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First Aid in Tamale Metropolitan Basic Schools, Ghana (Who Is Responsible?)

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ABSTRACT

Health and safety legislation places duties on teachers for the health and safety of their students in the classroom and anyone else on the premises of the school. The study aimed to determine who is responsible for offering first aid in basic schools of Tamale Metropolis- Northen region, Ghana. The study used a survey research design. Knowledge scores were computed giving minimum and maximum obtainable scores respectively. The main tool for the collection of data was a questionnaire and observation. The data collected was quantitatively analyzed using statistical frequencies. Respondents were reported as having inadequate knowledge, no training on first aid and administering of first aid activities done by anybody without referring to experts or trained personnel in the schools. Lack of basic knowledge of the programme among them will hinder its effective implementation. This may inform training interventions to upgrade their knowledge in first aid programmes. The study recommends that the Ministry of Education and other allied agencies should establish some mandatory policies for professionals involved in medicine to be attached to the basic schools in Tamale Metropolis. Regular workshops and training must be given to teachers. As part of a contribution to knowledge, the paper has exposed the lack of inappropriate methods used in purchasing drugs in schools and the involvement of non-medical professionals in the activities of first aid in Basic schools in the Tamale Metropolis.

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INTRODUCTION

Children are born with a range of ailments, from small to significant, and they need first aid to heal quickly.[1] Undoubtedly, adherence to first aid regulations has been a prominent topic of discussion in the world's most recent conversations.[2] This is because maintaining one's health and safety is essential to one's ability to survive, which benefits education, businesses and the economy at large. Therefore, following first aid instructions is just as important as breathing.

[1] Jayanti Semwal et al., "Study of Knowledge and Attitudes to First Aid among School Children of Doiwalablock, Dehradun," *International Journal Of Community Medicine And Public Health* 4, no. 8 (July 22, 2017): 2934, https://doi.org/10.18203/2394-6040.ijcmph20173348.

[2] Antoine Duval and Antonio Rigozzi, *Yearbook of International Sports Arbitration 2015* (Springer, 2016); N. Burns and S. Grove, *The Practice of Nursing Research: Conduct, Critique and Utilization* (Philadelphia: WB Saunders, 1997); Byars Lloyd, *Human Resource Management* (McGraw-Hill Education, 2018).

Considering the physical and mental capacities of children which are still developing, school children are susceptible to a variety of dangers.[3] Daniel, et al. suggested that children are more likely than adults to be involved in accidents and sustain injuries; they need first aid more frequently.[4] These kinds of physical activity-related injuries can happen when participating in extracurricular activities run by the school or during athletic events. First aid is a life-saving skill that can also stop minor injuries from getting worse. Teachers are required by health and safety laws to make sure that the school has the necessary supplies and facilities for administering first aid. Based on an evaluation of local needs, schools and the Ghana Education Service (GES) are responsible for creating their policies and procedures. Research is required to enhance teachers' understanding of School Health Education Programs (SHEP).

According to the Ministry of Health report Ghana, in Ghana, first aid is required for all organizations.[5] Every institution in Ghana is required to have a first aider and a first aid kit, according to Section 28 of the Factory, Offices and Shops Act (Act 328) of 1970 (20). The Act's provision aims to guarantee that employees possess the first aid knowledge necessary to assist a friend in an emergency. Duty bearers are required under the health and safety obligations to take into account all work-related risks, not just those that are covered by laws and regulations.[6] A safer and healthier atmosphere in our classrooms is promoted by first aid knowledge.[7] Gaining first aid knowledge and proficiency by both staff and pupils helps to improve school safety. Numerous pupils have accidents while attending school. Accidents may result in minor cuts, deep cuts, or fractures. However, until a qualified medical professional arrives, the wounded can still receive basic care. Having students and personnel with training who can apply their knowledge and act quickly to treat the patient is crucial.

Public Basic Schools have an extremely dangerous learning environment. Children are naturally eager to play, which presents its own set of risks and increases the likelihood that they may get hurt. To support teaching and learning in Public Basic schools, the health and safety of these students must be given great consideration. Thus, this study's primary goal is to identify the individuals in charge of first aid procedures in Tamale Metropolis' public basic schools. Many of these students and teachers believe that receiving first-hand, rapid assistance in first aid will enhance or expand their understanding of the subject among Tamale Metropolis public basic school teachers.

LITERATURE REVIEW

First Aid

First aid, according to Black and Rolf, is the administering of medical attention in the early stages of a sickness or accident.[8] Usually, someone with training does it, or in an emergency, "non-experts." Very little is known about first-aid practices among prehistoric humans; they would have faced numerous first-aid problems. However, the first documented use of first aid dates back to 1099, when pilgrims and knights wounded in combat received treatment from religious knights affiliated with the Order of St. John, including the Knights Hospitalet.[9] In addition, they taught other knights how to take care of frequent injuries sustained in battle. In the High Middle Ages, there was little indication that first aid was used.[10] However, the First International Geneva Convention and the establishment of the Red Cross to offer "aid to sick and wounded soldiers in the field" did not occur until the middle of the 19th century.[11] Before the medics arrived, soldiers were instructed to take care of one another during combat.[12] Barrett claims that the word "first aid" originated in 1878 and was a mix of the terms "first treatment" and "National Aid." [13]Civilian ambulance personnel in Britain received specialized training for use around railroads, mines,

[3] W. Glanze, K. Anderson, and C. Mosby, *The Mosby Medical Encyclopedia* (New York: Signet, 2020); Daniel Sowah and Robert Boyko, *Occupational Intervention in Schools* (Chima Nigeria: Rich Group Publishing House, 2020).
[4] Sowah and Boyko, *Occupational Intervention in Schools*.
[5] Ministry of Health, *Ministry of Health Report- Ghana (2014) Health in Our Schools*, vol. 5 (Accra: Ministry of Health, 2014).
[6] Ministry of Health, *Ministry of Health Report- Ghana (2014) Health in Our Schools*.
[7] Ministry of Health, *Ministry of Health Report- Ghana (2014) Health in Our Schools*.
[8] N. Black and P. Newton, *Sports Injuries: Causes, Diagnosis, Treatment and Prevention* (Cheltenham: Nelson Thornes, 2019); C. Rolf, *Sports Injuries Handbook* (London: A & C Black, 2021).
[9] D. Cormack, *The Research Process in Nursing* (Oxford: Blackwell Science, 2016).
[10] Semwal et al., "Study of Knowledge and Attitudes to First Aid among School Children of Doiwalablock, Dehradun."
[11] Semwal et al., "Study of Knowledge and Attitudes to First Aid among School Children of Doiwalablock, Dehradun."
[12] Cormack, *The Research Process in Nursing*.
[13] Jena Clayton Barrett, "Teaching Teachers about School Health Emergencies," *The Journal of School Nursing* 17, no. 6 (2001): 316–22.

and law enforcement. There has been some differentiation between first aid and emergency medicine, and the practical abilities of first aid have continued to develop. These days, paramedics with more advanced training and first aid experience staff ambulances are found across the nation.

According to the Ministry of Health Report Ghana, first aid has several advantages.[14] As a result, for teachers and students to help save lives, they must receive the necessary first-aid training. If medical attention is delayed, a minor injury could become more serious. Furthermore, severe injuries might be lethal if they are not treated promptly. Schools must have first aid supplies on hand to protect both students and staff. Everyone must understand the fundamental techniques they should use in the event of an accident.

The Teacher as a Protector

In Ghanaian schools, teachers serve as the primary caregivers and the first line of defence for students in Basic education. They serve to enhance the function of parents. It is a well-known fact that Basic school teachers are typically the first to respond to calamities or disasters during school hours.[15] Pickett also indicated that Teachers should be able to handle both typical children and children with special healthcare needs emergencies appropriately.[16] The World Health Organization (WHO) and Rakhi states that first aid is something that everyone can and should learn.[17] First aid education and training need to be provided to all.[18] Collins supports the claim that first aid delivered correctly could be the difference between life and death, quick versus delayed recovery, and temporary versus permanent handicap.[19] Teachers undoubtedly have a significant role in preserving the health and safety of school children.[20] However, this position can only be filled effectively by teachers who possess the requisite training skills.

When the victim is a youngster, the significance of first-aid procedures becomes much more apparent.[21] It is also a known fact that Adults and children differ from one another not just in terms of physical, physiological, and psychological development, but also in terms of how they are exposed to different diseases and accidents. Children's physical and mental development is still insufficient to enable them to defend and protect themselves. First aid may not be a requirement of a teacher's job description, but any staff member may volunteer to provide this service. In the same way that parents might be expected to act toward their children, teachers and other staff members who have authority over students are expected to exercise their best judgment at all times, especially in emergencies, to ensure the welfare of the students at the school.[22] Generally, the repercussions of doing nothing during an emergency are probably worse than the implications of trying to help.[23]

Who is a first aider?

First aid, according to Karl, is whatever care is provided to an injured or sick individual who requires immediate medical attention.[24] Souza opined that first aid encompasses a wide range of medical scenarios and calls for specialized knowledge and abilities in addition to the capacity to evaluate a situation and make the necessary judgments.[25] One essential component of first aid is readiness. While a basic emergency kit with first aid supplies and a first aid handbook should be present in every home, school, and gathering, certain situations may call for more advanced or specialized levels of emergency

[14] Ministry of Health, *Ministry of Health Report- Ghana (2014) Health in Our Schools*.
[15] John Joseph Hanlon, *Public Health. Administration and Practice.*, 1974.
[16] Hanlon, *Public Health. Administration and Practice.*
[17] Rakhi Pandey et al., "First Aid Knowledge among Health Assigned Teachers of Primary Schools," *International Journal of Research in Medical Sciences* 5, no. 4 (March 28, 2017): 1522, https://doi.org/10.18203/2320-6012.ijrms20171257.
[18] Robert C France, "Introduction to Sports Medicine & Athletic Training," *(No Title)*, 2004.
[19] James W. Collins, *National Occupational Injury* (New York : Elsevier BV. Press., 2019), http://bjsm.bmj.com/content/27/2/135.
[20] Rahul Banerjee, Mark A Palumbo, and Paul D Fadale, "Catastrophic Cervical Spine Injuries in the Collision Sport Athlete, Part 2: Principles of Emergency Care," *The American Journal of Sports Medicine* 32, no. 7 (2004): 1760–64.
[21] Banerjee, Palumbo, and Fadale, "Catastrophic Cervical Spine Injuries in the Collision Sport Athlete, Part 2: Principles of Emergency Care."
[22] Cormack, *The Research Process in Nursing*.
[23] Collins, *National Occupational Injury*.
[24] Dahlfred, Karl Bumah, *Conservative in Theology, Liberal in Spirit: Modernism and the American Presbyterian Mission in Thailand, 1891-1941,* vol. 69 (Wipf and Stock Publishers, 2019).
[25] Paulo José Souza and Cynthia Tibeau, " Accidents and First Aid in School Physical Education," *Digital Magazine EF Desportes* 13, no. 27 (2019).

preparedness.[26] Acquiring specialized knowledge, such as abdominal thrusts to help choking sufferers or cardiopulmonary resuscitation (CPR), can also help one be ready to provide efficient first aid. First aid may be necessary for minor medical disorders like nosebleeds and mild allergic responses, as well as for medical emergencies like heart attacks, strokes, or seizures. Knowledge of First aid can also be extremely helpful in cases of traumatic injuries (strains, sprains, burns, puncture wounds, cuts, and more serious internal injuries) and environmental injuries (sunburn, poison ivy, heat exhaustion, frostbite, bee or insect stings).[27] Some skills are taught everywhere because they are seen to be necessary for administering first aid.[28] Before treating less serious injuries, first aid principles which centre on vital lifesaving intervention must be administered. Basic skills are frequently picked up passively from life events, such as how to apply direct pressure on a haemorrhage or use an adhesive bandage. Nonetheless, education and hands-on training are necessary to deliver efficient, life-saving first-aid procedures.[29] This is particularly true for conditions and injuries that have the potential to be fatal, such as those that call for cardiopulmonary resuscitation (CPR). These treatments can be intrusive and put the patient and the caregiver at risk for additional harm. Similarly, as with any training, it is most effective when conducted ahead of time. In many nations, emergency ambulance dispatchers can provide basic first aid instructions over the phone while the ambulance is being dispatched.

Participating in a course that leads to certification usually will provide basic training. Regular attendance at refresher courses or re-certification is frequently required due to changes in methods and protocols that are based on updated clinical knowledge and to retain skills.[30] According to Fried, first aid training is also frequently offered by commercial providers who would train people for a fee, or by neighbourhood organizations like the Red Cross and St. John Ambulance.[31] The most popular use of this commercial training is to teach staff members how to administer first aid in the workplace or schools.

Teachers' Knowledge of First Aid

Fried states that first aid procedures are the earliest steps taken to assist those who are suffering or in danger of dying.[32] These activities can be carried out by anyone, not just medical professionals. One important location where an emergency or urgent scenario arises can be a school. It comprises a setting where children could get hurt and a good chance for the teacher to intervene. However, because of their education and training, most teachers lack the confidence and credentials to administer first aid.

In India, a study was carried out to evaluate teachers' knowledge of first-aid procedures in schools. The results indicated that 87% of the teachers had low knowledge and 13% had moderate knowledge, indicating a situation where teachers are not properly qualified to provide first aid care.[33] Similar findings were found in an African study by Whitaker et al., that revealed elementary school teachers' ignorance of and qualifications for administering proper first aid.[34]

Health education is an effective strategy for addressing teachers' lack of understanding of the subject. Despite their decreased knowledge, teachers' comprehension of pediatric first aid procedures improved over time as a result of the educational intervention, according to a study done in China that looked at their knowledge at six months, nine months, and four years after training on the subject.[35]

According to Ghanaian law, first aid is required for all organizations. According to Section 28 of the Factory, Offices and Shops Act (Act 328) of 1970 (2), all institutions in Ghana are required to have a first aider on staff as well as a first aid box. The Act's provision aims to guarantee that employees

[26] Camila de Sousa, " Physical Education in High School and First Aid: The Knowledge of Students and Teachers," VII scientific initiation Journey, Mackenzie Presbyterian University, 2018.
[27] J. Clover, *Sports Medicine Essentials: Core Concepts in Athletic Training and Fitness Instruction* (New York: Delmar Cengage, 2019).
[28] Souza and Tibeau, " Accidents and First Aid in School Physical Education."
[29] Souza and Tibeau, " Accidents and First Aid in School Physical Education."
[30] Bruce Fried and Laura M Gaydos, *World Health Systems: Challenges and Perspectives* (Health Administration Press Chicago, IL, 2002).
[31] Fried and Gaydos, *World Health Systems: Challenges and Perspectives*.
[32] Fried and Gaydos, *World Health Systems: Challenges and Perspectives*.
[33] K. L. Kucera et al., "Annual Survey of Football Injury Research: 1931–2018," *National Center for Catastrophic Sport Injury Research*, 2019.
[34] Jonathan Whitaker, Andy Cunningham, and James Selfe, "Youth Sports Injuries and Their Immediate Management: A Review," *Physical Therapy Reviews* 11, no. 3 (2006): 171–77.
[35] Kucera et al., "Annual Survey of Football Injury Research: 1931–2018."

possess the first aid knowledge necessary to assist a friend in an emergency. Duty bearers are required under the health and safety obligations to take into account all work-related risks, not just those that are covered by laws and regulations. Additionally, all first- and second-cycle schools are required by the Ministry of Health to teach first aid so that students can learn how to assist one another in the event of a medical emergency in public, at home, and in classrooms.

Since first aid is a component of emergency and urgent services and is available in schools, it holds a strategic place in health education about first aid procedures in schools. The School Health Program, which focuses on promoting students' health, includes first aid. Thus, research on instructional technology on first aid protocols is pertinent to our educational system. Teachers' first aid and emergency plan implementation skills are crucial because they enable pupils to receive rapid assistance, promote health, avoid illnesses, and prevent accidents among kids and teenagers.[36] Thus, it is clear that resourcing teachers on first aid is important and should not be undervalued, whether in classrooms or any other place.

Clover states that although any staff member may volunteer to perform first aid, teachers' employment contracts may not require them to do so.[37] In the same way that parents might be expected to act toward their children, teachers and other staff members who have responsibility for students are required to make every effort, especially in emergencies, to ensure the welfare of the students at the school. Generally speaking, the repercussions of doing nothing during an emergency are probably worse than the implications of trying to help, Clover asserted.[38]

First aid in Ghanaian schools

Since children and teens congregate in groups inside a shared area and engage in a variety of motor and sports activities, schools are high-accident environments.[39] Individual elements associated with their global development, including their age, social relationships, physical, mental, and cognitive traits, can determine the types of accidents that take place in that educational setting. Accidents are a continual worry in the educational setting; therefore, educational personnel must be prepared to respond appropriately and provide first aid as necessary to prevent problems from improper actions.

St. John feels that schools are the best location to begin spreading the word about the value of first aid in our community. We provide a free program called First Aid in schools that will teach school-age children how to handle emergencies by equipping them with lifesaving skills.[40] The goal of St.John is to lessen suffering and save lives by offering First Aid and safety instruction in communities, businesses, and educational institutions. Additionally, the organization offers public ambulance services. Accidents can happen indoors, outdoors, or even in a shopping centre. They have happened for as long as man has existed. The likelihood of accidents rises even further when discussing circumstances when physical activity is done in parks, gyms, and, most importantly, schools.

Promoting health and preventing illnesses and accidents among children and adolescents in schools is a major responsibility of schools and teachers. In many cases, ignorance results in a host of issues, including the victim's improper handling, his state of terror upon seeing them, and their needless requests for emergency assistance. First aid expertise becomes crucial for public school physical education teachers in this particular scenario. In the classroom, particularly in physical education classes, exercises are frequently conducted in settings that necessitate the teacher playing a crucial role in making the initial calls. Emergencies that necessitate emergency care in our schools generally include burns, choking, animal or insect bites, and wounds and bleeding.

Everyone has a right to health, and the state has a duty to ensure that everyone has access to it.[41] This is done through social and economic policies that lower the risk of disease and other aggravating factors, as well as by providing equal access to actions and services for health promotion, protection, and

[36] Dorling Kindersley, *St. John Ambulance. St Andrew's First Aid, British Red Cross: First Aid Manual*, 10th ed. (London, 2020).
[37] Clover, *Sports Medicine Essentials: Core Concepts in Athletic Training and Fitness Instruction*.
[38] Clover, *Sports Medicine Essentials: Core Concepts in Athletic Training and Fitness Instruction*.
[39] Duval and Rigozzi, *Yearbook of International Sports Arbitration 2015*.
[40] St John Ambulance, *Journal of Safety Tips in Schools Our Concern* (Lagos, Nigeria, 2019).
[41] World Health Organization, *Health Promotion Glossary*, 2014, http://www.who.int/hpr/NPH/docs/hpglossary,en.pdf.

recovery.[42] For pupils of all ages, a secure learning environment is crucial.[43] They can't concentrate on acquiring the skills necessary for a good education and future without it. Your child may likely see violent acts during their school years, even if they are not the actual victims of violence in the classroom. Studies have shown that kids who have a sense of insecurity at school not only perform lower academically but also have a higher likelihood of engaging in drug use and delinquent behaviour.[44]

It is simpler to keep everyone safe when staff, educators, and students follow the right school health and safety procedures.[45] When students arrive in the morning and when school is about to end, school grounds can get very crowded. The personnel at the school are very concerned about making sure that nobody gets wounded, but everyone has to help with this, including the parents.

The Main Causes of Accidents in the School Context

Accidents are described as "an inadvertent occurrence that may result in harm and may be preventable in educational or other social settings; occasionally may feature a series of health hazards." Accidents are also explained as "unintentional events that may occur in any environment, including schools, and are capable of causing physical or emotional injury, depending on their severity."[46] Even if accidents are considered unintentional, it is incorrect to claim that they are abrupt, unexpected, or unpredictable because they have a cause, a genesis, and epidemiological factors that can be managed or avoided.[47] The abandoning of the culture that views child growth as an accident or as something normal depends on this realization.[48] Students are always exposed to a variety of risks when they are in the classroom or school compound. Accidents can occur in a variety of locations, including classrooms, hallways, courtyards, parking lots, restrooms, labs, libraries, and recreation and sports facilities. The high concentration of kids and teens in these areas having meetings, interacting with one another, and engaging in various motor and sports activities may be connected to the predictability of accidents. Accidents can happen anywhere and have happened for as long as humans have existed. The sheer volume of kids and teenagers engaging in different motor and sports activities might result in mishaps that inflict bodily harm and psychological distress, ultimately causing the student to fail. Many youngsters may sustain injuries in the school setting as a result of their interactions with others.[49] As a result, the surroundings become more accident-prone.

According to a US report cited by Green & Kreuter (2019), 3,700,000 children are injured in school-related accidents each year. Additional research conducted in 2000 at 20 schools included in the Life in the City of Blumenau schools project found that out of 287 incidents registered over a year, 117 (41%) happened on the Court. Most accidents (55%) occurred when students were in class. Colucci provides statistics from a study carried out in 23 public and private schools in São Paulo, showing that 78% of children injured in accidents do so while adults are present.[50] We can say the same thing about what happens in our elementary schools in Ghana.

Health Services in Schools

The healthcare delivery system inside a school or college is called "school health services."[51] These programs are designed to support and uphold school children's health to provide them with a healthy start in life. These services help kids get the most out of their schooling. It is predicted that 1.2 billion children (18% of the world's population) are of school age worldwide.[52] Due to mothers' need to wean their babies early to return to the workforce, children in many homes throughout the world begin education as early

[42] World Health Organization, *Health Promotion Glossary*.
[43] World Health Organization., " WHO Definition of Health," 2020, https://www.who.int/about/who-we-are/frequently-asked-questions.
[44] Anthony Kwame Apedzi, "The Law on First Aid and Its Compliance in Ghana: The Case of Drivers in Madina Bus Terminal, Accra," *Biomedical Journal of Scientific & Technical Research* 37, no. 4 (2021): 29716–19.
[45] David S Gochman, "Health Behavior Research: Definitions and Diversity," *Handbook of Health Behavior Research* 1 (1997): 3–20.
[46] Kucera et al., "Annual Survey of Football Injury Research: 1931–2018."
[47] Kucera et al., "Annual Survey of Football Injury Research: 1931–2018."
[48] Thandar Soe Sumaiyah Jamaludin, Sanisah Saidi, and Mei Chan Chong, "Knowledge, Awareness and Attitude of First Aid among Health Sciences University Students," *International Journal of Care Scholars* 1, no. 1 (2018): 29–33.
[49] Kari Colucci, "Peer Mentoring Program for Baccalaureate Nursing Students," 2016.
[50] Colucci, "Peer Mentoring Program for Baccalaureate Nursing Students."
[51] Bacon-Shone J., "Behavioural Risk Factor Survey April 2018," Centre for Health Protection, 2018, https://www.chp.gov.hk/files/pdf/brfs_2015apr_en.pdf.
[52] Bacon-Shone J., "Behavioural Risk Factor Survey April 2018."

as five or six months of age. According to Clements et al., Nurses serve as liaison between school personnel, family, community and healthcare providers in the school.[53] The goal of school health services is to assist students in achieving optimal health so they can fully benefit from their education.[54]

School health services include health assessments, infectious disease management, documentation, staff and student health monitoring.[55] It is the part that deals with impartially assessing a person's health. Through health assessments, school administrators can identify symptoms of common illnesses and indications of emotional disorders that may interfere with students' ability to learn. School health services help inform parents and school administrators about the health status of school-age children. They include both preventive and therapeutic services.[56] In addition, it offers parents and the school community 6counselling and advisory services. It consists of school health records, pre-entry medical screening, regular health screenings, examinations, and sick bay, first aid, and referral services. Additional services provided include health examinations, which include screening tests, medical diagnosis, and the maintenance of health records; health observation entails the physical inspection of children's physiology and behaviours.[57]

The Ministries of Health in Ghana found out that, 30% of pupils had low Body Mass Index (BMI) and only 14% of headteachers and mistresses said that Pre-enrollment medical examinations were required in their schools.[58] According to the report, 30% of kids have a low body mass index (BMI), and the most prevalent medical disorders that cause students to miss school are fever (56%), headaches (43%), stomachaches (29%), cough/catarrh (38%), and malaria (40%).

According to Reeser, school health is intricate and multifaceted, which raises the issue of accountability.[59] In Africa, school health is the most undervalued aspect of primary healthcare.[60] Basic schools are present in almost every village and town; therefore, it should be possible to use them as a central location for providing primary healthcare services to the entire community, not just the students. This is especially true in places without health centres. A carefully planned and implemented school health program can help to establish a secure learning environment for students.[61] The school health program is one strategy for increasing access to primary healthcare services, with very little execution, all attempts to address Ghana's school health program have stayed mostly at the policy level. Implementation of health services has been tried mainly in the outside world rather than in the classroom. Following Ghana's ratification of the Convention on the Rights of the Child in 1991, the Ghana Education Service (GES), a Unit responsible for the School Health Education Programme (SHEP) was established. The government ordered the Ministries of Health and Education to implement integrated health delivery services and health education in 1992 to supplement the academic aspects of formal education. The Ministry of Health offers technical assistance, but the Ministry of Education has been assigned the primary role.[62]

METHODOLOGY

Study Setting

A Legislative Instrument (LI 2068) that transitioned the former Municipal Assembly into a Metropolis in 2004 created the Tamale Metropolitan Assembly[63] It is currently the only Metropolis in Ghana's five northern regions — the Upper East, Upper West, Northern, North East, and Savannah Regions and one of the six Metropolitan Assemblies in Ghana.[64] Tamale serves as the Northern Region's regional capital. The Guinea Savannah belt contains it. With 374,744 residents, it is the fourth-largest city in Ghana, of

[53] Breena Welch Holmes et al., "Role of the School Nurse in Providing School Health Services," *Pediatrics* 137, no. 6 (June 1, 2016), https://doi.org/10.1542/peds.2016-0852.
[54] Green L.W. and Kreuter M.W., *Health Programme Planning* , 4th ed. (Boston: McGraw Hill, 2019).
[55] Bacon-Shone J., "Behavioural Risk Factor Survey April 2018."
[56] Hanlon, *Public Health. Administration and Practice.*
[57] Hanlon, *Public Health. Administration and Practice.*
[58] Ghana Statistical Service (GSS), "Ghana - Service Provision Assessment Survey. ," 2021.
[59] J. Reeser, *Volleyball: Olympic Handbook of Sports Medicine* (Chichester: Blackwell Science Ltd., 2020).
[60] Reeser, *Volleyball: Olympic Handbook of Sports Medicine.*
[61] Green L.W. and Kreuter M.W., *Health Programme Planning* .
[62] Apedzi, "The Law on First Aid and Its Compliance in Ghana: The Case of Drivers in Madina Bus Terminal, Accra."
[63] Tamale Metropolis Assembly- Regional Coordinating Council, "Tamale Metropolis Assembly Profile," 2018.
[64] Ghana Statistical Service (GSS), "Ghana - Service Provision Assessment Survey. ."

these, 189,693 are women and 185,051 are men.[65] The city is home to the Tamale Teaching Hospital, which helps to handle health-related issues for the whole region. It is the third-largest hospital in the country. Tamale has the following educational institutions: 145 kindergartens, 168 primary schools, junior high schools (JHS) 96; Senior high schools (SHS) 8; Technical/Vocational 2 and 6 general/science/arts/business programmes.[66] The Metropolis has a high dropout rate, particularly among junior high school students.[67] This is a concern to the administrators of the Ghana Education Service.

The Research Approach

The study used a Survey Research Design, aimed at determining who is responsible for First Aid activities in Tamale Metropolitan Public Basic Schools. Most surveys deal with ‘‘what is” because its scope is very vast. It describes and interprets what exists at present. In surveys, researchers are concerned with conditions or relationships that exist, practices that prevail, beliefs, points of view or attitudes that are held, ongoing processes, influences that are being felt, and trends that are developing. The main benefit of survey research is that it provides first-hand primary data that is collected, maintained, and analyzed to achieve goals. Surveys also serve as direct sources of valuable knowledge concerning human behaviour.[68]

The Survey approach was used to collect the following three types of information (*i*) what exists, (*ii*) what we want, (*iii*) how to get there. The information about “what exists” was gathered by studying and analyzing important aspects of the present situation. The information about “what we want” was obtained by clarifying, goals, and objectives possibly through a study of the conditions existing elsewhere or what experts consider to be desirable. The Information on how to get these was collected by discovering the possible means of achieving the goals based on the experiences of others or opinions of experts. Kothari views this approach as conditions or relationships that exist, opinions that are held, processes that are going on, evident effects, or trends that are developing.[69] Simple descriptive statistics were used to analyze the data based on the various phenomena.

Population, Sample Selection and Sample Size

There are 409 Public Basic schools in the Tamale Metropolitan Assembly. According to the Tamale Metro Education Service report, the breakdown is 145 kindergartens (KG), 165 primary schools, and 79 junior high schools.[70] All Tamale Metropolis public basic schools were the target population. However, two hundred and fifty (250) public basic schools were randomly selected to make up the sample size. According to Creswell, a representative sample technique is when a small quantity of a whole accurately reflects the larger entity in a population.[71] In representative sample technique, it allows the collected results to be generalized to a larger population.[72] This is especially impractical for a large population. A representative sample parallels the key variables and characteristics under examination. [73] The Representation sampling approach was used for the sampling. Millar also agrees that Representation sampling is better than a large sample size or a whole population.[74] The size of a sample should not be too large or too small.[75]

Data Collection Approach

Data collection is an important aspect of any type of research study. Inaccurate data collection can impact the results.[76] The Socio-Economic Demographic characteristics of the study population play an important

[65] Ghana Statistical Service (GSS), “Ghana - Service Provision Assessment Survey. .”
[66] Tamale Metropolis Assembly- Regional Coordinating Council, “Tamale Metropolis Assembly Profile.”
[67] Tamale Metropolis Assembly- Regional Coordinating Council, “Tamale Metropolis Assembly Profile.”
[68] E. R. Babbie, *Survey Research Methods* (California, 2015).
[69] C. R. Kothari, *Qualitative Techniques*, 2nd ed. (New Delhi: Vikas Publishing House Put Ltd., 2014).
[70] Tamale Metro Education Service report (2019).
[71] J W Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (SAGE Publications, 2014), https://books.google.com.gh/books?id=4uB76IC_pOQC.
[72] J. K. Ogah, *Decision Making in the Research Process* (Legon Accra: Adwina Publications (Gh) Ltd, 2013).
[73] Ogah, *Decision Making in the Research Process*.
[74] D. C. Millar, *Research Design and Social Measurement* (Newbury Park, California: SAGE Publication, 2016).
[75] R. Karma, *Research Methods* (New Delhi: SAGE Publications, 2019).
[76] G. Ormrod, *Research, Quantitative and Qualitative Data Collection Methods* (London: Boston Press, 2015).

role when it comes to the collection of data.[77] Data was collected from secondary and primary sources. The main tools for the collection of data for this study were the questionnaire and observation. The 250 questionnaires were randomly distributed to the class teachers and headteachers/headmistresses of the selected schools. A prior visit to the various randomly selected basic schools headteachers and headmistresses was done to pave the way for ethical clearance for the data collection. This gave way to the data collection process. The participants voluntarily participated and informed consent was sought from them. They were assured of anonymity and confidentiality during the data collection process. The data collected was quantitatively analyzed using simple statistical frequencies.

PRESENTATION OF FINDINGS AND DISCUSSION

Two hundred and fifty (250) questionnaires and observation checklists were sent out and two hundred (200) responses were retrieved. The importance and usefulness of looking at statistics about data allows a researcher to determine whether the results are representative of the data or not. The findings are based on the 200 responses that were retrieved from the field.

Table 1 indicates that 30% (60) of the respondents were females (headmistress) and 70% (140) of the respondents were males (headteacher). This was also observed during the data collection process. An indication of how males dominate in the headship position of public basic schools in the Tamale Metropolis**.** The result from the data also confirms the ILO report which indicates that "there is a Sex gap in Leadership, what's holding women back."[78] The findings disagree with UNESCO's accession of calls for attention to gender and sex equality throughout the education system in relation to access, content, teaching-learning context, practices, learning outcomes, leadership and life and work opportunities for all genders.

Table 1. Headship based on Gender

		Frequency	Percent	Valid Percent	
	male	140	70	70	
	female	60	30	30	
	Total	200	100.0	100.0	

Table 2, indicates the number of years each headteacher or headmistress served in the school as a head. 21% (42) served as head teacher/mistress between 1-5 years, 41.5% (83) also served as heads between 6-10 years (43) representing 21.5.0% of the total respondents, and those who served between 16-20 years were (32) and representing 16.0%. The demographic characteristics of the respondents clearly show how experienced the head teachers/mistresses are and have worked with first aid activities for a longer time. These findings support Sulemana, et al. accession that Human experiences are part of leadership and this energizes an organized group.[79]

Table 2. Shows the Number of Years Served as Head Teacher or Headmistress

	Frequency	**Percent**	**Valid percent**
1-5	42	21	21
6-10	83	41.5	41.5
11-15	43	21.5	21.5
16-20	32	16	16
Total	200	100	100

[77] B. G. Tabachnick and L. S. Fidell, *Using Multivariate Statistics* , 5th ed. (Boston: Allyn and Bacon, 2007).
[78] ILO, "Gender and Development ," 2017, http://www.ilo.org/global/topics/economic-and-social-development/gender-and-development/lang-en/index.htm.
[79] Iddrisu Sulemana, Zakaria Shanunu, and Alhassan Imoro Nuhu, "Impact of Leadership Styles of Principals on Teacher Educants: A Study of Colleges of Education in Northern Ghana," *Journal of Education and Learning Technology* 1, no. 3 (August 25, 2020): 61–68, https://doi.org/10.38159/jelt.2020081.

In Table 3**,** and also from an observational point, out of the 200 respondents, 155 (84.1%) indicated that they have equipped first aid boxes in the school whilst 45 (15.9%) said they do not have first aid boxes in the school. These results could be based on how some schools do not consider first aid as a safety measure. The results also buttress the view of Babbie that School health has been described as the neglected component of some Primary Health Care in Africa.[80] The results also prove that many of the public basic schools have equipped first aid boxes/kits. Arasu et al. opined that First aid skills are important because they can mitigate the consequences of an accident and even save lives.[81]

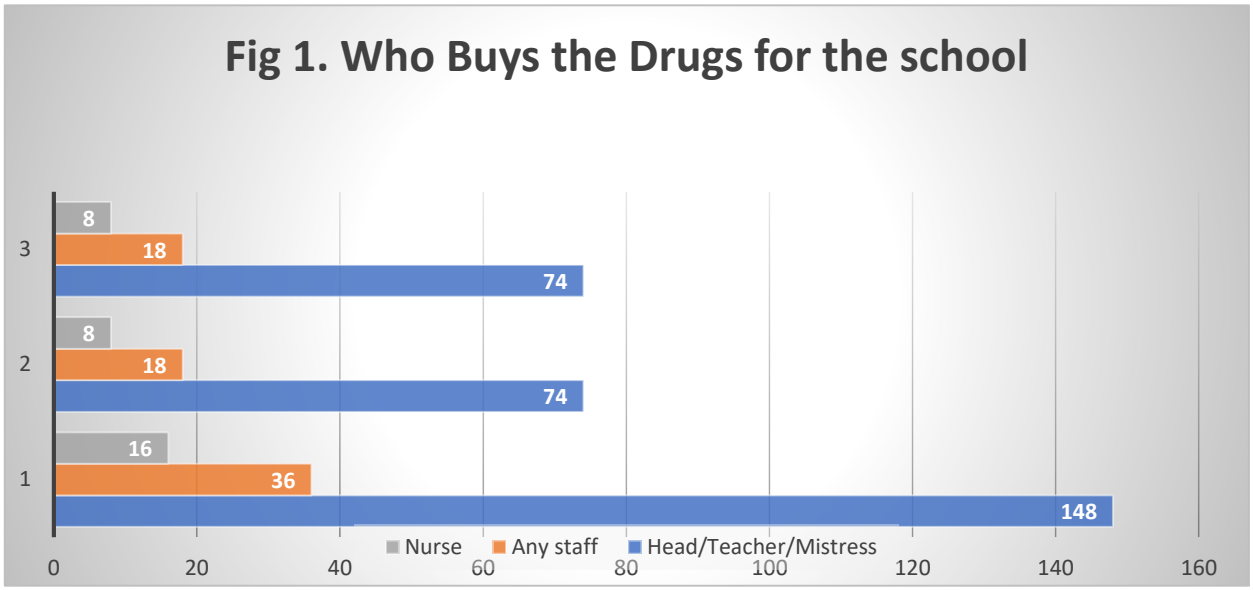

Table 3. Do you have a First Aid Box/kits in your School?

	Frequency	Percent	Valid Percent
No	45	22.5	22.5
Yes	155	77.5	77.5
Total	200	100	100

Source: *Field data 2024*

The analysis in Table 4 indicates that 148 (74%) confirmed that the headteachers/mistress buy the first aid drugs for the school. This could be due to the heads being the spending officers. (18%) also agreed that they allow any staff member to buy the drugs. 16(8%) allow nurses to buy the drugs for the school. These results support Clover's assertion that teachers' conditions of employment may not include giving first aid, although any member of staff may volunteer to undertake these tasks.[82] Schools, both legally and morally, bear the responsibility of ensuring a safe environment for their students. Though schools are fundamentally places of learning, they must also be sanctuaries of safety.[83] According to the Ministry of Health Report Ghana (2014), first aid has several advantages.[84] As a result, for teachers and students to help save lives, they must receive the necessary first aid training and this result does not support that view.

Table 4. Who Buys the Drugs for the School?					
		Frequency	Percent	Valid Percent	
	Headteacher/mistress	148	74	74	

[80] Babbie, *Survey Research Methods*.
[81] Sakthi Arasu et al., "Safety First: Awareness and Attitude Regarding First Aid among College Students—A Cross-Sectional Study in Urban Bangalore," *International Journal of Health & Allied Sciences* 9, no. 1 (2020): 25–28.
[82] Clover, *Sports Medicine Essentials: Core Concepts in Athletic Training and Fitness Instruction*.
[83] David Markenson et al., "Part 17: First Aid: 2010 American Heart Association and American Red Cross Guidelines for First Aid," *Circulation* 122, no. 18_suppl_3 (2010): S934–46.
[84] Ministry of Health, *Ministry of Health Report- Ghana (2014) Health in Our Schools*.

	Any staff	36	18	18	
	Nurse	16	8	8	
	Total	200	100.0	100.0	

From observation, on the question of who keeps the first aid drugs, 66.5% agree that the headteacher/mistress keeps the first aid drugs whilst 20% of the respondents allow staff members to keep the first aid drugs. Those who allowed the nurses and the sports masters to keep the first aid drugs were 5.5% and 8% respectively as shown in Table 5. This also indicates that there is no structured way or procedure as to who is responsible for keeping the first aid drugs. The findings support Lewis (2019) who asserted that the scope of first aid is not purely scientific; it is influenced by both training and regulatory issues.[85] The Findings also suggest that assisted distribution of first aid can have the benefits of preventing injuries by reducing school-based accidents.

Table 5. Who keeps the First Aid Drugs?

	Frequency	Percent	Valid Percent	
Headteacher/mistress	133	66.5	66.5	
staff members	40	20	20	
Nurse	11	5.5	5.5	
Sports master	16	8	8	
Total	**200**	**100.0**	**100.0**	

According to Glanze, et al. and Garcia, School health services deal with health appraisals, control of communicable diseases, record keeping, and supervision of the health of school children and personnel.[86] Out of the 200 respondents, 160 (80%) schools do not have nurses in their schools and 40(20%) of the schools have some community nurses in their schools. As observed during the data collection, it was realized that the nurses were not directly posted to the schools but posted to the community clinics. This also answers the objective of the study which sought to find out who is responsible for first aid activities in basic schools in the Tamale metropolis. The findings do not agree with Clements et al (2016). They indicated that Nurses serve as liaisons between school personnel, family, community and healthcare providers in the school as the literature revealed.

Table 6. Do you have a Nurse in your School

		Frequency	Percent	Valid Percent	
	No	160	80	80	
	Yes	40	20	20	
	Total	200	100.0	100.0	

For Table 7, which answers the question ‘’Who administers the first aid drugs in the school,’’ the data revealed that any staff member can administer the drugs whether trained or not and this represented 72% (144) of the total respondents. 15% (30) also have the view that the sports master administers the drugs. 13% (16) agreed that the head teacher/mistress administer the drugs. This result also confirms the assertion of Reeser who postulates that school health is intricate and multifaceted, which raises the issue of accountability.[87] The lack of qualified personnel to administer first aid drugs is a worry and can be dangerous to the basic school pupil’s health and academic work. The results do not support International Standards on Drug Use Prevention, which indicated that a lack of knowledge about substances and the consequences of the use of drugs are among the main factors that increase an individual’s vulnerability.[88]

[85] T.H. Lewis, *The Medicine Men: Oglala Sioux Ceremony and Healing* (Lincoln, Neb: University of Nebraska Press, 2019).
[86] W. Glanze, K. Anderson, and C. Mosby, *The Mosby Medical Encyclopedia* (New York: Signet, 2020); Danka R. Garcia, “Accidents and Injuries in the School Environment: Raise Awareness and Prevent,” 2018, http:www.diaadiaeducacao.pr.gov.br /portals/pde/arquivos/2140-8.pdf=%22%22%3E.%3C/http:%3E..
[87] Reeser, *Volleyball: Olympic Handbook of Sports Medicine*.
[88] World Health Organization, *International Standards on Drug Use Prevention*, 2 updated edition (Vienna: United Nations Office on Drugs and Crime. Licence: CC BY-NC-SA 3.0 IGO., 2018).

Table 7. Who administers the first aid drugs to the pupils?

		Frequency	Percent	Valid Percent	
	Any staff member	144	72	72	
	Sports master	30	15	15	
	Headteacher/mistress	26	13	13	
	Total	200	100.0	100.0	

Table 8 shows how those who administer first aid drugs have not undergone any basic training as to how to administer first aid drugs in Tamale Metropolitan basic schools. 64% (128) of the total respondents have not undergone any basic training before administering first aid drugs. 25.5% (51) have some knowledge or training in first aid activities. Those who have partial knowledge are 10.5% (21). These show how serious the problem is in the basic schools in Tamale Metropolis and also it defeats one of the objectives of the School Health Education Programme (SHEP) which indicates that: "Conduct training to build the capacity of teachers, school children and community members for effective implementation of school health programmes." The results reiterate the topic for this paper who is responsible for first aid activities in basic schools in the Tamale metropolis. The data does not support Green and Kreuter, who opined that the goal of school health services is to assist students in achieving optimal health so they can fully benefit from their education.[89] The results are central to WHO's asertion that, for pupils of all ages, a secure learning environment is crucial to their development aspirations as indicated in the literature.[90]

Table 8. Those Who Administer the Drugs, Are They Trained?

		Frequency	Percent	Valid Percent	
	No	128	64	64	
	Yes	51	25.5	25.5	
	Partially	21	10.5	10.5	
	Total	200	100.0	100.0	

Question 12 was on the need for a nurse or a medical professional to be attached to the school. All the respondents (100%) agreed that there was the need for a well-trained medical professional to be attached to the school and also the need for staff members to be trained on how to handle first aid cases in the school regularly. This result confirms the assertion of Reeser, who postulated that school health is intricate and multifaceted, which raises the issue of accountability.[91]From observation, none of the public basic schools in the Tamale metropolis has a sick bay, hence, who is responsible?

Question 13 was to find out about some of the safety measures put in place in the school. Averagely, the respondents mentioned good playgrounds, accessibility to buildings, good first aid boxes, regular inspection of some major parts of the body, regular washing of school uniforms/underwear, health education in the school, and Signposts. From an observational point, almost all the schools visited had very poor and absolete playgrounds. This result implies that keeping schools safe allows children to look forward to being in an encouraging environment that promotes social and creative learning.[92] When their basic safety needs aren't met, children are at risk of not feeling comfortable at school and may stop showing up, or they may remain on edge throughout the day. Promoting school safety creates an open space for kids to explore, learn, and grow.[93] It is also evident from an observational point that, anybody can be assigned to take charge of any activity in the schools, so long as the teacher is interested or has

[89] Green L.W. and Kreuter M.W., *Health Programme Planning* .
[90] World Health Organization, *Improving Early Childhood Development: WHO Guideline* (World Health Organization, 2020).
[91] Reeser, *Volleyball: Olympic Handbook of Sports Medicine*.
[92] Gitumoni Konwar et al., "A Review on Awareness of First Aid among Students," *J Nurs Sci* 4, no. 3 (2021): 87–89.
[93] Black and Newton, *Sports Injuries: Causes, Diagnosis, Treatment and Prevention*.

been asked to perform that duty. According to Reeser, in Africa, basic school health is the most undervalued aspect of primary healthcare and this results confirm it as raised in the literature.[94]

RECOMMENDATION

Based on the findings the following recommendations are made;

- Basic schools in the Tamale Metropolis must implement safety measures to avoid accidents in the school. Educational spaces must provide a physical accident-free motor development, cognitive, social development of children and adolescents, but thinking safety should be observed at all times.
- It is suggested that policies are put in place to designate some particular teachers as first aiders in each school.
- Management of basic schools should make sure that trained nurses are attached to the basic schools and not just allow anybody at all to be responsible for first aid activities in the school.
- Policymakers, for that matter, government should make it a policy to attach trained nurses to schools and also resource the School Health Education Programme (SHEP) in Ghana Education Service.

Therefore, appropriate in-service training for teachers in child protection is of major importance. Consequently, the assessment of school teachers' knowledge regarding first-aid measures is crucial to provide the health personnel with proper information about educational needs, which can help them plan and organize health education training programs to enhance teachers' awareness. Since basic schools are found in practically every small village, it could be feasible to use them as a hub for the delivery of primary healthcare services for the community as a whole, not just for the students.

CONCLUSION

This paper has presented research that delved into first aid activities in the Tamale Metropolitan Public Basic Schools. The findings of the study have shown that knowledge about first aid is inadequate among Teachers of basic schools in Tamale Metropolis. This is largely due to a lack of professional information and training on first aid activities. The study also revealed how just anybody can administer or buy first aid drugs for the schools. Hence, first aid educational and training programs should be introduced at school and college levels for teachers' early management of injuries and emergencies. Moreover, knowledge about first-aid should be incorporated into educational curricula. The study also brought to bear the lack of trained nurses attached to the schools and the lack of proper safety measures in schools. Current research has identified a perceived need for information about first aid among school students and thus justifies that first aid education should be compulsory in the training of teachers in the colleges of education in Ghana. The study has revealed the absence of improper means for medicine purchases in schools as well as the participation of non-medical professionals in first aid operations in Tamale Metropolis' basic schools.

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[94] Reeser, *Volleyball: Olympic Handbook of Sports Medicine*.

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