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HYGIENE KNOWLEDGE AND PRACTICES AMONG BASIC SCHOOL PUPILS IN THE LA NKWANTANANG MADINA MUNICIPALITY

BY

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DECLARATION

I, MOSES AYAMGA hereby declare that apart from specific references made which have been duly acknowledged, this research dissertation is my independent work undertaken under Prof. Philip Baba Adongo. I also declare that no part of this dissertation has been submitted for an award of any degree in this University or any University elsewhere.

28-8-23

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(ACADEMIC SUPERVISOR)

DEDICATION

I dedicate this work to the memory of my late father Timothy Ayamga and my mother Alice Amaliga Ayamga for her support and prayer throughout this research. Also, to my beloved wife Mavis Sarpomaa, and children Yinenongre, Yinesakiya for their love and encouragement. Finally, my siblings.

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ABSTRACT

Background: Hygiene is the study and practice of preventing illness from spreading by keeping things clean. Poor personal hygiene practices can lead to diarrhoea, typhoid, cholera, and schistosomiasis, which are a result of the lack of resources and low level of education among children. Basic schoolchildren are most at risk because of the lack of importance attached to basic hygiene practices.

Method: This study employed a qualitative approach to examine hygiene knowledge and practices among basic school pupils. The researchers employed an expert purposive sampling technique to identify the four key informants based on their expertise. Additionally, they utilized a convenient sampling technique to choose seven participants from each basic school classroom (basic 7-9) who met the inclusion criteria and numbered them 1-24. A total of 24 participants were interviewed using a semi-structured interview guide. The researcher transcribed the data verbatim and typed them into a Microsoft Word document. The statistical software, NVIVO 11which, a qualitative software, was used to analyse the data.

Result: This study revealed that knowledge of personal hygiene among schoolchildren was moderate; however; it did not translate into practice. The study further revealed that inadequate provision of urinal and toilet facilities and other supplies such as water, soap, paper towels, and wash-hand basins hindered the practice of personal hygiene among schoolchildren. To promote personal hygiene, health clubs, physical inspections, and health talks during lessons should be implemented.

Previous studies found that knowing about personal hygiene did not mean schoolchildren practiced it. This study confirms this. Also, resources available for personal hygiene practices are inadequate making the practice difficult in schools.

TABLE OF CONTENT

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATION

Abbreviation		Meaning
CDC	-	Centre for Disease Control
GAMA-SWP	-	Greater Accra Municipal Assembly-Sanitation Water Project
GES	-	Ghana Health Service
GHS	-	Ghana Education Service
GHS-ERC	-	Ghana Health Service Ethical Review Committee
GNCRC	-	Ghana NGOs Coalition on The Right of the Child
IDI	-	In-depth Interview
IS	-	Integrated Science
JHS	-	Junior High School
KI	-	Key Informant
NGO	-	Non-Governmental Organization
PH	-	Personal Hygiene
SDG	-	Sustainable Development Goals
SHEP	-	School Health Education Programme
UNESCO	-	United Nations Educational, Scientific, and Cultural Organisation
UNICEF	-	United Nations Children's Fund
WASH	-	Water Sanitation and Hygiene
WHO		World Health Organization

DEFINITION OF TERMS

Hygiene - conditions and practices that help to maintain health and prevent the spread of diseases.

Personal Hygiene - practices that help to prevent the spread of diseases and maintain health.

CHAPTER ONE

INTRODUCTION

1.1 Background

Hygiene among children the world over continues to be a challenge, especially in developing countries. In the Lucknow district of India, the overall level of knowledge and practices on personal hygiene among schoolchildren stood at 53.8% which was deemed poor taking into account practices such as hand washing, oral care, trimming of hair, and changing of clothes (Khatoon et al., 2017).

A study conducted among schoolchildren in Dhaka, Bangladesh, uncovered that poor health among schoolchildren was a result of the lack of awareness of the health benefits of personal hygiene (Shrestha et al., 2018). A review of articles related to SDG 6.1 and 6.2 in Indonesia, which were published on the Web of Science and Scopus, indicated that hygiene-related topics studied in schools revealed a low level of knowledge on personal hygiene and practices (Satriani et al., 2022).

In a related study among students in Nigeria, only 59% of urban school children had adequate hygienic facilities compared to 22% in rural areas. They opined that inadequate facilities contributed to poor hygienic practices, resulting in the spread of infectious diseases (Admasie et al., 2022). A similar study in Darfur-Sudan reported little or no knowledge of hygiene and hygiene-related practices among schoolchildren as the major cause of the spread of diseases. In addition, the lack of personal hygiene facilities in schools has revealed poor personal hygiene practices among students (Lachance & Adda-balinia, 2017).

Accordingly, the health implications of poor hygiene practices the world over cannot be overemphasized and poor personal hygiene practices can result in diarrhoea, typhoid, cholera and schistosomiasis. The effect of infectious diseases on basic school pupils due to low hygiene

practices coupled with inadequate hygiene facilities is a cause of concern. Basic school children are mostly at risk because of the lack of importance attached to basic personal hygiene practices such as hand washing, toilet hygiene, food hygiene, sanitation of the school compound, and oral hygiene (McMillin, 2005). Also, the lack of knowledge or low level of knowledge among pupils has increased regarding infectious diseases and their adverse effects on pupils and their overall educational development (Spruce, 2021). Although everyone is prone to disease infection, children are more vulnerable because of their immature immune systems (Erasmus, 2020).

Globally, over 400 million children of school-going age are said to have a low intelligence quotient as a result of worm infestation (Dadebo, 2018). Erasmus (2020) reviewed a report from the Global Public-Private Partnership for Hand Washing (GPPHW) and identified that 80% of the world's infectious diseases were due to poor hygiene. Proper personal hygiene practices among pupils mean that they should have well-kept hair, clean and decent clothing, clean teeth, well-trimmed hair, and trimmed figure nails. The spread of infectious diseases negatively affects pupils and this impacts negatively on their performance (Spruce, 2021). Adequate knowledge and proper implementation of acquired knowledge through practice are ways to prevent and reduce the global spread of infectious diseases. For instance, the Centers for Disease Control (CDC) reported that proper hand washing with soap under running water will reduce infection among schoolchildren by about 50% (Erasmus, 2020). The right knowledge of personal hygiene and practice adds not only to the physical health of pupils also but to their mental development (WHO, 2017).

It has been documented that, the best opportunity and place for children to acquire knowledge on personal hygiene, practices, and sanitary practices is the school environment. This is because children spend close to eight hours in school within the day than at home (WHO/UNICEF, 2018). Hygiene practices among schoolchildren including proper hand

washing, skin hygiene, face hygiene, cloth hygiene, menstrual, fingernail hygiene, and oral hygiene are all influenced by the availability of hygiene facilities such as water, soap, hand washing points, toilet and urinal facilities among others (Region, 2021).

The school environment is not just a place for academic work but a place to acquire knowledge for physical and mental well-being. This will also ensure proper hygienic practices among pupils in and out of school to become health promoters in their various communities and homes (Sibiya & Gumbo, 2013). Teachers and health professionals also play an important role in educating and promoting proper health practices (Khatoon et al., 2017).

This study examines pupils' knowledge of personal hygiene and practices in a basic school in the La Nkwantanang Madina Municipality. This study also examines factors that hinder effective hygiene practices of schoolchildren and how such practices are influenced by supervision and health educators.

1.2 Problem Statement

Encouraging good hygiene habits in schools is a major challenge worldwide due to a lack of knowledge, poor practices, and inadequate facilities (Sibiya & Gumbo, 2013). The school environment, coupled with the high level of child-to-child contact among schoolchildren is detrimental to the health of children (Pewu, 2019). A study conducted in Kintampo revealed that 37.7% of schoolchildren who practiced personal hygiene often did not fall sick, and infections among them were also reduced (Almoslem et al., 2021). In addition, 23.3% showed effective personal hygiene practices, while 43% washed their hands properly after visiting the toilet. Thus, with soap under running water, 15% washed their hands with only water (Shrestha et al., 2018). According to Kojo Abanyie et al., (2021), their study found that 30% of pupils washed their hands with soap any time they needed to wash their hands, 64.4% washed their

hands before eating, 63.3% washed their hands after visiting the toilet, whiles 62.6% brushed their teeth most often. They added that a lot more needs to be done than educating pupils on personal hygiene.

The School Health and Education Programme (SHEP), which was established in 1992, has been the engine for educating and improving the health of school-going children (Ministry of Education, 2017). To promote students' hygiene practices, the GAMA-SWP initiative, funded by the World Bank, installed restrooms and handwashing stations in schools (Nkwantanang & Municipal, 2017). A non-governmental organization (NGO), Safe Child Ghana GNCRC (2014), set up hygiene clubs in some schools in the municipality to step up WASH games to teach pupils proper sanitation and hygiene practices to foster behavioural change. Health educators in the municipality reported skin rashes, dental caries, coughs, worm infestations, and menstrual hygiene problems when they visited schools every month, despite the variety of interventions carried out to improve hygienic practices. The evidence available therefore shows that knowledge of hygiene and practices among schoolchildren globally particularly in developing countries, is very low in some public schools despite SHEP activities in schools *(WASH,* 2016).

Pathogens are more likely to enter the human system through poor PH practices. Schoolchildren frequently neglect washing their hands with soap before eating, after playing, after using the washroom, and after touching surfaces, which may be a source of disease transmission. This increases the chance of contracting several communicable diseases. Children who refuse to practice personal hygiene have higher pathogen burdens, gastrointestinal infections, and microbial flora on their skin surfaces (Region, 2021).

Pewu (2019) reported that there exists a knowledge gap on WASH among school children and the resources that are to be made available for the WASH programme were hampering proper

hygienic practices. It is also evident that one of the most common hygiene practices which is hand washing among school children be it after playing, before eating, or after visiting the toilet or urinal was poor, which increased the pathogenic transmission into their bodies. Also evident is the inadequate or lack of water, soap, and wash-hand points in schools (Erasmus, 2020).

Furthermore, to the best of my knowledge, there are only a few studies on young pupils in the literature, and no official study on the personal hygiene knowledge of basic school children in the La Nkwantanang Madina Municipality. Against this backdrop, this study examined the knowledge and practices of personal hygiene among basic school pupils in Aisha-Bintu Khalifa Islamic Basic.

Additionally, the retention level and academic performance of pupils are influenced by their health status, which is greatly affected by the quality, accessibility, and availability of hygiene facilities (Msn, 2021). This study aimed to examine pupils' knowledge of hygiene and hygiene practices. This study also concentrates on contributing to the body of knowledge and providing policymakers with empirically supported findings for creating and implementing long-term school-based personal hygiene programs in Aisha-Bintu Khalifa Islamic Basic School and its municipality.

1.3 Justification of Study

Literature abounds with proof that challenges associated with personal hygiene remain a major task in developing countries and contribute negatively to the fitness of many basic school children, as an extended range of gastrointestinal infections have been attributed to infections within schools (Pewu, 2019). Other studies have revealed that unhealthy lifestyle choices have a significant influence on the rise of communicable diseases in emerging nations. To improve health in the industrialized world, health professionals' active involvement in hygiene,

sanitation, and water supply was essential. Dadebo (2018) opined that clean behaviour is influenced by knowledge, awareness, training, membership in hygiene and sanitation clubs, and parents' health status. They also reported that factors that hinder compliance with proper hygienic practices need to be addressed.

The study therefore adds to the knowledge by identifying the factors that hinder or influence compliance with proper personal hygiene practices in basic schools in the La Nkwantanang Madina Municipality. In addition, however, the link between hygiene knowledge and personal hygiene practices was not evident, as the acquisition of knowledge did not show proportionality in the practice of such knowledge by pupils. This study will again add to knowledge by identifying what influences pupils' knowledge of personal hygiene and their decision to comply in practice. Overall, the findings in this study will allow stakeholders in La Nkwantanang Municipality, the Ministry of Health, Ghana Education Service, and other relevant stakeholders to make and implement good programmes for the benefit of the pupils.

Finally, the findings of this study will pave the way for additional research on school health and adolescent reproductive health services.

1.4 Research Questions

This study sought to address the following research questions:

1. How well-versed are basic school pupils in personal hygiene?
2. What factors influence compliance with pupils' personal hygiene practices?
3. What are the factors that promote personal hygiene practices among pupils?

1.5 Objectives of Study

The objectives of the study are divided into general and specific objectives

1.5.1 General Objective

The general objective of this study was to examine hygiene knowledge and practices among basic school pupils in La Nkwantanang Madina Municipality, Accra.

1.5.2 Specific Objectives

The specific objectives of this study are as follows:

1. To explore basic school pupils' knowledge of personal hygiene.
2. To identify the factors that influence compliance with personal hygiene practices among pupils.
3. To assess factors that promote personal hygiene among pupils.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A healthy childhood leads to a healthy adulthood; hence, the basis of a healthy lifestyle mostly depends on the education and habits that are developed during infancy. A person's personality is shaped during their formative years, and they also form favourable attitudes toward health and various health services. This chapter reviews the research on students in underdeveloped nations who practice good personal hygiene and good health.

2.2 Personal Hygiene

Hygiene according to WHO (2016) refers to the "conditions and practices that help to maintain health and prevent the spread of diseases". These practices are related to maintaining cleanliness and good health to protect ourselves from the environment which could harm our health. Application of hygiene principles and sanitary precautions must be ensured to maintain health. The term "hygiene" also refers to the study and application of keeping things clean to stop the spread of disease. It also refers to a notion that describes a collection of actions taken to maintain and promote good health. Although it is most frequently connected with illness prevention strategies, this idea is relevant to medicine as well as to personal, professional, and activities influencing most facets of human living. The development of good values and attitudes about health and the utilization of health services is based on the lifelong responsibility for maintaining personal cleanliness that is set down from childhood through healthy adulthood (Nurudeen & Toyin, 2020). Personal hygiene according to the World Bank is defined as all practices that ensure the body's cleanliness, promotion, and preservation of

good health, and serve as public health measures to prevent diseases (Kouakou et al., 2021). They added that personal hygiene means taking care of every aspect of one's body by keeping it clean to the best ability. Washing hands and brushing teeth are two examples of personal hygiene practices that keep germs, viruses, and fungi out of our bodies. Additionally, these behaviours will support us in maintaining an active body and mental wellness (Lal & Kavitha, 2016).

In another study, personal hygiene was defined as practices that help to prevent the spread of diseases and maintain health. The study further indicated that personal hygiene involves regular bathing, washing the hands when necessary, washing one's clothes, proper hair care, regular brushing of the teeth, cutting the nails, and caring for the gums (Sihra et al., 2018).

Personal hygiene is the practice of looking after oneself. It also refers to the act of keeping one's body and clothing clean to enhance general health and well-being. Personal hygiene involves the maintenance of bodily components such the hair, eyes, nose, mouth, teeth, skin, and armpits among others (Tamiru et al., 2017).

Simply defined, personal hygiene is the act of making the body clean by bathing, caring for teeth, caring for nails, caring for the feet, caring for the skin as well as ears and nose (Balogun, 2015). These actions are focused on preventing illness and helping individuals to recover quickly should they fall sick. Thus, personal hygiene means caring for every part of one's body and not limiting it to the visible part of the body such as the hair, teeth, skin, eyes, and nose.

2.3 Personal Hygiene Knowledge

Knowledge of personal hygiene will lead to a healthy life and build a positive attitude in children to practice personal hygiene. Students' health can be greatly improved, and illnesses can be prevented with good personal hygiene awareness. However, there are many things we

can do on a personal level to maintain our health, such as maintaining proper cleanliness and preventing the spread of disease-causing organisms in the environment. Out of the total, 93% of respondents said lack of education is responsible for practicing poor personal hygiene (Ullah, 2020)

Lal & Kavitha (2016) opined that poor knowledge of personal hygiene has been reported to harm school children's long-term social and mental well-being while awareness of proper knowledge of hygiene determines the level of sustainable personal hygiene practices. Again, in their study which was conducted among school children in Warangal-India, they reported that 56% of school children reported getting awareness of knowledge on personal hygiene from their teachers, 24% reported getting awareness through books and 20% reported getting hygiene knowledge awareness from their parents. In another study conducted in Ambassadors College Ile-Ife, Nigeria, on the source of knowledge on personal hygiene, parents accounted for 43.5% followed by books (17.4%), friends (12.7%), churches (13%), and mosques (13%), with parents, books, and friends making up the main source of knowledge (Nurudeen & Toyin, 2020). In another study among school children of Bikaner City of Rajasthan, 71% of respondents reported knowledge of personal hygiene from school followed by parents and media (Shekhawat et al., 2019). This is in line with a study by Kyilleh et al., (2018) who discovered that menstruation gave women a greater understanding of personal cleanliness. Similar findings from Nurudeen & Toyin (2020) study showed that, when it came to the knowledge of personal hygiene, female students scored much higher on average (93.4%) than male students (83.7%) concerning personal hygiene. Research from countries such as India and UAE draw a similar find but findings from Egypt disagree. Findings from Egypt conclude that the knowledge discrepancy could be due to family background, socio-cultural differences and physiologically, the higher need for cleanliness among female adolescents.

In a survey in Punjab-Pakistan, out of 400 students who participated, 96.6% responded that poor hygiene awareness harmed personal hygiene practices. It was evident in another study that, 71.3% of respondents believed that accurate knowledge about personal hygiene habits was crucial for their implementation (Ullah, 2020). It is however important to note that for learning healthy habits and practices, school days are the best time. This is because habits do not change as the children age. The physical body changes during adolescence, including the beginning of periods for females and the growth of body and pubic hair. As a result of these changes in adolescence, the personal hygiene of children needs to improve (Odigwe, 2015).

Schoolchildren frequently suffer from poor health due to a lack of knowledge about personal hygiene. Acute gastrointestinal problems, skin ailments, helminthic infestations, and dental diseases are frequently linked to poor hygiene. One of the most frequent issues affecting students is communicable infections. Infections are primarily brought on by the use of contaminated or hazardous water, inadequate sanitation, and careless hygiene practices (Meher & Nimonkar, 2018).

In a primary school study in Magboro Community, Ogun State Nigeria, it was established that school-age children face the risk of not understanding what personal hygiene is and the critical function it plays in maintaining health. A different study found that children of school-going age with greater personal hygiene knowledge and practices have fewer sick days and absences from school than their peers with less knowledge (Rajbhandari et al., 2018).

Furthermore, good personal hygiene practices, promotion and education have a great influence on reducing the prevalence of communicable diseases among school-aged children both at home and in schools (Almoslem et al., 2021). In a study conducted among students in Kenya, it emerged that the adequate provision and installation of hygiene facilities coupled with hygiene education improved personal hygiene practices such as hand washing in schools

(McMichael, 2019). Studies have shown that the level of knowledge and hygiene practices of students in low to medium-income countries like Ghana is low and must be improved (Prah et al., 2018).

2.4 Personal Hygiene Practices

Personal hygiene practice largely plays a vital role in maintaining the health of individuals and in this case school children. Communicable gastrointestinal diseases such as diarrhoea, dysentery, typhoid and cholera can be prevented through personal hygiene (Balogun, 2015). Even though access to water and sanitation facilities is directly related to the practice of hygiene, there are still many areas where these facilities are inadequate, which makes it harder for individuals, especially students, to maintain their cleanliness (*UNICEF*, 2018). Thus, personal hygiene means keeping one's body clean and this includes but is not limited to the hair, teeth, skin, cloth, nails, hands, and every aspect of the human body that ensures health (Ahmadu et al., 2013).

2.4.1 Hair Care

One of the most important practices in personal hygiene is hair care. The hair needs much attention as unkempt hair serves as a ground for hair lice and dandruff. Washing hair properly with soap or shampoo, brushing hair and trimming hair are some of the measures that must be taken to ensure that one's hair is healthy. Poor hair hygiene can lead to a variety of health issues. Among these issues include dandruff, seborrhea, and hair lice (Sridhar et al., 2020).

2.4.2 Oral Hygiene

Oral hygiene according to Temitayo, (2016) refers to the care of the mouth and the teeth. It is achieved by going to the dentist, brushing the teeth, and flossing the teeth. Oral problems arise if the mouth is not properly cared for. Tooth decay may result because of bacteria in the mouth

because of a sugar diet and susceptible gum. Dental caries, periodontal diseases, dental calculus, and malocclusion are the main diseases of the oral cavity. All occur because of bacteria found on gum, on teeth and in between teeth. The teeth and mouth must be brushed correctly and properly twice a day with a toothbrush and toothpaste. That is morning and evening before bed to remove plaques that cause tooth decay. The mouth must regularly be rinsed properly after every meal (Temitayo, 2016). To ensure a child's healthy development, dental hygiene, and maintenance, correct instruction is required. The school-age years are when permanent teeth erupt. The supervision of children's health during this time must include maintaining good dental hygiene and paying regular attention to dental cavities. The proper way to clean your teeth and the part fermentable carbohydrates play in the development of dental caries should be taught or emphasized. Even though using a toothbrush greatly raises the level of oral hygiene adequacy, mouthwashing and dental flossing are also important contributors (Profile, 2017).

In a survey of oral hygiene habits among 406 students at a primary school in Lilongwe, Malawi, the majority brushed their teeth (91.4%), although some used their fingers (9.8%) and some simply rinsed with water (10.3%). Twice or three times per day was the average number of times people brushed their teeth (48.7%). Collectively, 76.6% of the students practiced brushing their teeth twice daily. Students in urban (95%) compared to rural schools were substantially more likely to use toothbrushes. Only over a quarter (24.9%) of all students brushed their teeth before going to bed, but most students (91.9%) brushed their teeth before breakfast (Mlenga, 2021). A similar finding by Rajbhandari et al., (2018) indicated that 38% of respondents brushed their teeth before going to bed. In the same report, 37.2% of respondents visited the dentist once a year, 53.7% also visited when they had a problem and 9.2% never visited the dentist.

2.4.3 Skin Care (Bathing)

The skin is an elastic wrap that protects the human body from environmental influence and is an important part of the human body that is very sensitive to diseases. The most common skin disease that affects the skin is scabies. Research reveals a wide spread of this disease in developing countries. This makes skin care an aspect of personal hygiene that requires attention. Good personal hygiene is needed to maintain clean skin and prevent diseases (Wijayanti & Ainiyah, 2019). In a study conducted by Ullah (2020), 61.5% of school children interviewed took their bath once a day while 57.5% took their bath twice a day. Rajbhandari et al. (2018), in their study among secondary school students, noted that 39 students representing 11% of total respondents bathed every day while 75 of the respondents representing 22.1% bathed every other day and the remaining 225 representing 66.4% bathed at least once a week.

2.4.4 Hand Hygiene

In addition, hand hygiene is another important aspect of personal hygiene that must be taken seriously. Washing hands regularly and properly has proven to be a sure way to prevent many communicable diseases that are picked by the hand. Moreover, schools with hand washing facilities as well as water and soap have been seen as promoting proper hygiene practices (UNICEF, 2021). Water makes up 52% of the hand washing ingredients, while soap makes up 48% of personal hygiene practices. A study among students revealed one hundred per cent of the students washed their hands before eating while 66% responded yes to hand washing after using the restroom. Also, 34% responded no to washing their hands after using the restroom (Lal & Kavitha, 2016). The prevention and management of several communicable diseases depend heavily on regular hand washing with soap and water. Hands should be cleansed properly before and after each meal. Hands must be cleansed with water and soap after using the restroom and urinals to prevent infections spread by faecal-oral channels (Balogun, 2015).

2.4.5 Nail Care

Nail care is a component of personal hygiene practices that must be taken seriously by pupils as unkept nails especially fingernails pick up a lot of gems and bacteria which are invisible to the eye. It is recommended to avoid long nails wherever feasible and avoid cutting fingernails with the teeth to prevent infection. For trimming nails, it is preferable to use personal clippers or fresh blades (Shilunga et al., 2018). In research on personal hygiene conducted among primary school children in Sudan, 60.1% said they routinely pruned or clipped their fingernails, compared to students in an Indian survey where 76.92% said the same (Elmadani et al., 2021). Also, among primary school children of Namibia, almost half of the respondents (46.7%) had dirty fingernails, and 16.9% had very dirty fingernails. Furthermore, 14.9% of learners had very clean figure nails as compared to 21.6% who had clean fingernails (Shilunga et al., 2018).

2.4.6 Clothes Hygiene

Clothes hygiene considers the practices that prevent the spread of diseases through clothes. Items most likely to spread such disease include but are not limited to underwear, handkerchiefs, personal towels and clothes. In a study among schoolchildren in Warangal–India, 85% of students stated they maintained tidy and clean clothing, whereas 15% did not maintain clean clothes. The data also showed that weekends were the days when 65% of students washed their clothes, with the remaining 35%washing every day (Lal & Kavitha, 2016). In a similar study in Sudan among primary school children, 77.2% reported wearing clean clothes to school while a study in India reported 12.5% (Elmadani et al., 2021). Another study among schoolchildren in Namibia revealed that 17.6% of learners had very dirty clothes, 18.7% had dirty clothes, 32% had clean clothes and 31.8% had very clean clothes (Shilunga et al., 2018). Good personal hygiene among students includes proper care of one‘s clothes, uniforms, underwear, towels and handkerchiefs (Nuamah et al., 2020). The majority of students demonstrated moderate to low levels of personal hygiene practices while having adequate

knowledge, and it is necessary to use effective educational strategies to encourage these teenagers to improve personal hygiene habits. The majority of earlier studies on students' cleanliness habits in Ghana were conducted with primary and secondary school pupils. These investigations discovered a lack of sanitary facilities and poor hygiene practices among pupils in the majority of the schools visited (Prah et al., 2018).

2.5 Importance of Keeping Personal Hygiene

Keeping proper personal hygiene will not only result in a healthy mind in a sound body but also raise the mental alertness of pupils in their studies thereby improving their academic fortitudes. According to Msn (2021), children make up one-third of the world's population and represent a vulnerable group, therefore, need to be inculcated in the best health practices to contribute to the building of a healthy nation. Also keeping proper personal hygiene is an important part of a pupil's life as it acts as a preventive measure against infectious and various diseases. They added that, when pupils are taught basic personal hygiene skills, they get enlightened in their health practices ability at a young age. Therefore, good personal hygiene habits are crucial for limiting the development of infectious diseases such as helminthiasis, eye infections, lung infections, skin infections, and food-borne illnesses as well as novel pathogens that might cause epidemics (Sihra et al., 2018). To improve their health and enable them to learn, live, grow, and fulfil their respective roles in their diverse schools and communities, students must practice good personal hygiene in school (Elmadani et al., 2021).

Hand washing and personal hygiene education programmes have been found to significantly lower the number of incidents of diarrhoea and student absence rates. Additionally, the hand-washing intervention has dramatically increased students' understanding and behaviour, enabling them to talk with their parents about these practices (Almoslem et al., 2021).

Around the world especially in developing countries, to many who do not have enough resources and modern technology to tackle diseases, education on good personal hygiene is a sure way to minimize or reduce the risk and impact of outbreaks of infectious diseases (Nurudeen & Toyin, 2020). The practice of proper personal hygiene is one of the most important components of our everyday life. Personal hygiene is the practice of maintaining one's physical cleanliness. Personal hygiene education and excellent hygiene habits are crucial components of healthy living and the reduction of disease-related risks. These daily activities, actions, and mandated responsibilities, such as washing hands with soap before meals and after defecation, brushing teeth at least twice a day, especially after breakfast and after meals, taking regular baths with soap, keeping nails short, and exercising frequently are all directly connected to these health risk factors (AshaRai et al, 2019).

2.6 The Health Effects of Neglecting Personal Hygiene Practices

A consistent relationship between poor personal hygiene, such as not washing your hands, and gastrointestinal infections has been revealed by studies. Poor personal hygiene practices have also been linked to the development of some respiratory infections, such as the flu and the common cold. According to additional research, children are the most vulnerable group to communicable diseases, which are spread by people with poor personal hygiene (Sihra et al., 2018). Lack of awareness of the health advantages of personal hygiene leads to poor health among school children. Poor personal hygiene has been linked to cross-microbial transmission, gum infections, an increased rate of infectious diseases, the occurrence of food-borne outbreaks, and reproductive tract infections in several studies. These have been linked to a lack of understanding of personal hygiene and its related practices thus school children are frequently affected by personal hygiene deficiencies (Temitayo, 2016).

The lack of improved WASH facilities may also contribute to school absenteeism among learners because WASH-related illnesses, reduce school performance, increase drop-out rates, and cause delays in academic and social development. WASH-related illnesses spread faster in the environment and are infectious (Shilunga et al., 2018). The adoption of personal hygiene and fundamental sanitation measures can stop deaths from diarrhoea. The simple act of washing hands with soap and water destroys different microbes causing diarrhoea diseases (Jordanova et al., 2015).

In another study in Egypt on WASH, findings confirmed the point that, lack or poor personal hygiene fuels diarrhoea illness in developing countries. Thus, hygiene is largely influenced by the availability of water and sanitary facilities (Rahman et al., 2022). So, it stands to reason that basic school children are far more likely to practice proper hygiene in settings where there is a sufficient supply of water and sanitary facilities.

Most of Ghana's top ten diseases are linked to water, sanitation, and hygiene. In Ghana and throughout Africa, significant rates of morbidity are associated with diarrheal illnesses, skin infections, urinary tract infections, respiratory tract infections, and worm infestations. The pollution of the environment and poor hygiene habits are the main factors in the spread of these diseases. Additionally, many illnesses progress into ailments that harm children's growth and development (Tawiah, 2017).

2.7 Prevalence of Personal Hygiene Practices in Basic School.

In poor countries, it is still relatively rare for people to practice personal hygiene, and this is especially true for school-age children. The behaviour of family members, friends, and things shown in the media and educational system are just a few examples of the many determinants that have an impact on students' hygiene (Nurudeen & Toyin, 2020). According to research

conducted among Ethiopian school children, although 76.7% of the students were aware of the value of washing their hands after using the restroom, just 14.8% did so. A study conducted among caterers and food vendors at the University of Ghana, Manko (2018) revealed that food vendors reported observing poor knowledge of food hygiene among students and that students did not pay much attention to washing their hands with soap before and after eating.

Poor hygiene facilities and the lack of resources like soap are required by students to properly practice personal hygiene. Students were observed not always practicing following their knowledge. Children who attend schools with proper hygiene facilities and resources are better equipped to integrate personal hygiene instruction into their daily lives and can be successful change agents in their own families and the larger community (Shilunga et al., 2018). For students to develop strong personal hygiene practices that can last a lifetime, basic schools must have an adequate water supply. Only when all the required supplies are available are good hygiene practices simple to adopt and sustain (Balogun, 2015). The cost of implementing the required WASH services which will encourage personal hygiene practices is high in most developing countries. As a result of a lack of awareness of the importance of such WASH facilities, lack of government policies, inadequate budgeting and financial resource allocations, hygiene practices are impeded (McGinnis et al., 2017).

2.8 Hygiene and Available Resources in Basic Schools

Schoolchildren will be more empowered to adopt hygienic practices that will improve their health when they are given the resources they need to practice personal hygiene, including essential knowledge and skills (WHO, 2016).

Personal hygiene resources and facilities should be made available to students, and this is the duty of the community, the school, and the parents. Materials essential for personal hygiene

should be available to students. Before they can properly practice personal hygiene, students require a variety of materials at home and in the classroom. A good bathroom, consistent water supply for drinking, and washing hands and other objects like plates, cups, utensils, water bottles, towels or napkins are among some of the supplies needed to enforce good hygiene. Additionally, there is a need to keep clean classrooms and well-kept areas or playgrounds for the students (Darzi, 2018). The entire school and the student's learning environment must be safe. This covers the provision of clean water and restrooms. Another important aspect of encouraging student personal hygiene is through the provision of school clinics, safe and nutritious meals, and micronutrients to fight diseases (Nutbeam D, 2015).

2.9 Hygiene Policies and Standards in Basic Schools

From the literature, numerous research on school health education shows that the development of communicable diseases is caused by unsanitary living or a lack of hygienic safeguards (UNICEF, 2021).

The evidence available suggests that schools continue to play a crucial role in looking out for students' health. This includes engaging stakeholders in the policy environment, holding health education programmes, and carrying out actual health promotion initiatives. Schools Health, Sanitation and Safety Program guidelines were established by the Ghana Education Service. All levels of basic education are to have expanded and improved health and sanitary conditions. The goal of the policy is to make sure that schools adhere to a reasonable national minimum standard for health, sanitization, and safety. Additionally, it is to guarantee the availability of sufficient basic health care resources, including potable water, restrooms with accommodations for students with disabilities, and first aid supplies (GES, 2012).

2.9.1 School Health Education Programme

One of the key strategies for improving health promotion and education among adolescents, according to the Ghana Education Service, is through school-based health education programs. Then, Ghana Education Services formalized SHEP as a separate division. GES and GHS are in charge of implementing the initiative. According to GES (2012), SHEP is aimed at children, students, and teachers in public and private elementary schools, including preschools, primary and junior high schools, as well as special schools, students, students, and teachers in public and private senior high institutions, students, students, and teachers in teacher preparation colleges, and school community workers.

According to Lachance & Adda-balinia (2017), the SHEP consists of four key interventions: a safe and healthy school environment, disease prevention and control, skills-based health education, and nutrition control and education. The GES school health policies encourage the formation of health committees to supervise hygiene practices and sanitation in schools. This includes ensuring the provision of drinking water, ensuring proper waste disposal, and supervising the activities of food vendors' clean environment in schools. The various school health committees formed are overseen by the district School Health Education Programme (SHEP) coordinator in GES who links with GHS to promote policies and educate school children on health-related issues (Tawiah, 2017)

2.9.2 WASH in Basic Schools

The WASH program is an initiative of UNICEF with support from both local and international organizations to provide public basic schools with the needed sanitary facilities to aid their hygiene practices. Some of the facilities provided include toilets, hand washing points and washrooms. Leading WASH initiatives around the world with a focus on poor nations in Asia and Africa are multinational organizations like UNICEF and WHO, among others. According to studies, children miss 272 million school days a year because of diarrhoea. It has been

demonstrated that having access to water and sanitation facilities in schools helps school children experience diarrhoea and hand-washing-related illnesses as a result of improved hygiene practices (WHO & UNICEF, 2018). Having a regular supply of clean water for washing hands with soap helps greatly in their personal hygiene practices thereby reducing diarrhoea-related diseases and respiratory infections (WHO/UNESCO, 2021). The availability of clean water and soap for hand washing can help to reduce infections by almost 30%. Unfortunately, many schools in developing countries rarely make available adequate hygiene facilities and those schools that do provide such facilities have issues with the adequacy of those facilities, accessibility by pupils and maintenance challenges (Berriós-Torres et al., 2017).

2.9.3 Implementation of Personal Hygiene Practices in Basic Schools

The knowledge and attitudes of students can have a significant impact on the effectiveness of hygiene promotion and practice in schools. Encouragement of improvements in personal hygiene practices demands expertise because it is a very personal topic (Tamiru et al., 2017). Only a combination of education on water, sanitation, and hygiene, as well as the provision of appropriate infrastructure, may enable better hygienic habits and practices (Shilunga et al., 2018).

To contain all pertinent and up-to-date topics learned through studies, the school curriculum must include relevant parts on personal hygiene. Teachers must also make sure that they cover the entire curriculum in the allotted period. By providing students with proper instruction and information on health-related topics, teachers can help school children's health. This should not only involve health teachers but all of the school's instructors so that everyone may deal with the student's hygiene and other health issues in their classes as best as they can (WHO & UNICEF, 2018).

Students should be engagingly given personal hygiene instructions by including topics on personal hygiene in disciplines like integrated science, nutrition, biology, and health education. External experts like health educators and promoters can engage school children to discuss personal hygiene issues. To simplify things for the students, topics should be presented that range from the well-known to the unknowable to increase the understanding of hygiene-related issues (Balogun, 2015). Personal hygiene topics presented to school children should be made engaging in a variety of techniques like role-play, demonstration, and field trips. Teachers should have excellent social relationships with adolescent school children considering that this age group values and confides in people who are approachable and reliable (WHO/UNESCO, 2021).

The opinions of parents, teachers, and peers significantly influence their hygiene routines and behaviours (Antwi-Agyei et al., 2017). Children learn about proper hygiene and how to wash their hands at school, which is one of the most crucial places for hygiene practices. Regular hand washing, especially after using the restroom or handling potentially contaminated objects, and bathing are all part of good personal hygiene. There are physical changes that occur during adolescence, including the beginning of periods for females and the growth of pubic and body hair. Keeping to the right hygiene practices when one is in danger of contracting an illness and washing clothes frequently, especially underwear is a sure way to maintain health (Odigwe, 2015).

A survey with 400 participants found that 93% of the respondents, or nearly everyone, believed that societal barriers affected their hygiene practices. These results are consistent with those from a previous study and that many factors influence personal hygiene practice, including developmental level, cultural background, socioeconomic status, personal habits and health status (Appiah et al., 2018).

2.10 The Theoretical and Conceptual Framework

The conceptual framework is based on the PRECEDE-PROCEED model which is credited to Green and Kreuter as an ecological approach to health promotion. It has two parts. The PRECEDE stands for Predisposing, Reinforcing, Enabling Constructs in Education Diagnosis and Evaluation while the PROCEED stands for Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development. The PRECEDE part was first developed and introduced in the 1970s. According to Green and Kreuter, hygiene can be explained because of several factors that affect one's behaviour. It is based on the ideology that educational diagnosis of a problem is very important before the implementation of a developed intervention. The PRECEDE model was developed to help with problem-solving and health education planning Green and Kreuter (Fertman & Allensworth, 2010). This model was modified by Balogun (2015) for their study as a diagnostic tool to pinpoint the causes of a lack of specific personal hygiene behaviours. Additionally, it was adopted to assess secondary school students' knowledge, perceptions, and behaviours towards hand washing and to discover ways to enhance personal hygiene procedures. Similarly, Dube & January (2012) used the educational and organizational diagnosis from the model to examine the factors that led to poor water sanitation hygiene among primary children in Chitungwiza in Zimbabwe. In another study, this model was used to ascertain people's hygiene behaviour towards cholera in Cotonou-Benin (Moussiliou et al, 2015). The model is made up of five phases which include Social Diagnosis, Epidemiological Diagnosis, Behavior and Environmental Diagnosis, Educational and Organizational Diagnosis and Administrative and Policy Diagnosis.

For this study, the researcher adopted the educational and organizational diagnosis construct which has three factors to achieve the objectives under study. That is the Predisposing, Reinforcing, and Enabling factor. The conceptual framework attempts to explain the influence of various potential factors on pupils' hygiene practices.

The predisposing factors in this study are those factors that provide pupils with a justification for behaving in a certain way. These factors might affect pupils' hygiene behaviour, including knowledge, attitudes, perceptions, readiness to change, and beliefs. How pupils take care of the various parts of their bodies will be influenced by their personal hygiene habits or behaviour based on their knowledge, perceptions, and attitudes

The variables that encourage and make it easy to engage in a desired behaviour are known as enabling factors. To allow for optimal hygiene practices by schoolchildren, these elements must be available and accessible. They consist of the facilities, materials, money, and other resources required to make sure the right personal hygiene practices are followed. The model can be used to determine how these facilitators in the school impact schoolchildren's behaviour and practices, which include caring for their teeth, hair, nails, hairs, skin, clothes, feet, and eyes which ultimately improve their health.

The reinforcing factors are elements or agents that impact a pupil's decision to engage in a specific behaviour. These elements support repeating or maintaining desired behaviour. Parents, health educators, teachers, and supervisors are among them. These agents provide a framework for teaching pupils and support their hygiene habits. These agents provide pupils with the information that influences their knowledge, attitude, and perception to improve their behaviour. This model will make it easier to identify all the parties involved who are not supporting personal hygiene practices in schools and how advocacy can be used to solve the issue. The model in this study is utilized as a tool to identify factors that contribute to poor personal hygiene practices among pupils, to identify facilities, resources and materials that are available, as well as the role that authorities play in promoting correct personal hygiene practices.

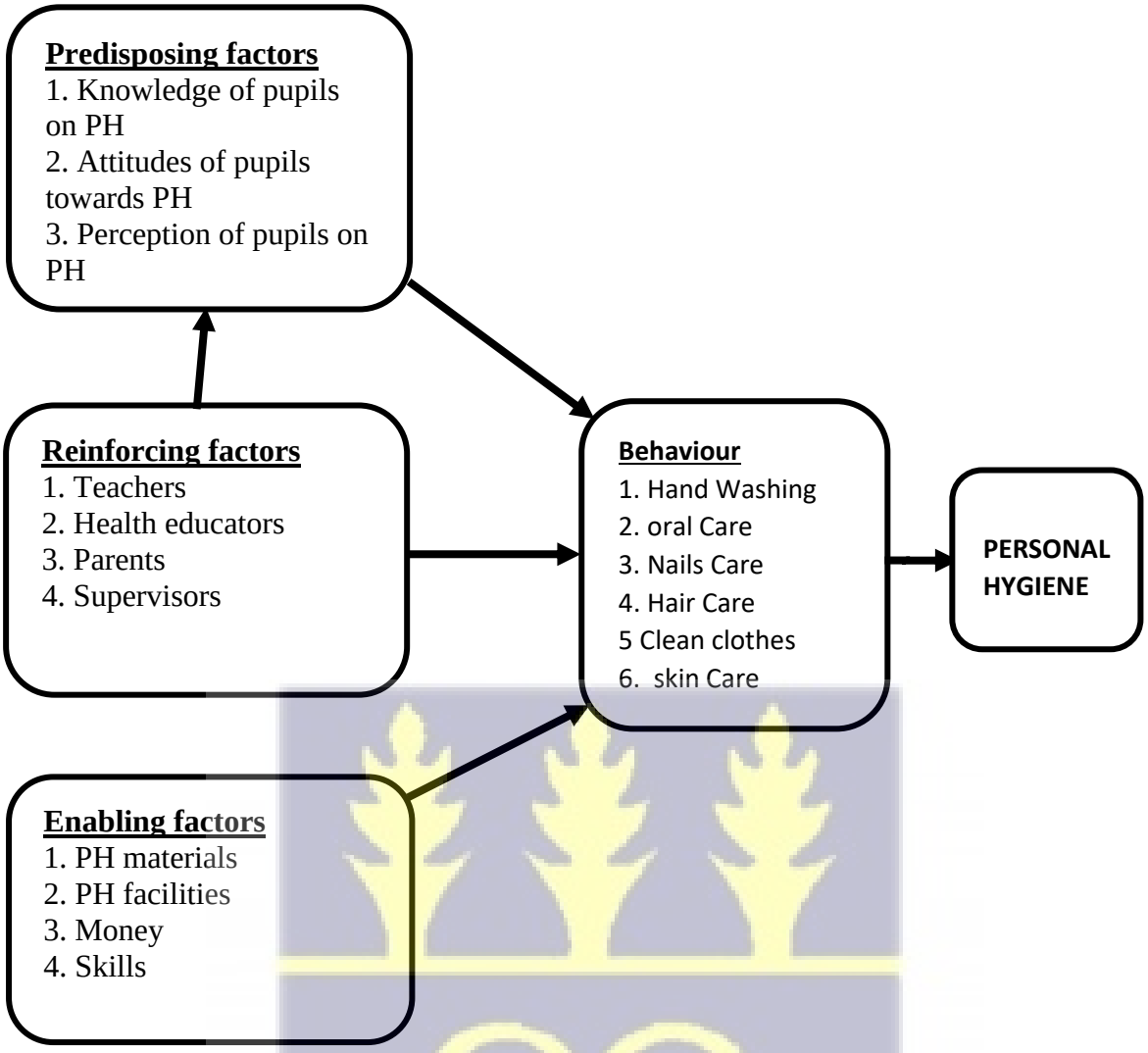


Figure 2.10 Adapted from the Precede-Proceed Model by Kreuter and Green

2.11 Gaps in the literature

This section presents a summary of the gaps in the literature on hygiene knowledge and practices.

First, literature and findings from earlier studies failed to identify training methods that could increase pupils' knowledge of personal hygiene and practices. Other studies also indicated that resource gaps hinder the practice of personal hygiene but failed to identify how to get these resources to improve hygiene practices (Oman, 2020).

In addition, these studies focused largely on community-based hygiene knowledge and practices with limited focus on school children especially those at the basic schools (Balogun, 2015).

Furthermore, many basic schools are not financially sound as such researchers failed to address how to obtain funds to adequately and sufficiently provide supplies necessary for personal hygiene practices in schools (Hotor, 2017).

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter provides a general description of the study region, technique used, study design, and method for gathering data from respondents in the study area. Along with the data analysis process, it also covers the ethical concerns that were taken into account before the study was conducted.

3.2 Study Design

Using a case study design, the researcher utilized a qualitative research methodology to gather data. According to Ridder (2017), a case study is a research approach that is used to gather in-depth information about a person, group of people or a unit, which is aimed to generalize over several units. This study design was appropriate because it allowed the researcher to gather concrete, contextual and in-depth knowledge from pupils about their hygiene practices. Hence it allowed the researcher to collect data on pupils' experiences in their natural context. A case study research also aided the researcher in obtaining vital and useful information through interaction with respondents as it ensured a detailed assessment of issues to the objectives of this study (Gammelgaard, 2017).

On the other hand, qualitative research is a type of research that explores and provides deeper insights into real-world problems. This was adopted to allow respondents to provide in-depth information on students' personal hygiene and health practices, which would have been challenging to record using a quantitative research methodology (Chu et al., 2017).

Additionally, it was useful to use a qualitative research approach since it allowed the researcher to concentrate on fewer respondents who gave rich and important information. Also, a

qualitative research approach was employed to allow the researcher to engage with participants and get the necessary information in the contexts where students encountered it. The research process entails developing study questions, data collection in the participant's environment, inductive analysis of the data, building from specifics to general themes, and interpretation of the data's significance. Understanding is mostly achieved by observation and analysis of people's behaviours, statements and records in qualitative research. The patterns of the meanings derived from the observation are presented using the participants are then presented using participants own words (Creswell & Poth, 2012).

3.3 Study Area

One of Greater Accra's 29 districts is La Nkwantanang Madina Municipality in Ghana. The Akuapim South District, Kpone Katamanso Municipal District, Accra Metropolitan District, and Ga East Municipal District are all about the district's northern, eastern, southern, and western borders, respectively. The overall area of the country is 70.887 square kilometres. Its neighbours to the west, east, south, and north are the Ga East Municipal Assembly (GEMA), Adentan Municipal Assembly (AdMA), Accra Metropolitan Assembly (AMA), and Akwapim South District Assembly, respectively (Nkwantanang & Municipal, 2017).

According to the 2010 census, the population of the La Nkwantanang Madina Municipal District is 111,926, with 54,271 males and 57,655 females (GSS, 2014). The current population according to the 2021 census stood at 244,676 with 120,846 males and 123,830 females (GSS, 2021).

In the municipality, trade, agriculture, services, and manufacturing make up the four main economic sectors. In the municipality, trading is the primary economic activity, with the Madina market serving as the economic centre. The service sector includes industries like banking, hospitality, telecommunications, graphic design, and professional services, among

others. It also includes topics like personal care and beauty. Producing crops and raising cattle is the main agricultural activity in places like Teiman, Ayimensa, Otinibi, and Oyarifa.

There are 39 healthcare facilities in the Municipality. Of these, two are government polyclinics, two are medical facilities, and two are Community Based Health Planning (CHPS) facilities. To help community health professionals reach out to residents and provide them with prompt care, the municipality established 10 CHPS zones. The Madina Polyclinic, along with one nearby Rawlings Circle, serves as the neighbourhood's primary referral hospital.

The public education system in the Municipality consists of twenty-six (26) primaries, twenty-five (25) junior high schools, nineteen (19) kindergartens, and three senior high schools (Plan, 2017). It has its administrative capital as Madina.

3.4 Study Population

The study population is made up of school pupils from Aisha-Bintu Khalifa Islamic Basic School. It is a public basic school located in Otinibi a community in the La Nkwantanang Madina Municipality. The school is made up of pupils from kindergarten to junior high. The total population of the school is 628 pupils. In this case, the study population refers to junior high school pupils from basic 1, 2 and 3 aged 12 to 18 years with a total population of 149. The study population will also include the SHEP's coordinator, a teacher, and a caterer from the school under study. The researcher considers them vital for this study because of their rich expertise and the important role they play in the school.

3.5 Sample Size

Twenty-four participants were sampled and interviewed until no new information was gathered or discovered. Saturation occurred after twenty-one (21) participants were interviewed. Three

more interviews were conducted to ensure that no new information was derived. According to Marshall et al. and Guest et al., there is a moment when gathering fresh qualitative data does not change much or does not change at all and just yields data that has already been discovered (Baker et al., 2018), at this point, data saturation has sets in.

3.6 Sampling Technique

Two sampling techniques namely purposive sampling and convenient sampling techniques were employed to recruit participants who were willing to participate in the study. An expert purposive sampling technique was used to select key informants. That is the SHEP coordinator, integrated science teacher, a food vendor, and the headteacher based on the high level they possess of personal hygiene. This allowed respondents to share their opinions on the subject under study. The researcher also employed a convenient sampling technique to select respondents for the study who were identified with numbers 1-24. This technique allowed the conscious selection of respondents from the targeted population.

3.7 Inclusion Criteria

Pupils who were eligible for this study were selected from the junior high school. That is basic 7 to basic 9 and between the ages 12 -18. Also, their parent consented to their participation in the study.

3.8 Exclusion Criteria

Respondents who met the inclusion criteria, but whose parents did not sign the consent form were excluded from the study.

3.9 Data Collection Technique

To gather data, an English-language structured in-depth interview guide was created. An in-depth interview is a qualitative research technique that is used to conduct detailed interviews with a relatively small number of participants (Rutledge & Hogg, 2020). Open-ended questions were included in the outlined in-debt interview guide. Two research assistants were hired, trained on the goals of the study and received instruction on how to use the interview guide. After obtaining permission from each participant, a convenient venue for the interview was chosen and with an audio recording device, all interviews were captured on tape. Participants were able to freely answer any question that the researcher brought up during their in-person interaction. The equipment utilized to obtain precise information from participants included notebooks, pens, and tape recorders.

3.10 Data Analysis

By listening to the tape recordings and typing down the interviews using the Microsoft Office Word document template, the data collected from respondents was verbatim transcribed. Thematic analysis was then performed on the transcribed material. The thematic analysis provided a precise and simple rule for analyzing qualitative data, making it appropriate for the data gathered from the study. The process of the thematic analysis after importing the data into NVIVO II involved four steps.

1. Create a coding framework: At this step, a coding framework is created which is a set of categories or codes that will help to organize the data by grouping similar concepts or ideas.

2. Code data: At this step, the data is coded. This involves assigning the codes created to the data. This makes it possible to categorize and organize the data, which makes it easier for analysis.
3. Analyse data: At this stage, the coded data is analysed by identifying patterns and themes in the data using NVIVO tools such as query and visualization to identify relationships between codes.
4. Interpret the result: The final step is the interpretation of the results and making inferences. This requires interpreting the patterns and themes identified in the data as well as identifying the import for the study.

With the statistical software, NVIVO II, a qualitative software used to analyze the data, a codebook was generated based on the numerous themes for easier description as shown below in Table 3.9a.

Name	**Description**
Hygiene habits	This refers to the various personal hygiene practices that are undertaken by pupils
Source of information	These are the various ways schoolchildren get their information on personal hygiene.
Benefits of personal hygiene	They are the positive outcomes schoolchildren derive from engaging in the right personal hygiene practices.

Poor personal hygiene and disease	They are the negative impact of not engaging in the right personal hygiene practices.
Hygiene materials available	These involve materials readily available at the school to aid personal hygiene practices.
Hygiene materials needed	These are materials that should be provided in the school to aid in personal hygiene practices.
Personal hygiene awareness	It involves ways to increase personal hygiene knowledge among pupils.
Hygiene educators	These are individuals who give information and educate pupils on personal hygiene.

Table 3.9a Codebook on Personal Hygiene

3.11 Ethical Consideration

3.11.1 Ethical Approval

Ethical clearance for the study was obtained from the Ghana Health Service Ethics Review Committee (GHS-ERC) through the School of Public Health. Introductory letters were also obtained from the University of Ghana, the Regional Education Directorate and the La Nkwantanang Madina Education Directorate. The researcher also sought permission from the head teachers and teachers at the school before the data was collected.

3.11.2 Informed Consent

An assent form was developed and delivered to parents through pupils before they were interviewed. This form was developed (hardcopy) to contain a written brief of what the study was about.

3.11.3 Confidentiality and Anonymity

All records taken from study participants were handled confidentially and anonymously. Interview instrument sheets were completed and sent directly into a database without being accessed by any third party since electronic data collection will be used. The questionnaire did not request respondents' names or residence addresses, phone numbers etc., to ensure anonymity.

3.11.4 Right to Refuse and Withdrawal

Study participants were informed that they had the right to withdraw from the study at any time before the completion of the study. In addition, they were not sanctioned in any way if they decided to withdraw from the study.

3.11.5 Data Storage and Usage

Data was stored in a safe storage system that is only available to the researcher and supervisor. It was stored on a google drive and sent to the email of the supervisor.

3.11.6 Conflict of Interest

There was no conflict of interest after the ethical board approved the study to commence.

3.11.7 Funding Source

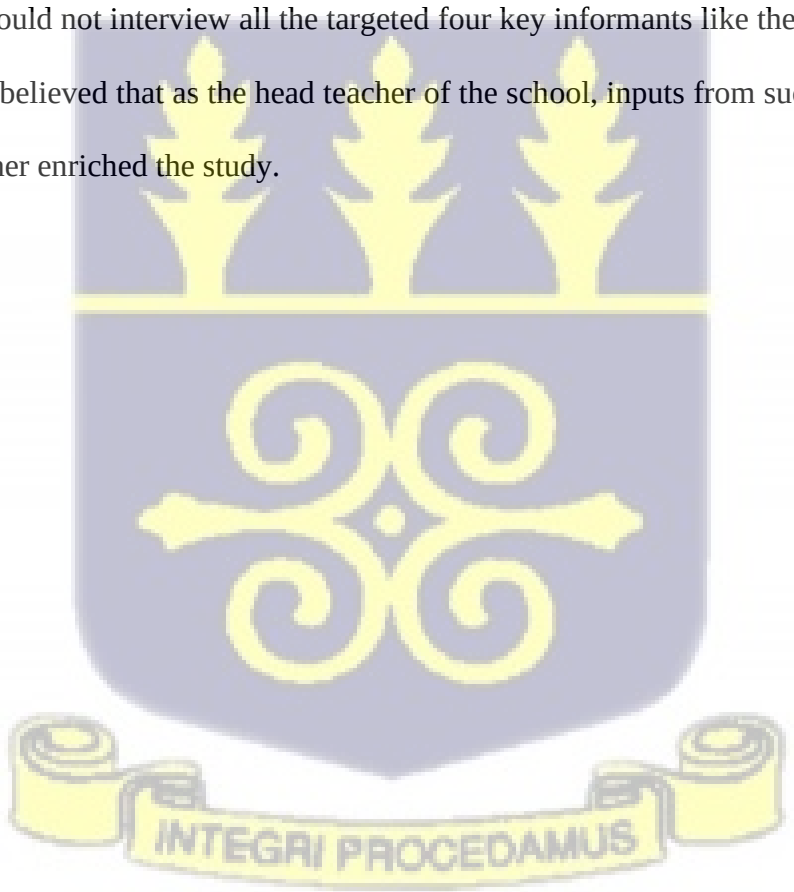
All funding for this project of study was borne by the researcher without seeking a loan from any institution whatsoever.

3.12 Quality Control

Data collection was carried out at safe, secured, and conducive venues with respondents. This will allow respondents to interact freely. Additionally, the researcher ensured the venues agreed upon were less noisy in the conduct of the in-debt interview to obtain clear audio-tape recordings of interviews.

3.13 Limitation to the Study

Just like other studies, this study had some limitations. First, due to time constraints, the research was limited in scope as it was conducted in only one Junior High School. Secondly, the researcher could not interview all the targeted four key informants like the Headteacher of the school. It is believed that as the head teacher of the school, inputs from such an individual could have further enriched the study.



CHAPTER FOUR

RESULTS

4.1 Introduction

In this chapter, the findings of this study are presented based on the research work that was carried out by the researcher. The chapter presents the result from the thematic analysis of the interviews and analysis of data. The findings reflected the three main research objectives. That is the knowledge of basic school pupils on personal hygiene, the factors that influence compliance of personal hygiene practices among pupils, and the factors that promote personal hygiene among pupils.

4.2 Socio-demographic Characteristics of Respondents

Participants for the in-depth interviews were basic school pupils of Ayisha-Bintu Khalifa Islamic Basic School at Otinibi. Participants were selected from basic one, two, and three. Most of the participants were Muslims followed by Christians. A total of twenty-one pupils were interviewed. The minimum age of participants for the IDI was 13 years while the maximum was 18 years with a maximum of 7 participants from each class for the IDI. Four (4) Key informants with ages between 35 – 45 were also interviewed.

Name of school	Basic	No of Participants	Age of Participants
Aisha-Bintu Khalifa Islamic Basic School	7	7	13-18
	8	7	13-18
	9	7	13-18
	Key Informants		
		4	35-45

Table 4.1a Socio-demographic Characteristics of Pupils and Key Informants

4.3 Knowledge of Personal Hygiene

This section presents the analysis of the research findings on the knowledge of basic school pupils on personal hygiene. In this study, most of the participants involved in the in-depth interview (IDI) expressed their knowledge of personal hygiene. Response from the interviews showed that personal hygiene goes beyond making one's body clean as it includes the prevention of diseases as shown in the quotes below:

" Personal hygiene means keeping your body clean and preventing it from diseases" **(6th Participant, Male Basic 8)**

"Personal hygiene is the way we keep our bodies and our surroundings clean" **(11th Participant, Female Basic 9)**

Some pupils further indicated that personal hygiene has to do with the negative consequences that would happen to them if they did not keep to proper personal hygiene practices. This is shown by the interview segment below:

> *"Personal hygiene is a process of taking good care of your body and preventing it from body odour"* ***(15th Participant, Female Basic 7)***

> *"Personal hygiene is keeping your body clean so that you always stay healthy"* ***(8th Participant, Male Basic 7)***

The submission of pupils above was corroborated by the interview responses from key informants as captured below:

> *"Personal hygiene also has to do with the way we keep our body clean, every part of our body clean and neat".* ***(SHEP Coordinator)***

> *"...they are the basic common practices naturally: we are talking about things that we must do in terms of keeping ourselves clean"* **(Integrated Science Teacher)**

The above submissions by pupils indicated the general knowledge of pupils on personal hygiene.

4.3.1 Hygiene in School and Habits

The research findings indicate that there were major hygiene practices and habits that were mandatory to be practiced by pupils. These included washing hands with soap under running water, washing school uniforms, trimming fingernails, combing hair, and ironing uniforms.

Most responses indicate that hand washing was the most personal hygiene habit practiced among pupils in school. This is shown in the interview segment below:

> *"... at school sometimes, we wash our hands after visiting the toilet, and while we go to the canteen, we wash our hands before eating"* **(8th Participant, Male Basic 7)**
>
> *"... I mostly practice washing of hands, washing my hands when they are dirty, keeping my cloth nice in school every day, decks and everything is clean. My hair does not become "bushy" it's clean, and will "cut" my hair if it becomes "bushy"* **(3rd Participant, Female Basic 7)**

Although some pupils indicated the various personal hygiene practices that were mostly practiced in school, interview responses further indicated that most pupils saw hygiene to include keeping their school compound clean as captured below:

> *"I wash my hands when I go to the washroom ... I sweep the compound and I clean our classroom"* **(12th Participant, Female Basic 7)**

4.3.2 Sources of Pupil's Information on Personal Hygiene

Touching on where pupils got information on personal hygiene, most participants mentioned that, their main sources of information were their parents, followed by teachers, friends, television, radio, and food vendors as shown in the quotes below:

> *"I get some from my parents or sometimes my teachers".*

(7th Participant, Female basic 9)

"Sometimes by our parents, we are being taught by them how to brush our teeth and bath always. Sometimes too our teachers also teach us something or educate us on some of our hygiene practices. sometimes our friends also tell us what to do to improve our hygiene" ***(8th*** **Participant,** ***Female Basic 7)***

" I get my information from my parents, and teachers and even those who sell food" **(10th Participant, Female Basic 9)**

However, some key informants indicated that they got their information on personal hygiene from in-service training, workshops, and the curriculum as aspects of some subjects detailed personal hygiene lessons.

These assertions of where pupils received their information on personal hygiene were corroborated by key informants who indicated that policies enshrined in school activities provided personal hygiene information to pupils. Participants also mentioned that pupils' knowledge of personal hygiene was gained through observation of their colleagues practicing personal hygiene as indicated in the quotes below.

"I think there are fundamental hygiene practices that every school will have to adhere to. So, the school policies, the way we go about our activities to ensure that children are instructed includes lesson to keep the body clean" **(Integrated Science Teacher)**

"I think some of the information they get from home. They also get some information from the school. That is from teachers, and their peers by observing their friends who look neat" ***(SHEP Coordinator)***

The above submissions indicated that there were various sources of information on personal hygiene that pupils relied on. Information from parents, teachers, friends, food vendors and those enshrined in the school curriculum also provided pupils with the needed information on personal hygiene.

4.3.3 Benefits of Regular Personal Hygiene Practices

On the importance of keeping to personal hygiene practices, most participants explained that personal hygiene benefits range from personal to general benefits of the school. They indicated that the benefits of personal hygiene cut across keeping the body clean as it includes the prevention of diseases as shown in the quotes below:

"The importance of personal hygiene practices ….is when you keep your body clean, it prevents body odour and prevent diseases such as cholera, malaria, Typhoid and so on" **(18th Participant, Female Basic 9)**

This was confirmed when most respondents mentioned that the different types of personal hygiene practices when adhered to could prevent diseases and infections as outlined in the quote below:

*"…bathing regularly, brushing your teeth twice, washing your clothes when they are dirty and sweeping your compound are examples of personal hygiene practices that will prevent you from getting diseases or germs "**(13th Participant, Female Basic 9)**

Participants stated again that, bathing and brushing their teeth twice a day as well as washing their uniform when dirty kept them healthy and this is shown in the quotes below:

"… brushing my teeth makes me healthy because at least you must brush your teeth twice a day to prevent diseases like diarrhoea and respiratory infection" **(4th Participant, Female Basic 8)**

"By bathing, brushing your teeth, and washing your clothes helps you to stay healthy" **(5th Participant, Male Basic 8)**

4.3.4 Poor Personal Hygiene Practices and Diseases

The findings from the interview indicated that poor personal hygiene practices had negative consequences on pupils' health. Cholera, respiratory infections, and skin rashes as indicated by pupils were borne out of poor personal hygiene practices among school children. Most participants explained that not practicing personal hygiene harmed their health as shown in the quotes below:

"…. the person will fall sick. Yeah, because you know, our daily life is made of materials and germs, so if somebody does not practice personal

hygiene, I think that person will be affected by those kinds of sickness".

(4th Participant, Female Basic 8)

".... you may fall sick and get a disease like malaria or any other fever ". **(7th Participant, Female Basic 9)**

Some participants were however of the view that skin rashes and body odour were the result of not keeping to the right personal hygiene practices. This is shown in the quotes below:

".... if you don't keep your body clean, you will have body odour, you have a disease and you will frequently get sick" ***(3rd*** **Participant, Female Basic 7)**

"At times they smell. Others too fall sick. Others have a sickness like body rashes...." **(10th Participant, Female Basic 9)**

Participants indicated that not only would pupils be infected with diseases such as skin infection, respiratory infection and cholera, but poor personal hygiene would also cause their bodies to smell and in effect prevent people from getting close to them. This would in the long run cause them to lose their self-esteem if they do not keep to the right personal hygiene practices as shown in the quotes below:

"Always when you are dirty, people will not like you, and your mouth will smell if you don't brush your teeth "(3rd **Participant, Female Basic 7)**

"When you don't practice proper personal hygiene, you smell bad, and you feel shy to go into people. You will feel when you pass by people or

someone, they will talk about it that you smell" **(5th Participant, Male Basic 8)**

The above submission indicates that pupils have an idea of personal hygiene and indicated some practices they keep up with at school. Interview responses further revealed the various sources of personal hygiene information to pupils. Notable among them are personal hygiene information from parents, teachers, friends, and television. In addition, pupils expressed their understanding of the health benefits of keeping to proper personal hygiene practices. However, participants agreed that when one does not practice personal hygiene properly, then the effect on their health could be dire.

4.4 Enabling Factors for Proper Personal Hygiene Practice

This section presents the analysis of the research findings on factors that influence compliance with personal hygiene practices in school. The findings revealed that factors that influence compliance with personal hygiene practices by pupils were determined by the availability of personal hygiene materials, hence the researcher sub-categorized this theme into three; materials available at school, materials needed at school and the impact of unavailable materials on the health of pupils.

4.4.1 Availability of Hygiene Materials at School

Some of the participants mentioned the availability of water, soap, and veronica buckets in the school as shown in the quotes below:

"We have veronica buckets and soap" **(15th Participant, Female Basic 7)**

"We have soap and the veronica bucket in the school.

...we also have water in the school" **(8th Participant, Male Basic 7)**

On the contrary, most of the respondents indicated that there was inadequate provision of veronica buckets, soap, water, and paper towels and these hindered their hygiene practices in school as indicated by the quotes below:

".... water in the school doesn't flow. So sometimes getting water is difficult in the school. So, you need to go out of this school to get water ". ***(8th Participant, Male Basic 7)***

"We need something like the veronica buckets, good toilet facilities and washrooms. Our toilet facility is not good at all" **(5th Participant, Male Basic 8)**

These responses from pupils were corroborated by key informants when they indicated that, the unavailability of the hygiene materials and facilities in the school affected the personal hygiene practices of pupils in the school as shown in the quotes below:

"Well, we have a little challenge with the source of water now, so they have to go looking for water and sometimes they don't get it which means washing time become a problem .... we have no tissue paper as well" **(SHEP Coordinator)**

4.4.2 Hygiene Materials Needed at School

Participants mentioned the construction of proper toilets and urinal facilities, the continuous supply of water, and the provision of soap to aid in their hygiene practices are among some of the hygiene elements needed as shown in the quotes below:

> *"When you want to go to the washroom, you must go to the "Bolla" (a local dialect for refuse dump) where they dump waste and even after you finish you can't wash your hands anywhere because there is no water in a veronica bucket and there is no soap"* **(12th Participant, Female Basic 7)**

> *"We don't have the toilet facility in our school but apart from the toilet facility we don't have, we go to people's homes to get water and it is affecting everything and the way we are learning in the school"* **(3rd Participant, Female Basic 7)**

4.4.3 Impact of Hygiene Materials on Pupils

Participants mentioned that they visit homes near the school to use their toilet facilities. They also indicated that they buy water to wash their hands without soap and this contributed to their inability to effectively practice personal hygiene. In addition, participants indicated that some of them visited and used the refuse dumping site near the school as an alternative to the lack of proper toilet facilities in the school. This is shown in the quotes below:

> *"When you need to use the toilet facilities and because it is not good, you have to go home before you can "do it". So, it affects us a lot and*

even when we have to wash our hands, we have to buy water to wash our hands" **(5th Participant, Male Basic 8)**

"It is affecting us …. if you want to urinate it is very difficult for us to urinate. If you want to go to "private "or …. it is very difficult for us to do it, so we need the washroom or private Bathroom "

(13th Participant, Female Basic 9)

"When you want to go to the washroom, you must go to the "Bolla" where they dump waste and even after you finished you can't wash your hands anywhere because there is no water in a veronica bucket and there is no soap" **(12th Participant, Female Basic 7)**

Interview responses suggested that the lack of proper toilet and urinal facilities affected pupils greatly as they spent a lot of time away from school to attend to use these facilities as shown in the quote below:

"…because we don't have washroom or toilet facilities, sometimes when we are learning in the class, and we need to go outside and use the toilet it is difficult for us. You need sometimes to go to the back of the school and this worries us. This sometimes makes us late to class"

(20th Participant, Male Basic 9)

The above submission indicates that, though there were some personal hygiene materials available in the school to aid hygiene practices, materials such as water, soap, wash hand basins and paper towels were woefully inadequate in supply as shown in the quotes below:

> *"We need enough water in our schools so that people can wash their hands frequently to stop the spread of diseases among us"* **(9th Participant, Male Basic 9)**

> *"We sometimes fall sick because if we do not have water, and we are supposed to wash our hands regularly, we will touch food and put it in our mouth, so we do fall sick"* **(15th Participant, Female Basic 7)**

4.5 Promotion of Hygiene Education

This section presents the findings of the research on how to increase personal hygiene awareness in school and how to reinforce personal hygiene practices among basic school pupils.

4.5.1 Personal Hygiene Awareness

On personal hygiene awareness creation, findings revealed that personal hygiene knowledge among pupils could be increased through continuous education, advice to pupils, formation of hygiene clubs, an inspection of pupils' physical appearance at the school assembly, and making personal hygiene a part of the curriculum as shown in the quotes below:

> *"Teachers are supposed to advise us and show us how to keep our body and surroundings clean"* **(15th Participant, Female Basic 7)**

"I think that nurses must go round schools and then advise the children and assist the children to wash their hands. The children will also pass the information to their parents as some of their parents don't know." **(9th Participant, Male Basic 9)**

Moreover, findings further revealed that the visibility and supply of hygiene materials prompted pupils to be conscious of their personal hygiene practices as shown in the quotes below:

"Personal hygiene practices can be increased when they get us all the things that we need in our schools" **(5th Participant, Male Basic 8)**

"...because anytime you see veronica bucket there, it comes into your mind that you have played, you have to wash the germs away from your hands" **(7th Participant, Female Basic 9)**

Some participants also indicated that their peers would be encouraged to practice personal hygiene when they observe them do the same as shown in the quote below:

"*If most of us practice personal hygiene, it will encourage other people who don't who do not practice it to also participate"* **(3rd Participant, Female basic 7)**

Also concerning how personal hygiene awareness among school children could be enhanced, some participants advocated for the formation and strengthening of school health clubs by the school health teachers as shown in the quotes below:

> *"... by setting up personal hygiene club and learning about personal hygiene in every subject".* **(10th Participant, Female Basic 9)**
>
> *"Every school should have a club which is introduced by the personal hygiene teacher. So that is to let everybody know about personal hygiene"* **(7th Participant, Female Basic 9)**

Participants again indicated that the awareness of personal hygiene could be increased through routine and regular inspection of pupils' appearance at the school's assembly grounds as shown in the quote below:

> *"Personal hygiene of school children can be increased by inspection at the assembly ground to make us start practicing it more and more"* **(6th Participant, Male Basic 8)**

4.5.2 Facilitating Factors of Proper Personal Hygiene Practice

Participants mentioned some of the lead facilitators to help enforce personal hygiene education in school include the headteacher, teachers, nurses, school prefects, girl child teachers and parents as indicated by the quotes below.

"Our head teacher should be doing that because he's the head of the school so he can create the posters around the school and also our teachers can also do that to help" **(9th Participant, Male Basic 9)**

"I think after the headmaster, the girl child teachers and teachers can promote personal hygiene in the school" **(19th Participant, Male Basic 7)**

" *Mostly our teachers are those who need to help us because they are well qualified and trained in certain things. We are just learners so if our teachers are those who are going to teach us or to lead us, I think it will help to create awareness"* **(3rd Participant, Female Basic 7)**

"I think that nurses must go round schools and then advise the children and assist the children to wash their hands. The children will also pass the information to their parents as some of their parents don't know." **(9th Participant, Male Basic 9)**

A corroborated response from some key informants indicated that teachers have a major responsibility to educate pupils on their hygiene in school as shown in the quote below:

"Teachers will have to be more responsible; we should have an orientation on personal hygiene because one way or the other we go a long way to make an impact on them. So, we need the right orientation to impact the right knowledge of hygiene in pupils ***(Integrated Science Teachers)***

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter discussed the findings of the research concurrently in light of the literature relating to the phenomena under study. The chapter also presents findings and how they are explained to the PRECEDE Model. The chapter is organized into three sections namely knowledge of personal hygiene, enabling factors, and hygiene education.

5.2 Knowledge of Personal Hygiene

The model adopted for this study is the PRECEDE model by Lawrence Green and his colleagues (Fertman & Allensworth, 2010). By this model, the study used the predisposing factor which is among the three factors under the educational and organizational diagnosis construct from the model to examine the knowledge of pupils on personal hygiene. The predisposing factor according to this model is the factor that provides pupils with information that directs their behaviour in the desired way. That is schoolchildren would take care of their bodies based on their knowledge of personal hygiene.

5.2.1 Personal Hygiene Knowledge

Findings from the study reveal that most basic school pupils generally have knowledge about personal hygiene but this did not translate into actual practice. Respondents from the IDI described personal hygiene as the action taken to keep their bodies clean. Most respondents were aware of the various aspects of their bodies that needed to be kept clean but they indicated paying attention to regular bathing and brushing their teeth before going to school as the main personal hygiene habit practiced. It was clear that respondents had knowledge about personal

hygiene but much needs to be done by stakeholders to increase and improve the level of personal hygiene education and practices.

Respondents further indicated that personal hygiene goes beyond the physical cleanliness of the body as it includes the prevention of diseases. Participants also indicated that; personal hygiene goes beyond the act of keeping their bodies clean but it includes the prevention of diseases. This confirms the findings of Appiah-Brempong et al., (2018) who define personal hygiene as a set of practices concerned with maintaining health and preventing diseases. This is also affirmed by the WHO, (2016) definition of personal hygiene as conditions and practices that help to maintain health and prevent the spread of diseases.

5.2.2 Hygiene in School and Habits

The result of the study reveals that, though pupils were aware of the various personal hygiene practices that were mandatory to be practiced, pupils' responses indicated few of these mandatory practices are adhered to. These include hand washing, trimming their hair and keeping their school uniform clean. These findings corroborate the empirical findings of Dadebo (2018) who indicated that washing hands helps to prevent infectious diseases that spread through the hands. Also Sridhar et al., (2020) indicated in their findings that, unkept hair serves as grounds for hair lice and dandruff. Concerning pupils' habits of keeping their clothes or school uniform clean, Nuamah et al., (2020) indicated that good personal hygiene includes keeping proper care of one's clothes and uniform.

5.2.3 Sources of Pupil's Information on Personal Hygiene

Ullah (2020) opined that the source of knowledge on personal hygiene had been reported to have adverse consequences on school children's social and mental well-being while proper knowledge of personal hygiene reveals the level of continuous personal hygiene practices.

Almost all respondents from the IDI significantly indicated that their main source of personal hygiene information is their parents. They however revealed other sources of information that are from their teachers, friends, the media, and from surfing the internet. This corroborates a similar study by Temitayo (2016) in Nigeria, findings revealed that parents accounted for the major source of information on personal hygiene followed by books, friends, church and mosque.

An empirical study in the Bawku Municipality by Aawulenaa (2016) revealed that apart from teachers, parents, and peers, the media and healthcare providers also provided pupils with information on personal hygiene.

Also in the study, most of the key informants indicated that schoolchildren received information on personal hygiene from lessons thought as enshrined in the school curriculum, that is policies for maintaining health among pupils. This conforms with the findings of Balogun (2015) which indicates that policy intervention in schools helps to sustain personal hygiene practices among pupils and such policies ensure that pupils are neat and that the environment is safe for pupils in the school.

5.2.4 Benefits of Regular Personal Hygiene Practices

In the study of Msn (2021), when pupils are taught basic personal hygiene skills, they get encouraged and motivated to keep to best hygiene practices and this therefore ensures that they are prevented from infections and diseases. This reflects the findings of this study when all respondents acknowledged that keeping to proper personal hygiene practices has enormous benefits on their health. Respondents indicated that the benefits of personal hygiene go beyond making the body clean as it includes the prevention of germs that will cause diseases. This was evident when respondents revealed that personal hygiene practices keep their bodies clean and neat.

Respondent further indicated that keeping to the various forms of personal hygiene practices such as bathing regularly, brushing of teeth, and washing clothes keeps them healthy and prevents infections and diseases corroborating AshaRai et al, (2019). They further stated that risk factors for not adhering to good health practices are linked directly with activities such as brushing teeth at least twice daily, washing hands and taking regular baths with soap. Therefore, maintaining good health among schoolchildren means adhering to proper PH practices.

5.2.5 Poor Personal Hygiene Practices and Diseases

Concerning personal hygiene practices and diseases, respondents stated that there was a direct link between poor personal hygiene practices and diseases. Respondents indicated that poor personal hygiene practices had negative consequences on their health. They mentioned cholera, diarrhoea, skin infections, respiratory infections and body odour as some of the effects of poor personal hygiene practices. This anchors the study by Sihra et al., (2018) who revealed that poor personal hygiene practices have been linked to the development of respiratory infections such as flu and common cold. Furthermore, a study by Jordanova et al., (2015) revealed that the adoption of personal hygiene practices can stop deaths from diarrhoea.

In addition to findings from this study, some respondents stated that smelly bodies or body odours were a result of poor personal hygiene practices among schoolchildren which may prevent their friends from getting close to them and thereby losing their self-esteem.

5.3 Enabling Factors

According to Fertman & Allensworth (2010), Green and Kreuter opined that hygiene can be explained according to the PRECEDE model concerning many factors that hinder an individual's behaviour. The enabling factor under the educational and organizational diagnosis

phase of the model is used to determine the availability of personal hygiene elements such as facilities and supplies that allow the promotion of personal hygiene practices. They are the factors that encourage and make schoolchildren engage in the desired behaviour. To motivate and encourage such desired behaviour, hygiene materials and facilities must be provided.

5.3.1 Availability of Materials at School

Findings from the study indicate that there were various elements available in the school that facilitated personal hygiene practices among pupils. While some respondents mentioned the availability of water, veronica buckets and soap as main materials at the school, the majority of the respondents on the contrary maintained that veronica buckets, water and soap were inadequate in supply at the school, and these affected their practice of personal hygiene. Some respondents were of the view that, even though they had a toilet facility in the school, it was in a very bad condition and as such almost no one in the school uses it. This account from pupils was confirmed when key informants indicated that, the inadequate materials such as the erratic water supply, inadequate wash hand basins, and soap in the school coupled with the poor state of their toilet facility was a disincentive to the practice of personal hygiene in the school. In line with this, the PRECEDE model under the enabling factors affirms that the provision of personal hygiene materials and the appropriate toilet facility affected personal hygiene practices among schoolchildren. Proper personal hygiene practices were influenced by the availability of hygiene resources and schoolchildren were more likely to practice personal hygiene in areas where there was an adequate supply of water and hygiene facilities (Rahman et al., 2022) (Tawiah, 2017).

5.3.2 Hygiene Materials Needed and Practice

According to WHO (2016), when given the needed resources and materials, school children will be more empowered to practice personal hygiene hence the need to provide good

washrooms, regular water supply, wash hand basins, soap and paper towels. This affirms calls from all respondents who revealed that, their inability to practice personal hygiene properly despite the knowledge acquired was a result of the critical need for the provision of appropriate toilet facilities, regular supply of water, soap, veronica bucket, tissue paper and paper towels in the school. This finding was consistent with Darzi, (2018) who indicated that the frequent supply of water, good washrooms, paper towels and soap are among some of the supplies schoolchildren need to encourage good hygiene practices.

5.3.3 Negative Impact of Hygiene Materials on Pupils

The findings revealed that respondents were negatively affected by the lack and inadequate provision of hygiene facilities and supplies in school. In this study, the majority of the respondents stated that the lack of proper toilet facilities in the school was affecting them as they had to go out of the school environment to use nearby restrooms. They mentioned visiting homes around the school environment to use their urinal and toilet facilities which leads to spending a lot of time away from school. This confirms the findings that the lack of improved WASH facilities in school contributes to absenteeism among children and its consequence of reducing children's performance and increasing drop-out rates among school children (Shilunga et al., 2018).

Some respondents in the study mentioned that a waste dumping site near the school was used as a toilet facility and using this site delayed their return to school. It was also noted that schoolchildren bought sachet water to wash their hands since there was no free water at the dump site and even with the sachet water, they washed their hands without soap. This corroborates the findings that the basic act of schoolchildren washing their hands with soap under running water destroys several microbes that cause diseases (Temitayo, 2016).

The unavailability of personal hygiene materials and facilities was indicated by respondents as causing sicknesses and infections as they touched food with their dirty hands and directly put them in their mouths. Research findings by Pewu, (2019) on factors influencing compliance to WASH in school revealed that for schoolchildren to be safe and free from diseases and infections, there is a need for the provision of clean water, soap, urinal and toilet facilities in schools.

5.4 Hygiene Education

5.4.1 Personal Hygiene Awareness

Respondents mentioned that knowledge of personal hygiene among schoolchildren could be enhanced by the formation of hygiene clubs facilitated by science teachers. Respondents also revealed that continuous education on personal hygiene through inspection of the physical appearance of pupils and creating awareness during lessons like integrated science were ways of increasing personal hygiene awareness among schoolchildren. This assertion supports the findings of Lal & Kavitha, (2016) who opined that being aware of the right knowledge of personal hygiene determines the extent to which personal hygiene practices are sustained. This is in line with findings from a study by Balogun, (2015) which indicates that school activities such as regular or occasional inspection of pupils' appearance create awareness and enforce pupils' behaviour to take their bath regularly, have their hair barbered, nails trimmed and clothes washed.

Findings from this study further revealed that, when materials and supplies for personal hygiene practices are made available at school and positioned where they are visible, it would encourage schoolchildren to be aware of the need to practice personal hygiene. Respondents assert that the visibility of personal hygiene materials will consciously remind pupils of the

need to keep their bodies clean at every material moment. According to some respondents, observing their peers engage in various personal hygiene practices would encourage and motivate others to do the same. Findings from this study support findings by Dadebo, (2018) an empirical study which reveals that the availability of personal hygiene materials such as water, soap, paper towels and water basins was a sure way of internalizing proper personal hygiene habits among schoolchildren. Similarly, the frequent supply of water and the availability of hygiene facilities played an important role in positively influencing pupils' attitudes or behaviour (Appiah-Brempong et al., 2018).

The findings above call for intense measures to be put in place which ensures that personal hygiene materials are supplied and made visible in schools.

5.4.2 Facilitating Factors

It was highly evident from this study that good and proper personal hygiene practices among schoolchildren could be enforced when agents inform and motivate pupils to engage in expected behaviour. These agents provide information on personal hygiene practices as well as support and ensure the repetition of desired behaviour.

The majority of the respondents mentioned that the headteacher should be the main reinforcer of desired behaviour on personal hygiene habits among pupils. They additionally mentioned that personal hygiene education can be enforced among schoolchildren by teachers, girl child educators, and other professionals like nurses.

The above submission supports the re-enforcing factor under the Educational and Organizational Diagnosis of the PRECEDE model. This construct of the model makes it easy to identify all agents involved in ensuring that personal hygiene practices are adhered to. These agents provide information to teach pupils about issues related to personal hygiene and guide

them in cultivating the right personal hygiene habits. Therefore teachers, health educators, and parents are in this category.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Introduction

This chapter presents a summary, conclusions, and recommendations of the research. The chapter has been subdivided into three main sections. They are the summary of the study, conclusions from the study, and recommendations from the study.

6.2 Summary of the Study

The research sought to examine hygiene knowledge and practices among basic school pupils of Aisha-Bintu Khalifa Islamic Basic School in the La Nkwantanang Madina Municipality in Accra. The researcher used the educational and organizational diagnosis phase of the PRECEDE model to guide the study. This phase of the model has three factors. These are the predisposing factor, enabling factor and re-enforcing factor. To help answer the research questions, the researcher employed a qualitative method to gather data through interviews. The findings of the research covered the three main objectives as indicated below.

1. Knowledge of Personal Hygiene

Findings from the study revealed that schoolchildren have moderate knowledge of personal hygiene. Interview responses to questions on the knowledge of pupils on personal hygiene can be considered moderate. The study indicated that schoolchildren knew about the various personal habits to practice but engaged in only a few. The study further revealed that schoolchildren knew the benefits and the adverse effects of personal hygiene. The findings

above affirm findings in the literature that, generally, schoolchildren have appreciable knowledge of PH but this does not largely translate into practice.

2. Factors that Influence Compliance with Personal Hygiene Practices

Findings gathered from the study revealed that personal hygiene facilities and materials were either unavailable or woefully inadequate in supply to motivate personal hygiene practices in the school.

3. Factors that Promote Personal Hygiene Practices

On factors that promote personal hygiene practices, findings revealed that more needs to be done to create and increase awareness of personal hygiene among children. Respondents mentioned that the formation of hygiene clubs, physical inspection of pupils' appearance, incorporating personal hygiene in lessons taught in the classroom, and the visibility of hygiene materials were some ways to increase personal hygiene awareness among schoolchildren. Respondents indicated that the headteacher, teachers, health club educators, and nurses were the main re-enforcers of hygiene education in school.

6.3 Conclusions from the Study

The conclusion drawn from this study is based on findings gathered through interviews considering the three main objectives of the study. That is the knowledge of personal hygiene, factors that influence compliance with personal hygiene practices and factors that promote personal hygiene practices.

The study concludes that, although a majority of schoolchildren exhibited knowledge of personal hygiene, such knowledge did not translate into practice. The study further concludes that there is an inadequate supply of personal hygiene materials such as water, soap, paper

towels, wash-hand basins and toilet facilities in the school. These unavailability and inaccessibility to materials and facilities hindered personal hygiene practices among schoolchildren. The study again concludes that there is a need for teachers, health educators, and parents to broaden the knowledge of pupils by providing them with accurate and right information on personal hygiene.

6.4 Recommendations

1. Ghana Education Service (GES) should liaise with the health promotion unit of the Ghana Health Service (GHS) to provide the needed hygiene training for School Health Education Programme (SHEP) coordinators in schools since they are in direct contact with pupils. Authorities should also ensure that health education and promotion officers regularly visit schools within the municipality to educate pupils on how to take care of their teeth, nails, hair, eyes and hands. This form of education could be enhanced with health awareness posters, pasted in and around the compound of schools to remind pupils of the need to engage in personal hygiene practices.

2. To ensure and encourage personal hygiene practices among pupils, the Municipal Assembly should extend the GAMA project to public schools as a matter of emergency by constructing toilet facilities and providing the needed supplies in schools to promote personal hygiene practices among pupils.

3. The Municipal Director of Education should encourage all basic school headteachers to take an interest in the formation of personal hygiene clubs in the schools and enforce and ensure regular physical inspection of pupils' appearance in school.

REFERENCE

Aawulenaa, D. (2016). *University of Ghana http://ugspace.ug.edu.gh*. *10550820*.

Admasie, A., Guluma, A., & Feleke, F. W. (2022). *Handwashing Practices and Its Predictors Among Primary School Children in Damote Woide District , South Ethiopia : An Institution Based Cross-Sectional Study*. https://doi.org/10.1177/11786302221086795

Ahmadu, B. U., Rimamchika, M., Ibrahim, A., Nnanubumom, A. A., Godiya, A., & Emmanuel, P. (2013). State of personal hygiene among primary school children: A community based cohort study. *Sudanese Journal of Paediatrics*, *13*(1), 38–42. http://www.ncbi.nlm.nih.gov/pubmed/27493356%0Ahttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC4949962

Almoslem, M. M., Alshehri, T. A., Althumairi, A. A., Aljassim, M. T., Hassan, M. E., & Berekaa, M. M. (2021). *Handwashing Knowledge , Attitudes , and Practices among Students in Eastern Province Schools , Saudi Arabia*. *2021*.

Antwi-Agyei, P., Mwakitalima, A., Seleman, A., Tenu, F., Kuiwite, T., Kiberiti, S., & Roma, E. (2017). Water, sanitation and hygiene (WASH) in schools: Results from a process evaluation of the national sanitation campaign in Tanzania. *Journal of Water Sanitation and Hygiene for Development*, *7*(1), 140–150. https://doi.org/10.2166/washdev.2017.159

Appiah-Brempong, E., Harris, M. J., Newton, S., & Gulis, G. (2018). Examining school-based hygiene facilities: A quantitative assessment in a Ghanaian municipality. *BMC Public Health*, *18*(1), 1–8. https://doi.org/10.1186/s12889-018-5491-9

AshaRai et al. (2019). *HEALTH AND HYGIENE PRACTICES AMONG*. *10*(1), 60–64.

Baker, S., Waterfield, J., & Bartlam, B. (2018). Saturation in qualitative research : exploring its conceptualization and operationalization. *Quality & Quantity*, *52*(4), 1893–1907. https://doi.org/10.1007/s11135-017-0574-8

Balogun, D. B. (2015). *KNOWLEDGE , PERCEPTION , PRACTICE OF PERSONAL HYGIENE AMONG SECONDARY SCHOOL STUDENTS IN IBADAN NORTH WEST LOCAL GOVERNMENT AREA , IBADAN , OYO STATE , NIGERIA BY Adeola Bosede BALOGUN B . Ed . Health Education (Ibadan) Matric No : 86288*.

Berriós-Torres, S. I., Umscheid, C. A., Bratzler, D. W., Leas, B., Stone, E. C., Kelz, R. R., Reinke, C. E., Morgan, S., Solomkin, J. S., Mazuski, J. E., Dellinger, E. P., Itani, K. M. F., Berbari, E. F., Segreti, J., Parvizi, J., Blanchard, J., Allen, G., Kluytmans, J. A. J. W., Donlan, R., & Schecter, W. P. (2017). Centers for disease control and prevention guideline for the prevention of surgical site infection, 2017. *JAMA Surgery*, *152*(8), 784–791. https://doi.org/10.1001/jamasurg.2017.0904

Chu et al. (2017). John W, Creswell, Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. *Journal of Social and Administrative Sciences*, *4*(June), 3–5.

Component, A. E. (n.d.). *An Essential Component of a*.

Creswell, J., & Poth, C. (2012). Second Edition QUALITATIVE INQUIRY& RESEARCH DESIGN Choosing Among Five Approaches. In *Design: Choosing Among Five Approaches* (Vol. 3, Issue June).

Dadebo, J. O. P. E. (2018). *School of Public Health College of Health Sciences Handwashing With Soap Practice Among Primary School Pupils At Abokobi Presbyterian This Thesis Is Submitted To the University of Ghana , Legon in Partial Fulfilment of the Requirement for the Award of Mas*. *10637290*, 27–60.

Darzi, A. (2018). Better Health And Care For All: A 10-Point Plan For The 2020s. *Institute for Public Policy Research, June 2018*. www.ippr.org

Dube, B., & January, J. (2012). *Factors leading to poor water sanitation hygiene among primary school going children in Chitungwiza*. *3*, 25–28. https://doi.org/10.4081/jphia.2012.e7

Elmadani, M., Elamin, E., Tamomh, A. G., & Twum, P. (2021). *Assessment of the Personal Hygiene Practices among Primary Schools Children , Sudan : A Cross-Sectional School-Based Study*. https://doi.org/10.23880/phoa-16000170

Erasmus, S. S. (2020). *PRESBYTERIAN UNIVERSITY COLLEGE , GHANA FACULTY OF DEVELOPMENT STUDIES DEPARTEMENT OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT KNOWLEDGE AND PRACTICES OF HAND HYGIENE AMONG SELECTED JUNIOR HIGH SCHOOLS IN THE BY*.

Fertman, C. I., & Allensworth, D. D. (2010). *HEALTH PROMOTION*.

Gammelgaard, B. (2017). Editorial: The qualitative case study. *International Journal of Logistics Management*, *28*(4), 910–913. https://doi.org/10.1108/IJLM-09-2017-0231

Gender and water, sanitation and hygiene - UNICEF DATA. (2018). https://data.unicef.org/topic/gender/water-sanitation-and-hygiene-wash/

GES. (2012). *GOVERNMENT OF GHANA EDUCATION STRATEGIC PLAN 2010 - 2020 ESP VOLUME 2 – STRATEGIES AND WORK PROGRAMME Ministry of Education*. *2*.

GHANA STATISTICAL SERVICE. (2014). *La nkwantanang-madina municipality*.

Ghana Statistical Services. (2021). *Ghana Statistical Services.* (Vol. 2019, Issue Act 1003, pp. 1–4). https://statsghana.gov.gh/regionalpopulation.php?population=MTMxOTU3MTAxOC44

MjU=&&Bono&regid=2%0Ahttps://statsghana.gov.gh/%0Ahttps://statsghana.gov.gh/nationalaccount_macros.php?Stats=MTA1NTY1NjgxLjUwNg==/webstats/s679n2sn87

GNCRC. (2014). *GHANA NGOs COALITION ON THE RIGHTS OF THE CHILD (GNCRC) CONVENTION ON THE RIGHTS OF CHILDREN (CRC) REPORT TO UN COMMITTEE ON THE RIGHTS OF THE CHILD Prepared by Ghana NGOs Coalition on the Rights of the Child (GNCRC) Accra*.

Hotor. (2017). *ASSESSMENT OF KNOWLEDGE, ATTITUDES AND PRACTICES OF SANITATION AND HEALTH OF MARKET USERS AT THE AGBOGBLOSHIE MARKET IN ACCRA, GHANA. 10018866*.

Jordanova, T., Cronk, R., Obando, W., Medina, O. Z., Kinoshita, R., & Bartram, J. (2015). Water, sanitation, and hygiene in schools in low socio-economic regions in Nicaragua: A cross-sectional survey. *International Journal of Environmental Research and Public Health*, *12*(6), 6197–6217. https://doi.org/10.3390/ijerph120606197

Khatoon, R., Sachan, B., Khan, M. A., & Srivastava, J. P. (2017). *Impact of school health education program on personal hygiene among school children of Lucknow district*. 97–100. https://doi.org/10.4103/2249-4863.214973

Kojo Abanyie, S., Ebo Yahans Amuah, E., Biyogue Douti, N., Owusu, G., Casmed Amadu, C., & Alhassan, B. (2021). WASH in Selected Basic Schools and Possible Implications on Health and Academics: An Example of the Wa Municipality of Ghana, West Africa. *American Journal of Environmental Science and Engineering*, *5*(1), 15. https://doi.org/10.11648/j.ajese.20210501.13

Kouakou, J. S., Tiadé, M. L., Barro, P. K., Kouamé, J., Bediakon, M. G., Desquith, A. A., & Kouadio, L. (2021). Factors influencing personal hygiene among primary schoolchildren in western Côte d'Ivoire. *Journal of Water Sanitation and Hygiene for Development*,

11(4), 687–692. https://doi.org/10.2166/washdev.2021.265

Kyilleh, J. M., Tabong, P. T., & Konlaan, B. B. (2018). *Adolescents ' reproductive health knowledge , choices and factors affecting reproductive health choices : a qualitative study in the West Gonja District in Northern region , Ghana*. 1–12. https://doi.org/10.1186/s12914-018-0147-5

Lachance, N. T., & Adda-balinia, T. (2017). *EVIDENCE*. *December*.

Lal, B. S., & Kavitha, G. (2016). *Assessment of Personal Hygiene Knowledge and Practices : An Empirical Study of Schooling Children in Warangal*. *5*(8), 2013–2016. https://doi.org/10.21275/ART20161207

Manko, A. N. (2018). University of Ghana Hygienic Practices of Food Vendors ; Effect on Consumer Food Safety on the University of Ghana Campus By This Thesis Is Submitted To the University of Ghana , Legon in Partial Fulfilment of the Requirement for the Award of Mphil Health. *Thesis*, *10598384*, 1–154.

McGinnis, S. M., McKeon, T., Desai, R., Ejelonu, A., Laskowski, S., & Murphy, H. M. (2017). A systematic review: Costing and financing ofwater, sanitation, and hygiene (WASH) in schools. *International Journal of Environmental Research and Public Health*, *14*(4). https://doi.org/10.3390/ijerph14040442

McMichael, C. (2019). Water, sanitation and hygiene (WASH) in schools in low-income countries: A review of evidence of impact. *International Journal of Environmental Research and Public Health*, *16*(3), 1–21. https://doi.org/10.3390/ijerph16030359

McMillin, K. W. (2005). Personal hygiene. *Handbook of Food Science, Technology, and Engineering - 4 Volume Set*, 3389–3401. https://doi.org/10.5005/jp/books/11640_4

Meher, S., & Nimonkar, R. (2018). Study of hygiene practices among school going children

in a government school in Kolkata. *International Journal Of Community Medicine And Public Health*, *5*(7), 3102. https://doi.org/10.18203/2394-6040.ijcmph20182655

Ministry of Education. (2017). Pbb-Moe. *MoD*, *Ghana*, 110. https://www.mofep.gov.gh/sites/default/files/pbb-estimates/2017/2017-PBB-MOE.pdf

Mlenga, F. (2021). *Oral Hygiene Practices , Knowledge , and Self-Reported Dental and Gingival Problems with Rural-Urban Disparities among Primary School children in Lilongwe , Malawi*. *2021*.

Moussiliou et al. (2015). *Factors-influencing-the-behaviour-according-to-the-PRECEDE-PROCEED-model*.

Msn, R. D. (2021). *Community & Public Health Nursing Knowledge and Practices Regarding Personal Hygiene among Primary*. *7*(9), 7–10.

Nkwantanang, L. A., & Municipal, M. (2017). *SFG3246 V1 LA NKWANTANANG MADINA MUNICIPAL ASSEMBLY (LANMMA) Construction of Institutional Sanitation Facilities ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)*. *March*.

Nuamah, C. A., Arthur, C., Jecty, R., & Asare, B. (2020). *European Journal of Public Health Studies REMEDYING THE ABYSMAL EFFECTS OF POOR PERSONAL HYGIENE ON TEACHING AND LEARNING IN BASIC SCHOOLS , IN THE ASSIN NORTH MUNICIPALITY , GHANA*. 1–16. https://doi.org/10.5281/zenodo.3627410

Nurudeen, A. S., & Toyin, A. (2020). *Journal of Health Education*. *5*(2), 66–71.

Nutbeam D. (2015). *Nutbeam_2015*. *42*(4), 450–456.

Odigwe, O. (2015). Good Personal Hygiene: A Fight against the Spread of Infectious Diseases. *MOJ Public Health*, *2*(2), 15406. https://doi.org/10.15406/mojph.2015.02.00019

Oman, G. A. (2020). Presbyterian University College , Ghana Faculty of Development Studies Department of Environmental and Natural Resource Management Hygiene Practices Among Waste Management Workers At La Nkwantanang-Madina Municipality By Gifty Abena Oman. *Https://Ir.Ucc.Edu.Gh/Xmlui PRESBYTERIAN*, *August*.

Pewu, L. (2019). Factors Influencing Compliance With the Water Sanitation and Hygiene (Wash) Programme: Hand Hygiene Practices in Second Cycle Schools in the Ledzokuku Municipality of the Greater Accra Region of Ghana. *International Journal of Hygiene and Environmental Health*, *220*(7), 539–550.

Plan, M. D. (2017). *MUNICIPAL ASSEMBLY MEDIUM-TERM DEVELOPMENT PLAN*. *March 2015*.

Prah, J., Abdulai, M., Lasim, O., Ampofo-asiama, A., Prah, J., & Abdulai, M. (2018). *Assessment of Hygiene Practices among Students at the University of Cape Coast , Ghana*. 1–9.

Profile, S. E. E. (2017). *Study on Oral Hygiene : Awareness and Practices Among the School Going Research & Reviews : Journal of Dental Sciences Going Children in Rajshahi Division*. *April 2016*.

Rahman, M. H., Hassan, M. N., Khan, M. S. I., Hasanuzzaman, M., & Awal, N. (2022). Compliance to hand hygiene and its determinant factors among Community Health Care Providers in Community Clinics: an observational study in Bangladesh. *Journal of Infection Prevention*, *23*(2), 67–74. https://doi.org/10.1177/17571774211066965

Rajbhandari, A. K., Dhaubanjar, R., GC, K. B., & Dahal, M. (2018). Knowledge and practice of personal hygiene among secondary school students of grade nine and ten. *Journal of Patan Academy of Health Sciences*, *5*(2), 107–113.

https://doi.org/10.3126/jpahs.v5i2.24030

Region, S. A. (2021). *Infectious Diseases in the*.

Ridder, H. G. (2017). The theory contribution of case study research designs. *Business Research*, *10*(2), 281–305. https://doi.org/10.1007/s40685-017-0045-z

Rutledge, P. B., & Hogg, J. L. C. (2020). *In-Depth Interviewing Author Draft for International Encyclopedia of Media Psychology*. *September*. https://doi.org/10.1002/9781119011071.iemp0019

Satriani, S., Ilma, I. S., & Daniel, D. (2022). *Trends of Water , Sanitation , and Hygiene (WASH) Research in Indonesia : A Systematic Review*.

Shekhawat, R., Sodha, V. S., Sharma, N., & Verma, M. (2019). Knowledge and practice regarding personal hygiene among students of government schools of Bikaner, Rajasthan. *International Journal of Advanced Community Medicine*, *2*(2), 108–111. https://doi.org/10.33545/comed.2019.v2.i2b.15

Shilunga, A. P. K., Amukugo, H. J., & Mitonga, K. H. (2018). *Knowledge , attitudes and practices of primary schools learners on sanitation and hygiene practices*. *5*(8), 3197–3204.

Shrestha, M. V., Manandhar, N., & Joshi, S. K. (2018). Study on Knowledge and Practices of Water, Sanitation and Hygiene among Secondary School Students. *Journal of College of Medical Sciences-Nepal*, *14*(3), 160–165. https://doi.org/10.3126/jcmsn.v14i3.21158

Sibiya, J. E., & Gumbo, J. R. (2013). Knowledge, attitude and practices (KAP) survey on water, sanitation and hygiene in selected schools in Vhembe district, Limpopo, South Africa. *International Journal of Environmental Research and Public Health*, *10*(6), 2285–2295. https://doi.org/10.3390/ijerph10062282

Sihra, J., Meena, G., Meena, N., Naroliya, D., Saini, L., Kaur, M., & Gaur, K. (2018). Assessment of Knowledge and Practices regarding personal hygiene among students of Government schools of Jaipur city: A cross-sectional survey. *International Multispecialty Journal of Health*, *4*(4), 125–130.

Spruce, L. (2021). Hand Hygiene. *AORN Journal*, *113*(3), 286–294. https://doi.org/10.1002/aorn.13340

Sridhar, M. K. C., Okareh, O. T., & Mustapha, M. (2020). Assessment of Knowledge, Attitudes, and Practices on Water, Sanitation, and Hygiene in Some Selected LGAs in Kaduna State, Northwestern Nigeria. *Journal of Environmental and Public Health*, *2020*. https://doi.org/10.1155/2020/6532512

Tamiru, D., Argaw, A., Gerbaba, M., Ayana, G., Nigussie, A., Jisha, H., & Belachew, T. (2017). Enhancing Personal Hygiene Behavior and Competency of Elementary School Adolescents through Peer-Led Approach and School-Friendly: A Quasi-Experimental Study. *Ethiopian Journal of Health Sciences*, *27*(3), 245–254. https://doi.org/10.4314/ejhs.v27i3.6

Tawiah, B. (2017). *University of Ghana http://ugspace.ug.edu.gh University of Ghana http://ugspace.ug.edu.gh*. *July*. file:///C:/Users/Harrison/AppData/Local/Mendeley Ltd./Mendeley Desktop/Downloaded/Doville NK - 2010 - University of Ghana httpugspace.ug.edu.gh University of Ghana httpugspace.ug.edu.gh.pdf

Temitayo, I. O. (2016). Knowledge and Practices of Personal Hygiene among Senior Secondary School Students of Ambassadors College, Ile- Ife, Nigeria. *Texila International Journal of Public Health*, *4*(4), 648–660. https://doi.org/10.21522/tijph.2013.04.04.art055

Ullah, P. Z. (2020). *Social Impediments of Personal Hygiene Practices Among Females in*

Rural Faisalabad , Punjab Pakistan Major Objective of the Study. *2020*, 53–60. https://doi.org/10.31703/grr.2020(V-II).06

Unicef. (2021). *Hygiene and Hand Washing Statistics- UNICEF DATA*. https://data.unicef.org/topic/water-and-sanitation/hygiene/

Water, Sanitation and Hygiene (WASH) In Schools

_____ *Guidelines for Timor-Leste*. (2016). *1*.

WHO, & UNICEF. (2018). Core questions and indicators for monitoring WASH in Schools in the Sustainable Development Goals. *Joint Monitoring Programme*, 28. http://www.who.int/about/licensing/copyright_form/en/index.html%0Ahttp://www.who.int/about/licensing/copyright_form/en/

Wijayanti, L., & Ainiyah, N. (2019). *THE EFFECT OF THE SKIN PERSONAL HYGIENE MODULES AS HEALTH EDUCATION MEDIA AGAINST*. *8*(1), 1–7.

World Health Organization(WHO). (2016). *Water, Sanitation & Hygiene for accelerating and sustaining progress on Neglected Tropical Diseases*. 34. https://apps.who.int/iris/bitstream/handle/10665/182735/WHO_FWC_WSH_15.12_eng.pdf?sequence=1%0Ahttp://www.unwater.org/statistics_san.html

World Health Organization. (2016). *Summary Report : Hand Hygiene Self-Assessment Framework Survey 2015 / 2016*. 20. https://www.who.int/gpsc/5may/hand-hygiene-report.pdf

World Health Organization, & Unesco. (2021). *WHO guideline on school health services.*

APPENDIX A: PARTICIPANT INFORMATION SHEET

Research topic: Hygiene knowledge and practices among basic school pupils in the La Nkwantanang Madina Municipality.

Principal Investigator: Moses Ayamga

Address: School of Public Health, University of Ghana Legon.Email: mssayamga@gmail.com / mayamga001@st.ug.edu.gh Tel: 0200647649/ 0242618001

General Information/Background

The importance of promoting and practicing personal hygiene in schools is significantly influenced by the level of hygiene knowledge among schoolchildren. Poor hygiene is usually associated with diarrhoea, stomach cramps, skin conditions, and dental illnesses. Infections that are spread by poor personal hygiene habits are one of the most prevalent problems impacting students. Children's long-term physical, social, academic, and emotional well-being has been negatively impacted by poor personal hygiene awareness. To increase students' understanding of proper hygiene practices, the GES, GHS, and some NGOs made a significant effort to provide facilities and supplies to schools. Infectious illnesses are spreading among

schoolchildren despite these measures. The implementation of the right knowledge through practice is a sure way of preventing and reducing the spread of infectious diseases at home and school hence I will like to invite you to participate in this study because you have an experience as a student.

Procedure

This is qualitative research that will employ a purposive and convenient sampling technique to select key informants and pupils aged 12 – 18 years as respondents to examine hygiene knowledge and practices among basic school pupils. A tape recorder will be used to record those who agree to be interviewed. The data will be transcribed, and thematic themes developed and analysed using data statistical software called NIVIVO II. The result will be interpreted to improve hygiene knowledge and practices among schoolchildren.

Possible Risks and Discomforts

There is minimal risk in the study. There are no physical or psychological risks because the response to the interview questions is not sensitive or traumatic. However, the time it takes for respondents to be interviewed might be inconvenient.

Possible Benefits

There will be no direct benefits to respondents for participating in this research however the findings will add to knowledge and help policymakers integrate hygiene activities into the school curriculum.

Confidentiality and anonymity

Information about you will be protected. Your name would not be provided in the interview guide. The interview instrument sheet will be sent directly into a database which cannot be accessed by a third party other than my supervisor who may access my records.

Compensation

There will be two exercise books and a pen given to respondents for their participation.

Right to refuse or withdraw

Before participating in the study, please understand that your participation is voluntary. You do not need to participate in the research if you do not want to. If you decide not to be part of this study, your decision will not affect your relationship with the staff of the Ghana Health Service in any way. You will also not lose any benefits that you would have otherwise been entitled to. If you agree to take part in the study, you can still withdraw from the study at any time, and this will not affect you in any way.

Outcome and Feedback

Data obtained at the end of this research will be used to improve hygiene practices among school schoolchildren.

Funding

The study would be self-financed by the Principal Investigator

Sharing of Participants' Information/Data

Participant information would not be shared with a third party except for my supervisor who would have access to my records.

Data Access and Storage

An audio recorder will be used to record all interviews for the study and data stored for as long as needed to complete this research work.

Provision of Information and Consent for Participants

A copy of the Information sheet and Consent form will be given to the respondent after it has been signed or thumb printed.

Your rights as a Participant

This study has been reviewed and approved by the Ethical Review Committee of Ghana Health Service. If you would like to find out more about the study or if you have any concerns, you may contact Ms Abena Kwaa Ansah Apatu the Administrator of the Ghana Health Service Ethics Review Committee at **0503539896**.

For Further Information

For further explanation about questions regarding this research, contact Principal Investigator (Moses Ayamga at 0200647649), or Supervisor (Prof. Philip Baba Adongo on 0244806015).

APPENDIX B: ASSENT FORM (ADOLESCENT 12-18 YEARS)

Research topic: Hygiene knowledge and practices among basic school pupils in the La Nkwantanang Madina Municipality.

PARTICIPANT'S STATEMENT

I have read the information given above in a language I understand (i.e. English). I have been given a chance to ask questions concerning this study; questions have been answered to my satisfaction. I now voluntarily agree to participate in this study knowing that I have the right to withdraw this study at any time (i.e. withdraw from the research) even after I have signed this form.

Name of Participant……

Participant's signature……

Date……

APPENDIX C: INFORMED CONSENT FORM FOR PARENTS/GUARDIANS OF PUPILS 12-18 YEARS

Research topic: Hygiene knowledge and practices among basic school pupils in the La Nkwantanang Madina Municipality.

[*Instruction: Please tick (□) if eligible and accenting*]

☐ I have read the participant information sheet and this consent form, and I understand what is being requested of me.

☐ I understand that I can withdraw my ward from this study without giving a reason, and I can request my ward's data not to be included if I wish, up until the date given for analysis of the data.

☐ My questions concerning this study have been answered to my satisfaction.

☐ I freely consent and accept that the researcher can access my wards' information. I have been provided with a copy of this form.

☐ I give my consent for my ward to be part of the research.

☐ I consent to my ward being audio-taped during the interview.

☐ I accept that my ward takes part in the focus group discussions.

☐ Name of Parent/Guardian ……..

Parent/Guardian Signature ……...OR Thumb Print……

Date:…….

STATEMENT OF WITNESS

I was present when the purpose and contents of the Participant Information Sheet were read and explained satisfactorily to the participant in the language, he/she understood (….*name of language*)

I confirm that he/she was allowed to ask questions/seek clarifications and the same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name:……

Signature…….... OR Thumb Print …….....

Date:……

APPENDIX D: PARTICIPANTS' STATEMENT FOR KEY INFORMANTS

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and all questions satisfactorily explained to me in a language I understand (i.e. English or Twi). I fully understand the contents and any potential implications as well as my right to change my mind (i.e. withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Name of Participant……..

Participants' Signature ……...OR Thumb Print……

Date:……

APPENDIX E: DATA COLLECTION TOOL

In-depth interview guide for basic school pupils.

Research topic: Hygiene knowledge and practices among basic school pupils in the La Nkwantanang Madina Municipality.

Things to note:

1. Make sure the participant is at ease.
2. Introduce yourself and the study.
3. Confirm that the participant has.
   i) Read and comprehend the participant information sheet.
   ii) Signed (Parent) the consent forms and consented to be audio-recorded.

iii) Before beginning the interview, obtain the participant's consent and turn on the audio recorder.

Lead questions

iv) Tell me how you are doing.

v) How are studies going on?

Section A: RESPONDENTS' DEMOGRAPHIC CHARACTERISTICS

1. What is your sex? a. Male [ ] b. Female [ ]
2. What is your age group? a. 12-15 [ ] b. 16-18 c. 18+ [ ]
3. Religious background a. Christian b. Muslim c. other
4. What is your form (class) a. B7 b. B8 c. B9

Section B: Hygiene Knowledge and Practices among basic school pupils

1. Can you tell me what you know about hygiene?

Probe:

- Personal hygiene

2. Can you tell me where you get your information on personal hygiene from?

Probe:

- Do you have any more to add?

3. What are the forms or types of personal hygiene practices you are aware of?

Probe:

- Do you have any more to add?

- Which of these do you practice at home and school?

4. Which of these personal hygiene types do you practice the most?

Probe:

- Personal hygiene practices [Interviewer to take note and discuss in detail each PH type mentioned by pupils]
- Do you know how often each of these PH types should be practiced within a day?
- Do you observe these practices as you have mentioned above?

5. Can you tell me about some of the importance of personal hygiene?
6. What are the effects of not taking your hygiene care seriously?

Probe:

Which other effects of personal hygiene practices are you aware of? [Interviewer to take note and discuss in detail each effect mentioned by pupils]

Section C: Factors that influence compliance to PH practices in the school

7. Can you tell me some of the materials that are needed to ensure proper personal hygiene practices?

   Probe:

   - Do you have any more to add?

8. Which of these materials do you have at your school?

   Probe:

   - Do you have any more to add?
   - Which of these materials do you not have at your school?

9. How do the materials you do have affect your personal hygiene practice in your school?
10. What do you think your school should provide to help in your personal hygiene practices?

Section D: Factors that promote personal hygiene practices in the School

11. In your opinion, how can personal hygiene practices awareness be increased in your school?

Probe:

- Do you have any more to add?

12. Who do you think should lead hygiene education in the school?

Probe:

- Do you have any more to add?

Concluding question and statement

Is there anything else you would like to add or suggest about what we have discussed earlier?

APPENDIX F: IN-DEPTH INTERVIEW GUIDE FOR KEY INFORMANTS

Research topic: Hygiene knowledge and practices among basic school pupils in the La Nkwantanang Madina District.

Things to note:

Make sure the participant is at ease.

i. Introduce yourself and the study.
ii. Confirm that the participant has;
iii. Read and understood the participant information sheet.
iv. Signed (Parent) the consent form and consented to be audio-recorded.
v. Before beginning the interview, obtain the participant's consent and turn on the audio recorder.

Lead question

vi. How are you doing?

vii. How is work going on in the school?

Section A: RESPONDENT'S DEMOGRAPHIC CHARACTERISTICS

1. What is your sex? a. Male [ ] b. Female [ ]
2. What is your age group? a. 20-30 [ ] b. 40-50 c. 50+ [ ]
3. Religious background a. Christian b. Muslim c. other
4. What is your occupation a. teacher [ ] b. SHEP coordinator [ ] c. food vender [ ]

Section B: Hygiene Knowledge and Practices among basic school pupils

1. Can you tell me what you know about hygiene?

Probe:

- What do you know about personal hygiene?

2. Where do you think pupils get their source of information about personal hygiene from?

Probe:

- Do you have more source(s) to add?

3. What are some of the health benefits of personal hygiene practices to the pupil?

Probe:

- Do you have any more to add?

4. Do you think pupils have adequate knowledge of personal hygiene practices?

Probe:

Section C: Factors that influence compliance to personal hygiene practices in the school

5. Do you observe pupils engage in any form of hygiene practices in your school?

Probe:

- If YES, then what form or type of personal hygiene practices were observed?
- Can you tell me whether pupils exhibited the right knowledge in their personal hygiene practices?
- If NO, what could be the reason(s) why pupils do not engage in any form of personal hygiene practices?

6. What kind of material resources are available to pupils in their personal hygiene practices?

Probe:

- Do you have any more to add?

7. What are the effects of not observing personal hygiene practices on the pupil?

Probe:

- Is there another effect (s) of not engaging in personal hygiene practices by pupils?

8. What facilities are available in the school to help ensure proper personal hygiene practices among pupils?

Probe:

- Which other facility or facilities are available in the school?
- What do you think are some of the problems pupils encounter when using these available facilities in the school?
- What can be done to improve upon the facilities available to pupils in the school?

Section D: Factors that promote personal hygiene practices in the School

9. Do you think the school is ensuring proper hygienic practices among pupils?

Probe:

- If YES, what measures are available in the school to enforce these practices?
- If NO, what measures should be put in place to enforce these practices?

10. What can be done to increase awareness of personal hygiene practices among school children?

Concluding question and statement

Is there anything else you would like to add or share about this topic that you think is important for me to know besides what we have talked about?

APPENDIX G: ETHICAL APPROVAL LETTER

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Digital Address: GA-050-3303
Mob: +233-50-3539896
Tel: +233-302-681109
Email: ethics.research@ghs.gov.gh

13th March, 2023

My Ref. GHS/RDD/ERC/Admin/App/23/163
Your Ref. No.

Moses Ayamga
P. O. Box M 135
Madina-Accra

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC: 044/01/23**
Study Title	Hygiene Knowledge and Practices among basic school pupils in the La-Nkwantanang Madina Municipality of Ghana
Approval Date	13th March, 2023
Expiry Date	12th March, 2024
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of a yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID -19

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
Dr. Naa-Korkor Allotey
(Ag. Head, Ethics & Research Management Department)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

APPENDIX H: INTRODUCTORY LETTER

UNIVERSITY OF GHANA
DEPARTMENT OF SOCIAL AND BEHAVIOURAL SCIENCES
SCHOOL OF PUBLIC HEALTH

Ref No.:.....

15th November, 2022

The Director of Education
La-Nkwantanang Municipality
Madina – Accra

Dear Sir/Madam,

LETTER OF INTRODUCTION
MOSES AYAMGA – 10935177

I write to introduce Moses Ayamga, a Master of Public Health (MPH) student in the Department of Social and Behavioural Sciences, School of Public Health, University of Ghana, Legon.

Ayamga's dissertation is titled: **"Hygiene Knowledge and Practices Among Basic School Pupils in The La-Nkwantanang Madina Municipality."**

Ayamga will pay a visit to your Municipality to collect data for his research work. I would be grateful if you could give him the necessary assistance to enable him conduct the study.

Thank you and counting on your co-operation.

Yours faithfully,

Dr. Emmanuel Asampong
Head of Department

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