The common way that the virus that causes hepatitis A spreads is through food or drink contamination with feces. The ensuing inflammation and infection of the liver is frequently accompanied with nausea, vomiting, black urine, anorexia, and joint pain.

Due to a lack of awareness and practice, students are especially susceptible to neglecting basic personal hygiene practices including routine hand washing (Vivas, Gelaye, Aboset, Kumie, Berhane and Williams, 2010). A student's long-term general development is negatively impacted by inadequate knowledge, practice, and attitudes (health education) regarding personal cleanliness, such as hand washing, which contribute significantly to the high frequency of communicable diseases (Sarkar, 2013).

The two main causes of student morbidity and death worldwide, respiratory tract infections and gastrointestinal tract infections, have been successfully decreased by up to 50% thanks to improved knowledge (health education) and hand hygiene practices, particularly among children (Rabie & Curtis, 2016). In addition, studies have also shown that school children with better knowledge and practices of personal hygiene have fewer sick days and absenteeism in school and achieve higher grades (Vivas et al., 2010). School is the place where 5 health education regarding important aspects of hygiene, environment and sanitation, as well as social customs is being imparted (Dongre, Deshmukh, Boratne, Thaware & Garg, 2017).

Health is a key factor in school entry, as well as continued participation and attainment in school. The teacher is the guardian of the student in school and plays a

pivotal role in the whole process of primordial prevention. Bearing in mind that students have been consistently implicated in the spread of communicable diseases and that the school has been recognized as a vital setting for health promotion there is need to target the study area. A well organized and properly executed school health programme like school-based hand washing practice can be used to create safe environment for schools. This is to prevent infectious diseases. Prevention of infectious diseases has become one of the daunting challenges facing developing countries all over the world in varying degrees. One area of special concern is the control of diseases within the environ where people reside and live in very close proximity with each other. One of the most important vehicles of transmission of diseases in such environment is the hand, spelling the need for appropriate hand hygiene (Galiani, Gertler & Orsola-Vidal, 2012). Hand washing practice entails generality of health care process outside the school setting. This is always geared towards health promotion, prevention of diseases and prolonging life. However, it is usually expressed in the form of school-based hand washing and school-based sanitary aids that focuses on: health education, environmental sanitation, personal hygiene, adequate water supply-potable for drinking and use for frequent hand washing, provision of waste collection receptacles, and provision of toilet facilities.

Hand washing is the process of scrubbing and cleaning the hands with soap or ashes with adequate water to rinse it. This is done to remove or reduce germs load in the hands so as to make it clean for use in order to prevent hand-to-mouth infection. On the other hand, sanitary aids are all the things that are used to ensure that school-based sanitary practice is achieved and sustained. Hand washing is the single most important method of preventing infectious disease such as diarrhoea among children and young people. Hands can be contaminated with faces, fluids, dust, germs and viruses which can be transferred to things we handle such as chairs, door knob, handles, tape holders, electronic devices, keys and the floor. Furthermore, infectious disease-causing agents can enter the body when the unwashed hands touch the nose,

month, eye, ears among others. When a person with respiratory infection sneezes or coughs, the droplets that remains in his/her hands or the object used can contaminate another person upon contact. When that person touches another's hands and that person touches his or her month, eyes, ears and nose without washing their hands, the person can be infected with respiratory infections such as influenza, common cold or other related infectious diseases such 7 as the Nova Corona Virus that is currently circulating (Tettah, Teddy and Tettah-Bator, 2021). This underscores the fact that hand washing will not only promote hand hygiene, it will also prevent several other infectious diseases and acute respiratory infections.

Hand washing with soap is one of the best ways to maintain good hygiene and fend against illness. Clean hands will be accessible if people recognize that various actors can participate and assume various responsibilities (UNICEF, 2023). In 1843, while working in an obstetric yard where approximately 25% of women delivering were dying from childbed fever (Puerpenepsis), Holmes made the first discovery regarding the importance of hand washing. Holmes's investigations revealed that it was spread by doctors' infected hands during mother deliveries. But media experts rejected the proposal (Gallup and Sachs in Tettah et al. 2021). In 1847, Semmelweis proved that hand washing was effective in the prevention of infections and demonstrated that childbed fever incidence could be reduced from 2% - 3% or less when appropriate hand washing practices are done by medical workers. However, the idea was also mocked by health practitioners (Lerman in Tettah et al 2021). Despite the rocky beginning of the significance of handwashing, it has become one of the most important aspects in the protection against the spread of infections worldwide. Young people are known to be highly susceptible to diseases such as diarrheal and respiratory infections. Studies have recommended hand washing as the best means of preventing diarrheal diseases transmission, despite not being the sole route of transmission.

The importance of hand washing with soap and the other eight hand hygiene practices has grown in recent years as a low-cost yet crucial strategy for improving young people's personal hygiene and overall health. Even though hand washing with soap is one of the most often overlooked life-saving measures, it has the potential to save millions of lives. Globally, the percentage of people who observe hand washing with soap at crucial times, especially after using the restroom, has decreased from 0% to 34%. In Ghana, one out of every twelve live births ends in childhood death before the age of five, with diarrhea being a major contributing factor. Every year, 1,400 children under the age of five still pass away.

Conceptualising Hand Washing

Because of Ghana's dusty climate, outdoor lifestyle typical of tropical countries, and the types of food that Ghanaians love to cook, eat, or purchase, the idea of hand washing is extremely important and relevant there. In Nigeria, hand washing is very important because most people prefer to eat with their hands. It is preferred to consume traditional meals like banku, kenkey, and fufu with your bare hands rather than silverware. The majority of cereals and grain-based dishes, including rice, waakye, and others, are traditionally consumed with the hands rather using silverware. Hand hygiene is especially necessary because of these cultural eating customs.These cultural eating practices make it very important for people to practice hand hygiene. Hands are the main pathways to germ transmission during ill health. Hand hygiene is therefore one of the most important measures to avoid the transmission of harmful germs and prevent health care-associated infections. The main medical purpose of washing hands is to cleanse the hands of pathogens such as bacteria, viruses, or other microorganisms that can cause disease as well as chemicals which can cause harm or diseases (WHO, 2009).

The WHO recommended frequent hand washing with soap under running water by all to avoid infections, contamination and cross contamination Certain materials or substance have been listed and are used for hand washing and preventing diseases spread for illness, they include: 1. Soap and water

2. Ash and mould

3. Hand antiseptic

4. Solid antiseptic anti-bacterial soap

5. Alcohol-gel

The correct steps by the CDC on how to wash your hands with soap and water includes:

1. Wet your hands with cleaning running water (warm or hot as tolerated), turn off the tap, and apply soap.

2. Lather your hands by rubbing them together with the soap. Be sure to lather the back of your hands, between your fingers, and under your nails.

3. Scrub your hands for at least 20 seconds. (Hum the “Happy Birthday” song from beginning to end twice).

4. Rinse your hand well under clean, running water.

5. Dry your hands using a clean towel or air dry them.

6. Use your paper towel to turn off the water after you are finished.

In most cases, the easiest technique to get rid of germs is to wash your hands with soap and water. If you don't have access to soap and water, you can clean your hands with a hand sanitizer. An alcohol-based hand sanitizer with a minimum alcohol content of 60% can be used. If more than a few mouthfuls of alcohol-based hand sanitizer are consumed, alcohol poisoning may result. CDC (2015). It is important to remember that hand sanitizers may not completely eradicate dangerous substances like pesticides and heavy metals from hands, nor can they eradicate all varieties of bacteria. CDC (2015). The correct steps by the CDC on how to washing your hands using a hand sanitizer:

1. Apply the gel or alcohol-based product to the palm of one hand. It is worth reading the label to learn the correct amount required and usage instructions.

2. Rub the sanitizer in your hands together.

3. Rub the sanitizer over all the surfaces of your hands and fingers until your hands are dry. This should take around 20 seconds.

Hand washing with soap is the single most effective and inexpensive way to prevent diarrhoea and acute respiratory infections (ARI) and a common behaviour performed in homes, schools, and communities worldwide. (UNICEF, 2014). This is especially important for people who handle food or work in the medical field, but also an important practice for the general public. Hand Washing with soap impacts not just health, sanitation and nutrition, but also education, economics, and equitable access to health and sanitation resources (Global Hand Washing Partnership, 2017).

Action for Sustainability of Hand Washing Practices

The maintenance and improvement of hand washing habits point to factors including societal norms, laws and regulations, and the availability of "enabling technologies" (such as water treatment products and tippy taps).Ghana observes events like the Global Hand Washing Day, which emphasizes the importance of washing hands with soap to prevent acute respiratory infections, diarrhea, and other germ-related illnesses, once a year in addition to other nations.The Global Hand Washing Partnership created Global Hand Washing Day, an occasion to come up with, test, and duplicate innovative ideas to motivate people to wash their hands with soap at crucial moments. Global Hand Washing Day is celebrated every year on October 15th. The aim of the Day Celebration is to sensitize and engage the youth and schools in acknowledging and promoting the essence of handwashing. The youth act as agents of change and take the good practice of hygiene learned at school back into their homes and communities. The active participation and the involvement of the youth, along culturally sensitive community-based interventions which have been the motivation force is aimed at ensuring sustained behavioural change, while hand washing with soap particularly at critical moments including after using the toilet and before handling food, has been proven to be a key cost effective and lifesaving interventions (Smith-Asante, 2012). This is because when hand washing is practiced regularly, it will foster social inclusion and individual self-respect by offering an alternative to stigma and marginalization. This study therefore explores the practice and its impact on the youth in the Eastern Region of Ghana through the following; assessing the level of awareness of young people on the hand washing. Determining the benefits and significance of hand washing with soap among young people. Analysing the roles of key stakeholders in supporting hand washing with soap in the

communities and at schools. Identifying challenges associated with implementing hand washing initiative.

Empirical Evidence of Handwashing Practices

Average people in Nigeria tend to have a poor practice of hygiene, and children can copy these behaviours very easily. This is not surprising: it has been found that hand hygiene and childhood diarrhea disease is positively correlated to socio-economic and educational status, especially that of the mothers. It was evident from a study on delayed effectiveness of home-based interventions in reducing childhood diarrhea, in Karachi, Pakistan, where it was discovered that people from higher socio-economic status tended to change their behaviour faster (Luby, Agboatwalla, Hoekstra, Rahbar, Billhimer and Keswick, 2004). In a study done in Ghana on the determinants of the prevalent low level of handwashing despite the overwhelming evidence of its effectiveness in the control of diarrheal disease, socio-cultural and economic factors were found to be major determinants of the low level of handwashing (Scott, Lawson, Curtis, 2007). There is evidence that provision of piped water and sanitation can substantially reduce child mortality, however in dispersed rural settlements, this is an expensive venture. Many poor countries have, therefore focused on provision of community-level water infrastructure, such as Wells, and various traditional child health interventions that have been shown to be effective in fighting diarrhea.

Mothers and other caregivers for children frequently neglect to properly wash their hands during crucial times, either out of ignorance or cultural beliefs. To put it another way, what works for one person or community might not work for another. According to Curtis and Aunger (2009), planned handwashing interventions should therefore be situationally appropriate and tailored to the needs of the community or individual. Some people may not even practice appropriate handwashing habits just because their homes offer handwashing indications like soap and water. That may exist in some people's homes, but it does not imply that they practice proper handwashing. That might be their exclusive means of displaying their wealth. Obviously, they also require education about cleanliness. It has also been discovered that men may not be motivated to wash their hands for the same reasons as women. AccordingJudah G. et al., women's handwashing behaviour was found to be

influenced by their knowledge activation domain, whereas men's behaviour was found to be driven by disgust. Studies have also shown that having water and soap available at the right place to wash hands after toileting is associated with washing both hands with soap after faecal contact. As such, interventions that improve the presence of soap and water at the designated place to wash hands would, hopefully, improve handwashing behaviour and diarrheal incidence (Luby, Halder, Tronchet, Akhter, Bhuiya and Johnston, 2009). A study by Omotade, Kayode, Adeyemo and Oladepo (2015), on the handwashing practices of mothers in relation to environmental conditions in Ona-Ara LGA of Oyo state, showed that mothers in peri-urban areas were more likely to wash their hands at the critical times than their counterparts at the rural areas. This is, probably, because of the relative higher educational status of the women in peri- 15 urban areas.

According to a study on the prevalence, causes, and management of diarrhea in children of Nigerian market women, children of mothers in lower socioeconomic status have higher rates of diarrheal disease. Additionally, market women, even those with relatively high levels of knowledge, typically manage diarrhea at home with little success. The presence of faeces in and around the toilet area, the habit of urinating and defecating in chamber pots in dwelling units, the source of domestic water, and the careless disposal of waste were the main factors significantly associated with the occurrence of diarrhea in this community, according to a case-control study of food hygienebehaviourand childhood diarrhea in Lagos by Ekanem et al.found that the presence of faeces in and around the toilet area, habit of defecating and urinating in chamber pots in dwelling units, indiscriminate disposal of waste, and source of domestic waterwere the main factors significantly associated with the occurrence of diarrhea in this community. In another study by Oyejide, Oladepo and Oke (2014) on hygienebehaviourpractices as determinants of the occurrence of childhood diarrhea, it was found that behavioral practices, such as disposal of faeces around the house; careless handling of cleaning materials and purchase of cooked food from food vendors were associated with occurrence of diarrhea. This was in line with a different study conducted in southwest Nigeria on the topic of environmental and personal hygiene practices: risk factors for diarrhea among children of Nigerian market women. That study discovered that these

practices actually serve as risk factors for children's diarrhea. Understanding these factors that influence handwashing behaviors can be effectively used in intervention research to strengthen the handwashing habit. Application of both social and commercial marketing principles by both private and public organizations, targeted at specific groups: mothers, caregivers, older siblings, and grandmothers are a likely solution. In addition to keeping kids safe at school, a culture of frequent hand washing promotes the necessary excellent hygiene in families and communities. Methods for Increasing Handwashing Knowledge and Practice It is anticipated that regular handwashing in addition to hygiene instruction in schools will help nursery school students develop a durable habit of better handwashing. An 18-month follow-up research conducted in Karachi, Pakistan, on an earlier intervention study revealed that the intervention group had 1.5 times higher odds of having soap and water in the appropriate locations. They were also 2.2 times more likely to have better handwashing technique (rubbing their hands together for at least 3x). Soap promotion and hygiene education campaign has also been shown to have a sustained positive effect on handwashing behavior, from a campaign carried out in rural India. An educational intervention study has also been shown to result in increased knowledge of the importance of proper handwashing and positive changes in the children’s handwashing habits.

Children developed a persistent social norm of handwashing as a result of another intervention study to ascertain the impact of a pre-school intervention program on psychosocial measures of educators toward handwashing and infectious paediatric diseases (Rosen, Zucker, Brody, Engelhard and Manor 2009) After two weeks and then a year of the intervention, community intervention research conducted in a rural Kenyan community revealed a maintained awareness and practice of handwashing. Research on health education in schools and children's personal hygiene in Obionu and Ilika, Anambra state, showed that health education greatly enhanced the knowledge, attitude, andbehaviourof primary school students. These results give hope that routine handwashing in nursery schools could result in a sustained habit of handwashing and a decrease in the incidence of diarrhea among students and children in poor rural communities. However, lack of adequate facilities in schools may constitute a hindrance to the adoption of proper hygienicbehaviourby the

children and thwart health promotion efforts. The study was conducted as part of a project of the International Development Research Centre in Nigeria: Childhood Diarrhea in Ondo State (Nigeria).However, scarcity of adequate facilities in schools may constitute a hindrance to the adoption of proper hygienic behaviour by the children and thwart health promotion efforts.

Conclusion

Hand washing is the most important and cost-effective methods of prevention of infectious diseases such as diarrhoea which young people and community members are most at risk of. Global Hand Washing Initiative is dedicated to increase awareness and understanding about the importance of handwashing with soap as an effective and affordable way to prevent diseases and save lives. This paper highlights that there is high level of hand washing awareness among young people with deeper understanding of normal and proper hand washing and its associated benefits in promoting good health. On the other hand, level of awareness of the hand washing day is low among the youth in a given community. The month and the day set for the Global Hand Washing Day is not known by majority of the community members interviewed, however, they were aware of what the day is about. In the same vein, most members of the certain community, people wash their hands with soap and water after visiting the toilet or before eating whereas, few uses hand sanitizer while other do not practice this exercise. This is worrisome and has a daring implication on hygiene. health education greatly enhanced the knowledge, attitude, and behaviour of primary school students.

Recommendations

Based on this conclusion, it was recommended that:

1. Schools, religious centres, health facilities and other public sectors/places should provide hand washing stations with soap near connivences and kitchen area. This will help the public practice healthy hand washing.
2. Sensitization of member of the public should be made a priority by the federal and state governments.
3. The State government should collaborate with community members and create health awareness for community members.

4. Poor funding of handwashing facilities leads to additional healthcare cost, loss of life and therefore I recommend that government should invest in hand-washing education.
5. Community members among other individuals should practice hand washing with running water and soap.
6. Community members should imbibe the habit of use of alcohol-based sanitizers (should contain 60% alcohol).

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