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**THE EFFECTIVENESS OF COMICS IN EDUCATING CHILDREN ABOUT HEALTH
CRISIS**

BY

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DECLARATION

Student's Declaration

I, Aweke Millicent Makafui, declare that except for references to other people's work which have been duly cited, this research work is the result of my own work and that it has neither in whole nor in part presented elsewhere.



.....

Millicent Makafui Aweke

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13th December, 2021

Date

Supervisor's Declaration

I hereby declare that the preparation and presentation of the project work was supervised in accordance with the guidance and supervision of the project work lid down by the Ghana Institute of Journalism, Osu.



Dr. Stanley Semarco

13th December,2021

Date

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Finally, special thanks go to all who have assisted me in one way or the other but have not been singularly acknowledged.

DEDICATION

I dedicate this dissertation to my wonderful mother, Madam Mary Adablah.

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ABSTRACT

The study used observation and survey to examine the effectiveness of comics in educating children about health crisis. It was a small scale study which was conducted in Fievie E.P Primary school in the South-Tongu District of the Volta region. The pupils in class five were used for the study. The research used mixed method with questionnaires and observations as data collections tools. Purposive sampling and random sampling were used to satisfy both methods. Findings revealed that teachers would prefer the use of comics to increase the level of engagement and awareness creation of health-related issues. Although there was a change in behavior towards the observation of Covid19 protocols, it was concluded however that, a change in behavior or a desired behavior would only occur when there is reinforcement after a comic video or strip have been used for a lesson.

CHAPTER ONE

INTRODUCTION

The chapter covers the background of study, purpose of study, the problem statement, research objectives, research questions, significance of study, delimitation, potential limitation and organization of the study.

1.1 Background of Study

Health crisis communication is very essential in fighting diseases and pandemics (Su et al., 2021). Media such as television, radio among other traditional media and social media are necessary for health crisis communication.

The coronavirus pandemic safety protocols to protect oneself have been widely and extensively communicated. Advertisements have been shown on television and played on radio to educate the public on the coronavirus pandemic. Although this is a great approach to sensitize the general public, it is not enough when television and radios are the two main media mostly used. Le et al. (2020) stated that, Covid19 has created a high demand for information and effective health communication that can help change behaviors across the world.

Mahmoud et al. (2020) purported that, the spread of information through Social Media resources particularly advertising marks the significance of online marketing as a crisis communication strategy for attitudinal change. The findings also provided strong evidence regarding the importance of Social Media advertising for the knowledge, awareness and importance of Social

media during Covid-19 pandemic. They also argued that, Social Media advertising does not only spread the healthcare information but also, capable of attitudinal change among the public.

Zhou et al (2020) have labelled some people as asymptomatic which suggest that they may be carriers of the virus with no or less symptoms. Children have been seen as a group that fall under such category. This phenomenon is of great concern and has caused fear among doctors and nurses because it is a lead factor to the rapid spread of Covid 19 virus (Alizadeh et al., 2020). According to research, children under age nine are likely to be carriers of this virus and can transfer the virus to a large number of people since the virus is mostly transferred through physical contact, (Hafeez et al., 2020). Children, especially, must be sensitized and educated on the deadly virus through other media alternatives rather than only television and radio. Children must therefore be encouraged to observe the protocols to help curb the spread of the virus. Various educational tools can be explored to sensitize them about the need to wash their hands, use sanitizer often and observe social distancing when they are with their peers. The use of comics, however, can be the best educational tool for this purpose.

Comics can be used as a means of communicating using visuals, text in form of stories that can transcend barriers in language, knowledge, age and culture. Comics are inevitably the best communication tool to get the interest of children and making teaching and learning more fun (Kearns & Kearns, 2020).

Ghia et al., (2020) also argued that, the large amount of contradictory information might influence the way children think about the Covid 19 pandemic and the need to use comics has become important to convey information to children. The use of government approved comic books, cartoons among other media would help create awareness among children about how Covid 19 is transmitted, its related health risks and the value of observing recommended protocols. Oluwafemi

(2020) also contended that cartoons do not only provide humor for the audience but also served to enlighten them on the reality of the virus. It was revealed how cartoons / comics were used as a mode of communication in educating the citizens on the nature, the mode of spread and prevention of the virus. The use of cartoons/ comics has been seen as a good approach in educating and creation of awareness of the virus while managing the emotional and psychological well beings of individuals.

1.2 Purpose of Study

The purpose of the study is to examine behavioral change in children with the introduction of comics as an instructional aid while observation their emotional reactions and behavioral changes towards the observation of the Covid19 protocols. Communicating health crisis to children is equally as important as to communicating to the adults. The researcher hopes to find an appropriate tool to bridge the gap by exploring available communication tools like the comic videos to ascertain its effectiveness. The purpose of the study is to examine emotional reactions and level of engagement in children whose instructional aid have been comics while observing their behavioral changes after the lesson.

1.3 Problem Statement

The phenomenon of not adhering to health protocols during this pandemic has been the concern of many parents and health care providers. Handwashing after visiting the toilet and before eating have been the advocate of most teachers in our various schools even before the wake of corona virus pandemic. Social distancing is one of the protocols which children find difficult to observe. For instance, while playing football, they are likely to touch one another or even get close contacts

with their fellow playmates. It has been observed that teachers find it difficult to control kids during break and this is a worry for both parents and teachers even though the children have been advised severally.

Health crisis communication is very essential in making people aware of the virus, adhere to protocols and adopt a behavioral change to avoid contracting or to control the spread of the disease. According to Van Den Broucke (2020), changing peoples' behaviors is not only by informing them about the risks. It is about letting them know about the implications for not complying, see the perceived condition as severe and letting them know the actions that will help reduce the threat and believing they can prevent the spread of a disease or condition (Champion and Skinner, 2008). Communication has been the only go to resolution in educating the masses of the Corona virus pandemic. Social media and traditional media have played their roles in order to sensitize all and sundry about this life-threatening virus. There have been a lot of news circulating about the severity of the pandemic which can be seen on social media on daily bases. Reports from WHO about the virus have been on the news daily, including the discovery of the vaccine and issues about the vaccine have also been on the news and social media. It is very important to note that, the wake of this novel virus and the news surrounding it has created a lot of anxiety. Croyle et al., (2013) purported that, although it is important to influence a protective behavior, too much anxiety can elicit cognitive avoidance strategies which may reduce the perceived threat. It has become important to frame news in a manner to reduce these anxieties.

In Ghana, health crisis communication has also been practiced to ensure all and sundry hear about the virus. Messages from the ministry of health and other affiliates have been circulating on various media platforms most especially television and radio and also social media platforms.

However, the communication in schools to sensitize and educate pupils and students about the novel virus have been extensively done only through the use of “word of mouth” by teachers. Although attempts have been made to educate the children and necessary logistics provided in schools by the government, most school children are not observing the Covid19 safety protocols. Also, not all Ghanaian homes in the rural communities have access to television or radio and may not be privileged to all the information about this novel virus. Children who are the majority in these communities may not be privileged to know the cause and why they need to observe the Covid19 safety protocols. They might also not be aware of how this virus spreads and reasons to observe the protocols to prevent the spread of the disease. The poor communication of health crisis to the Ghanaian child might be impacting negatively to the observation of Covid19 protocols and understanding of health crisis. The need to find alternatives and framing this health crisis to reduce anxiety and promote self-efficacy through sensitization and education has become very necessary.

1.4 Research Objectives

General objective

To analyze the impact of the use of comics in educating the Ghanaian child on health crisis.

Specific objectives

- 1.To examine the reactions of children when comics are used as teaching aids in a lesson.
- 2.To explore the effectiveness of comic in awareness creation and adherence to health crisis protocols.

3.To examine the behavioral changes of school children after watching a comic video on the corona virus pandemic.

1.5 Research Questions

In view of the objectives and problem statement of the study, the study sought to answer the following questions:

1. What are the reactions of children when comics are used as teaching aids in a lesson?
2. Are comics effective alternatives for awareness creation of health crisis and its related protocols among children?
3. Are there any behavioral changes among pupils after reading or watching a comic video on health issues or crisis?

1.6 Significance of Study

The relevance of this study is to outline the importance of comic books and how they affect the emotions of children which help change of attitudes and perceptions. The study would help to establish and acknowledge that, using comic books as a form of sensitizing children about the Covid19 pandemic and other health crisis would help create awareness of the causes, symptoms and effects of these pandemics. The study again would also create an alternative for teaching aids needed to teach kids about the health crisis and health related issues. The study will also be useful to other academic researchers seeking to investigate on the importance of comics in the teaching and learning process and also, the usefulness of inculcating comics in disseminating health crisis information to children. It will essentially, provide them with information and data concerning health crisis communication to children and the gaps therein.

1.7 Delimitations (scope)

The study was carried out in the South-Tongu District. The study covered the importance of comics in communicating health crisis to children in various basic schools. It also addresses the need to use comics in educating children for better understanding to the text that may accompany them. Furthermore, the study identified some challenges that may occur when educating children about crisis and measures to adopt in communicating with them about health crisis and the relevant protocols to observe. The researcher also hopes to understand the emotional appeals that might changes the attitude in the children towards the observation of the Covid 19 protocols.

Potential Limitation

The researcher anticipates that finding the appropriate story line to serve the purpose of the study might be a challenge. Some pupils' inability to read simple text accompanying the comics might also be a challenge.

1.8 Organization of study

The study is organized into five chapters. Chapter one covers the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, delimitations, potential limitation and organization of the study. Chapter two of the study would review related literature to ascertain works that have been done by scholars in the chosen research area so as to inform the conceptual framework. Chapter three would describe the research methodology, and discusses the research design, sample and sampling procedures. Research instrument, data collection procedure, ethical considerations, and data analysis procedure would be discussed in chapter three. Chapter four would present empirical data and data analysis. Chapter five will highlight the summary of findings, and provided the conclusions and recommendations.

CHAPTER TWO

REVIEW OF RELEVANT LITERATURE

The chapter sought to review the related literature on comics and health crisis communication. The main spotlight is the effectiveness and relevance of comics in crisis communication for children.

2.1 Theoretical Framework

Two theories are relevant for this study which deals with the influencing change of behavior and the benefits there are for the individual. These theories include: Health Belief model and Framing Effects Model.

Health Belief Model

A group of public health social psychologists from the U.S developed the HBM model which was one of the early health theories in 1950s. The model was first used to understand and determine the low rates of participation of the public in various disease prevention and detection programs (Rollins L.,2018). Health Belief Model is a cognitive model which suggest that behavior is determined by the knowledge of threats to human health and the effectiveness and outcome of a particular behavior. Some features of the model like the concept of self-efficacy, is supplemented by additional stimuli noted as ‘cues to action’ which trigger actual adoption of behaviors (HBM; Rosenstock, 1966).

Janz et al. (1984) explained that, the fundamental components of this model was established from different psychological and behavioral theory and their models suggest that behavior depends on

two variables: the value placed on by individual on a particular goal and the individual's estimate of the likelihood that a given action will achieve that goal. These variables were further conceptualized in the context of health-related behavior, and the correspondence are: (1) the desire to avoid illness and (2) that a specific health action will prevent illness.

The very basic principle of the HBM is the correlation between variables like attitudes, beliefs, and perceptions about a particular health condition. They suggested that the HBM is made of six constructs which are believed to influence the decisions of individuals in taking actions, preventing, screening and controlling an illness. The constructs are as follows: The first construct is perceived susceptibility which is defined as the perceived threat of illness which includes the level of personal susceptibility of the illness or health condition; The second construct is perceived severity where a person view the degree of severity of negative as consequences which might result from contracting the disease. The third construct is perceived benefits, which is described as a person's belief that their health behavior will be beneficial or effective in preventing or reducing susceptibility or severity of disease. The fourth construct, perceived barriers are defined as costs that are physical, psychological, and financial against initiation or continuation the encouraged behavior. The fifth construct is cue to action. It is the stimulus that causes the desired health behavior because of the awareness of the health threats. The last construct is self-efficacy which is also referred to as personal control, the perception that one has a personal ability to perform behaviors that brings desired outcomes (Rollins L., 2018).

In a research conducted among housewives in Islamabad County, the HBM was seen as a useful tool in determining the cognitive predictors of CCSB among these women. A designing intervention program was introduced aiming to promote level of CCSB among these women and to early detection of cervical cancer. They recommended that when frameworks like the HBM is

used, the focus should be on perceived self-efficacy, perceived barriers and perceived benefits of the CCSB while designing such interventions (Babazadeh et al., 2018).

2.2 Framing Effect Model

The framing effects is cognitive bias where people make decisions based on options that are more influential based on how these options are presented. A person may go for the option that has been highlighted in the positive light rather than the negative. Wang (1996) examined the mechanism and dynamism of the framing effects in risky choices across three distinct task domains (life- death, public property, and personal money) in his study. He mentioned that, framing effect includes moderately different implications which is seen in situations that changes decision making. In other words, framing of decisions in terms of how problem is described to a decision maker but not necessarily how that person mentally represents the problem. He however argued that, framing of choices can be unclear which may lead to unidirectional effect and that when the risk preference is clear, the decision maker is at a liberty to resist a framing manipulation. He again stipulated that, positive framing could increase risk-averse choices whereas negative framing could magnify risk-pursuing choices. Gonzalez et al., (2005) described “framing effect” as cognitive bias which is dependent upon how options are presented. A person may go for choices when faced with consequentially equal decision problems framed positively rather than negatively framed ones which are mostly conflicting. For example, McNeil et al., (1982) found out that, patients, students, and physicians were more likely to choose surgery over radiation therapy for treating patients who have lung cancer when the outcome of treatment was framed as the probability of surviving rather than as the probability of dying.

Juxtaposing the health belief theory and the framing effect model, the researcher believes that the effectiveness of comics in educating children is dependent on how it is framed to elicit self-efficacy in children to the adherence to Covid19 protocols and other health related crisis.

When comics are used to frame health implications in a positive way, it is likely to contribute to a desired behavior from the decision maker because people are likely to go for the positive frame than for the negative one. For instance, “wear your mask to protect yourself from Covid19” is a positive frame, as compared to “you are likely to contract Covid19 if you do not wear a mask” which is a negative frame. Although both statements may mean the same thing, a positive frame is likely to be the preferred choice of the decision maker.

Pictorial representation of the information can elicit change in behavior. Framing health beliefs in a pictorial way (comics) can reduce anxiety which may result in children mimicking positive health behaviors to prevent disease from being contracted. The researcher believes the use Comics (funny pics) can keep interests of readers and give a clearer meaning to health implications presented, which changes the way people view that health issue.

2.3Health crisis

The terms ‘crisis’ and ‘disaster’ are often used interchangeably. Both are used to replace events that belong in the ‘un-ness’ category: unexpected, undesirable, unimaginable and often unmanageable situations (Hewitt, 1983). Crisis researchers usually focus on a temporal part of the process through which a disaster emerges and eventually fades. Crisis researchers usually dwell on the temporal little idea of the ways crisis or disaster occur and eventually fades. They described crisis researchers as ones who are normally interested in the phase where intervention can reduce the

effects of an emerging or escalating incident. They define a crisis as a “threat that is perceived to be existential in one way or another” (Rosenthal & Comfort, 2001). The word “Pandemic” comes from the originates from the Greek pan meaning “all” and demos “the people”. The word pandemic is usually used to describe the widespread of epidemics throughout a country which spreads to one or more continent (Honigsbaum,2009).

2.4 Health crisis communication

Communication is the way humans exchange information; it also signifies symbolic exchange of shared meaning, and all communicative acts have both a transmission and a ritualistic component. Intervention efforts to change behaviors are communicative acts (Rimal & Lapinski, 2009). Carey (1989) recognized that communication serves an instrumental role which helps us in acquiring knowledge while fulfilling a ritualistic function which reflects humans as social beings.

Schiavo (2013) defined health communication as a complex and a combination of several academic disciplines to reach different audiences and share health-related information with the goal of influencing, engaging, and supporting individuals, communities, health professionals, special groups, policymakers and the public to champion, introduce, adopt, or sustain a behavior, practice, or policy that will ultimately improve health outcomes.

Qiu et al. (2017) posited that, in order to avoid mortality and morbidity and also reducing the types of economic and social impacts, an effective and efficient emergency response is needed. To deal effectively with disease outbreak and a pandemic now and future, the government are to take on a critical task to have an emergency management that is effective and efficient.

Based on the research done by Patel et al. (2020) in Ukraine they suggested that, there should be an increase in the transparency of health crisis communication including eye witnesses' videos in television news communication.

Imperatively, when adults are communicating to children, they must take note of their age and understanding of that information being given to them. Children's understanding differs from time to time as they grow. Life-threatening illness are sensitive in nature which needs effective communication to benefit children and their family's long-term psychological wellbeing (Dalton et al., 2019).

2.5 Comics as an educational tool

Communication has inevitably play a major role in companies in resolving crisis. Comics play an important role our society in communicating complex issues in the simplest form. However, scholars have proven that traditional media and social media are not the only media available to use. Comics can better communicate with the aim of creating awareness and sensitizing people including children about the current global pandemic. Children misattribute the causes of disease as a result of poor understanding of how disease spreads even with their emerging sense of conscience. For instance, they see illness as a result of bad health behaviors (Schonfeld, 1993).

Although comics are used in schools like primary, secondary and colleges of education, they provoke readers interest which motivates teachers to continuously use it (Sones 1944; Hosler & Boomer., 2011). Yang (2008) explains that advantages of using comics in education are: very encouraging, forming a pictorial image, common and providing an intermediary bridge for students to understand difficult subjects or issues with the use of words and images. In Spiegel et

al. (2013) research, in a nonfiction essay about viruses, they realized that students in the comic group were highly likely to read learning materials than those in the scaffolding group.

2.6 History of comics

Comic is a sequential pictorial presentation which began with the invention of printing press and maps comics from 1450 (Kunzle,1973). Opinions on the creation of the comic strip as a separate form differ. Researchers believed that the exact date for the beginning of comics cannot be dated. It even suggests the likelihood that the comics was discovered as early as in 1300 B.C. in Egypt, which is connected with the possible study of the sequential depiction of life on the grave of the scribe Menny (McClaud, 1995).

The first comic book in history, named "Voyages et aventures du Docteur Festus" (Travels and Adventures of Doctor Festus) was completed in 1831 and was published in 1840 with the signature of Rudolphe Töpffer. Since the 1960s, comics have extended to cover politics, sexuality, race, history, and similar topics that can be found in fiction and nonfiction for adults, teenagers, and children (Hatfield, 2005).

Gaines (1942) who was the President of "All- America Comics" chronicled the display of original American Art at the American Institute of Graphic Art in 1942. Gaines described the arrangement of the exhibition as an assumed antecedents of Egyptian hieroglyphics, Sumerian mosaics, ninth-century Carolingian manuscripts, eleventh-century Japanese Kozanji scrolls, fifteenth century printed block books of the gospels, and on down through the great caricaturists of the eighteenth and nineteenth centuries. Historians after Gaines established this noble lineage through a discussion of these ancient precedents. This has to do with the notion that comics lack the aesthetic

qualities of traditional art and literature. This was to say that comics is not the first efforts to tell stories with words and pictures, and such efforts occupy a respectable place in our cultural history. Their comments suggest that ancient antecedent paved way for comics and that those qualities make comics special; their formal features and artistic nature make them so powerful and appealing to present³⁸ (Inge, 2016).

2.7 Relevance of comics

Covid19 has created a high demand for information and effective scientific communication that can help in change of behaviors across the world. Comics can be used as a means of communicating using visuals, text in form of stories that can transcend barriers in language, knowledge, age and culture. Comics are inevitably the best communication tool to get the interest of children and making teaching and learning more fun (Kearns & Kearns, 2020). The large amount of contradictory information might influence the way children think about the Covid19 pandemic and the need to use comics has become needful, quick and effective abstract and important information to the children. The use of government approved comic books, cartoons among other media would help create awareness among children about how Covid19 is transmitted, the health risks, the value of observing recommended protocols (Jean-Eric Ghia et al, 2020). Fitri et al. (2016) also posited in their study that, the use of comics as teaching aids gets the attention of students. Comics are the best option for attention grabbing for inductive learning which makes students more interested in what is being taught and follow what is usually given to them in a traditionally text package. Comics makes students more of participants rather than observers in the teaching and learning process (Mallia, 2007; Gafoor & Shilna, 2013). Oluwafemi (2020) contended that cartoons do not only provide humor for the audience but also served to enlighten

on the reality of the virus. It is revealed how cartoons / comics were used as a mode of communication in educating the citizens on the nature, the mode of spread and prevention of the virus.

2.8 Children's Reactions and Level of Engagement with Comics

Matuk et al. (2019) conducted a research on how teachers use comics to promote engagement equity and diversity in science classrooms. The study examined how educators used comic books series purposely designed to arouse interest among the youth in virology in a way that makes science appealing to diverse students. Using a qualitative analysis, they used survey responses, instructional artifacts and classroom observation as their data collection tools. It was realized that comics enabled teachers to incorporate different forms of literacy and disciplinary lenses into their lessons. The study also informed both researchers and teachers how innovative curriculum materials can broaden, arouse interest of students /participants in a science class.

In study conducted by Sharpe et al. (2021) where they used comic strips in teaching children about natural occurrences like earth quakes and tsunamis. They randomly chose a kindergarten for a small scale study and met all ethical considerations before embarking on the study. A designed comic strip was used to tell a story. The researcher asked question about the story and some children volunteered to narrate what they had seen in the comics. The researchers also mentioned that children show a level of engagements in the topic and the medium used for the lesson.

While Sharpe et al. (2021) and Matuk et al (2019) contended that comics generate interest and engagements in lessons, Muzumdar (2016) revealed that comics have been a pedagogical tool to motivate students to read, help them to remember content and make the learning process more fun. Comics have been used to educate patients, promote health interventions, and also inform consumers about diseases. He also concluded that comics could be a visually interactive and

innovative educational tool. They suggested that Pharmacy faculty comic books could be used in a curriculum or part of a larger curriculum and making learning more fun.

Most of the research in this field used observations for the data collection to analyze the study. However, Batrisyia et al. (2020) conducted a research using an in-depth interview which was recorded to discern interests of students in solving mathematics word problems with the use of comics. The mix method was used for the exercise with usage of the action research model. They conducted a pre-test to assess the students' prior knowledge of the content on the terms used in mathematics word problems. The intervention lesson which involved comics also took place and a post-test was administered right after the intervention lessons were completed in order to detect if there were any substantial progresses. It was revealed that the students enjoyed and had interest in the comics used in the classroom. 'Enjoyment' and 'Interest' were the two major themes that detailed their reaction from reading a comic book during an in-depth interview. They concluded that the use of comics in lessons exudes high levels of engagements.

2.9 Effectiveness of comics for awareness creation

Oluwafemi (2020) conducted a research on communication and coping during Covid19 pandemic. He conducted the research to explore the role of cartoons and comics on Covid19 pandemic in crisis communication and coping strategies. He engaged in content analytical framework using purposive sampling of Nigerian online newspapers cartoons and web comics on coronavirus which have a bearing on socio-economic, health and political dynamics in Nigeria. He contended that cartoons and comics strips served to enlighten people while helping in psychological moral emotional effect of the pandemic. In his research, it was shown that cartoons and comics were used to convey the impact of the coronavirus to Nigeria and the world at large. While Oluwafemi (2020)

concluded that the cartoon/comics is a mechanism to address the psychological, moral and emotional needs of the people while distracting them from the negativity of virus in a humorous nature, Ernsth Bravell (2020) revealed that comics creates interest and motivates students. He conducted a research on the uses of Comics and Graphic Novels as a Multimodal Teaching Material in English Courses at the Upper and Lower Secondary Schools in Sweden. He investigated on multi modal text, graphic novels and comics and examined the use of graphic novels and other comic text in English course at the upper levels in Sweden. Twelve participants were involved to investigate their opinions and thoughts on comics and graphic novels. In order to achieve this, qualitative interview was conducted which was done digitally through social media platforms. The interview was a semi structured one. After a thematic analysis of data of the interview was analyzed, the researchers realized that most commonly discussed topic by the participants was that, comics or graphic novels arouse and increases the interests of the students and motivates them to read. One explanation for the increased interest and motivation found in this study is that, comics and graphic novels are more accessible especially for struggling students, as they are more used to visual and multimodal texts. Kearns et al. (2020) conducted an independent nationwide survey which revealed that, the younger generation were the largest of the population to have opted for the ‘caretoon’ strategy. They conducted an online survey using two different types of strategies - ‘Caretoon’ strategy’s and ‘standard’ approach to conducting online surveys. The survey responses were published separately for evaluation and comparison. It was revealed that “caretoon” strategy which involved the use of comics and visual illustrations outperformed the standard approach to survey based research in terms of people reach and engagement among others. This provided an objective evidence of the value of comic illustration as a tool in health care research. Kearns et al. (2020) comments and conclusions resonates with

my arguments on the importance of using comics as an effective tool in communicating health crisis.

2.10 Behavioral Changes after Comic Lesson on Health Issues or Crisis

It is very important to note that, children can be made to have a change in behavior through comics. In other words, Comics can be used to create self-efficacy in children after awareness creation. Self-efficacy is being aware of a phenomenon and placing importance on a desired behavior during times of fear and anxiety. This mostly gives children control even as they play while helping themselves, families and their communities. Children may help in observing safety protocols like washing of hands, preparing for quarantine or volunteering to help the aged or the sick with their chores (e.g., writing letter or sharing extra supplies with a neighbor) (Bartlett et al., 2020). In a study, Branscum et al. (2013) had a study which focused pilot testing the comics for health program, a theory based nutrition and physical intervention for children. They randomized twelve after – school programs to test theory and knowledge based versions of intervention. They used randomized controlled design to recruit children for the participation to the study- to either a theory-based or knowledge- based version of the intervention. They administered pretest, posttest and three months follow up test to evaluate the programmatic effects on the body mass index percentile obesity behavior and constructs of social cognitive theory. Their findings suggest that the comic book approach appeared to be an acceptable intervention medium through which messages can be framed and transmitted to children. It was also found from the data that, children enjoyed making their own comic books. They suggested that future health care educationist should consider similar comic approach when targeting these age group. They reiterated that, health educators operationalize self- efficacy better by adopting these intervention strategies which includes the use of comics. In a similar study, Leung et al. (2017) revealed that manga comics

(Japanese comics) played a role in promoting fruit consumption messages in middle school. A randomized study was conducted in two public schools in California and put into groups.

- a) a group was given a comics (manga) promoting fruit consumption.
- b) Another group was given a newsletter about fruits
- c) The last group was given newsletter about ancient Greece.

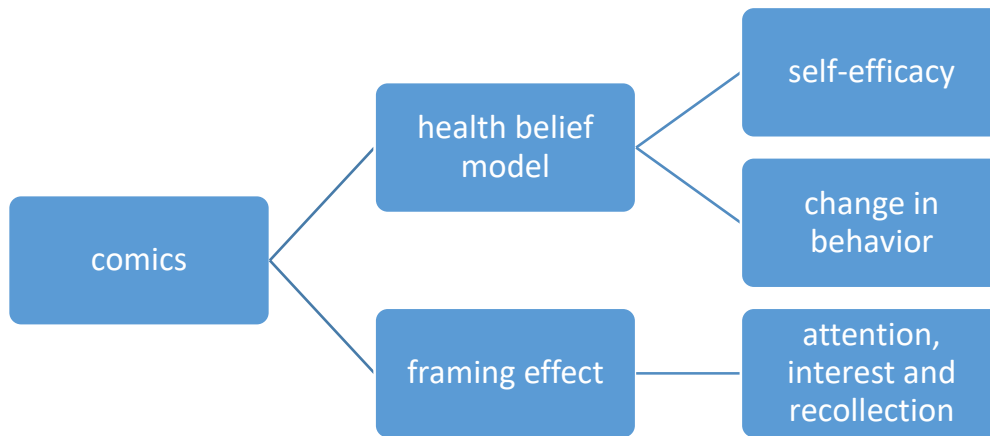
Participants included N= 263 youth with a mean age of 13- 18 years. (SD = 1.2). Self -efficacy and knowledge related to fruits intake were the dependent variables which measured the baseline. Secondary outcomes, that is, the degree to which participants were immersed in their media and enjoyment were measured. The regression analysis method was used to analyze the data. Comic group participants tended to have change in outcome expectations related to fruit intake as compared to the other two groups. The results suggest that, manga comics may be a useful tool to promote positive health beliefs in the youth.

2.11 Conceptual Framework

Polit and Hungler (1996) defines conceptual framework as a coherisive,supporting linkage of selected inter related concepts. It is the device for organizing ideas and in turn bringing order to related objects, observations, events and experience. It serves as a guide to research and a spring board for the generation of research hypothesis. They also agrued that conceptual frameworks represent the less formal way of presenting a phenomena. (Polit & Hungler, 2014)

The researcher would use a comic video to conduct her studies to navigate how a framing effect of comics can be used with Health belief model to achieve a desired behavior in children during health crisis. The researcher would first observe their reaction towards a lesson without comics

and also the attention span of the children. The children's interest in comics would be examined through their actions and feelings towards comics using observation and focus group discussion. The researcher would use observation to check self-efficacy of the children after watching the educational comics. Also, the teachers would be given questionnaire to find out their opinion on comics in education and its impact on children during teaching and learning. Gathering information from these three angles would help the researcher to ascertain the effectiveness framing effect of comics have in promoting health beliefs.



CHAPTER THREE

METHODOLOGY

This chapter describes the methodology used in carrying out the study. These include Research Design, Population, Sampling, Sampling Procedures, Data and Data Collection Procedure, Research Instrumentation and Method of Processing Data and Analysis.

3.1 Research Design

According to Gay (1992), research design indicates the basic structure of a design, the nature of the hypothesis and the variables involved in the study, the nature of comparison to be established, the method, timing and data collection, the setting in which the data collection is done and the nature of communication with respondents are some of research design.

Causal research is used to examine the relationship between independent variables with one or more dependent variables. Casual research is a type research which is useful to determine the cause or effects of a phenomenon which can be tested using statistical method (Erickson, G. S. 2017). This type of research design would help the researcher discover how these variables affect each other.

3.2 Population

The target population for the study comprise all primary pupils in the Fievie E.P Primary School in the South-Tongu District of the Volta Region. The teachers of Fievie E.P Primary School were also part of the study.

3.3 Sampling

A sample size of 30 was chosen which includes twenty pupils of class five (5) and ten teachers from the Fievie E.P Primary School. The responses and observations of the target population enabled the researcher have adequate information on the subject matter which helped in detailed analysis.

3.4 Sampling Procedure

The sampling technique used by the researcher is the purposive sampling and random sampling. Purposive sampling allows a researcher to draw externally valid conclusion about the entire population. Campbell et al (2020) opines that, purposive sampling enables the researchers to select units for a study from the universality of a case under study by this sampling technique. Random sampling on the other hand helped the researcher not to have a bias to the study and helps the sample population to have an equal chance of been selected for the study (Jawale, K. V. 2012). Purposive sampling was employed for the observation, that is, the total class of twenty (20) class five (5) pupils were used for the study and six of these pupils were randomly picked for a Focus Group Discussion. Ten teachers out of fourteen were also selected purposively for the survey. Purposive sampling helped the researcher to get all pupils and teachers needed for the study.

3.5 Data Collection Procedure

The purpose of the study was explained to the head teacher and class teacher with the assurance of confidentiality. A week notification was given to the head teacher who is the administrator of the school and the class teacher to schedule the time that will be most appropriate so that the study does not interfere with the school's academic work and activities. A comic video about Corona and its related health protocols was showed to the children after break time which was the most convenient time. This followed three weeks' observation of the class five pupils in the school to ascertain change in behavior towards the adherence of Covid19 Protocols.

3.6 Research Instrumentation Method of Processing Data and Analysis

A semi structured interview guide was the instrument used to conduct a focus group discussion with the children while questionnaires were given to the teachers of the school under study.

Focus group discussions was done with pupils with the aim of gaining knowledge about how they feel about comics and assess their interest in comics. It was designed to give liberty to pupils to express their opinion about the comic video and comics in general with the view of unearthing their perceptions, feelings and interest in comics and also to help the researcher understand the effectiveness of inculcating comics in education.

Survey was used to gather data from the teachers to satisfy research questions one and two.

A pre- test was done to be sure of the strength and the importance of the field tools to be used for the study. The class five (5) pupils were chosen for the pre- test. Observation will be used for the pre- test after which a final review would be made for the research instruments.

For the post test, an observation will be used to discern the changes in behavioral patterns of the pupils' understudy to help analyze the impact of comics and to determine if there is a significant relationship between comics and behavioral changes.

3.7 Method of Processing Data and Analysis

The study was used statistical tools to analyze the data. Statistical Package for the Social Science (SPSS) was the analytical tool that was used to analyze data obtained from the survey. The analysis was centered on two research question, that is, research question one and two. Observation was used to analyze the third research question.

CHAPTER FOUR

RESULTS, ANALYSIS AND DISCUSSIONS

This chapter shows the result and the analysis of the data collected as well as observation and findings from the post-test stage in relation to the research questions. The data was presented in Statistical Package for the Social Science (SPSS) which gave answers to research questions one (1) and two (2) posed in relation to the study and observational analysis used for research question three (3). Below are the research questions designed to guide the study.

- What are the reactions of children when comics are used as teaching aids in a lesson?
- Are comics effective alternatives for awareness creation of health crisis and its related protocols among children?
- Are there any behavioral changes among pupils after reading or watching a comic video on health issues or crisis?

4.1 Data Presentation and Analysis

To find the effectiveness of comics in educating children about health crisis a pre-test was conducted to determine the initial behaviors of the children after been educated about Covid19 and its related protocols without pictures nor comics. In order to gather a fair and balance data needed for the study, the class five pupils were considered. The pupils were selected purposively for the study. The entire class was used for the study.

4.2 Pre Test Analysis

The class five pupils of Fievie E.P Primary was used for the pre-test of the data collection tools. Observation was the data collection tool used. Observations were done before, during and after the lesson. In Fievie E.P Primary school, the researcher noticed that the school has been provided with PPEs by the Ghana Education Service through the Ministry of Education. Veronica buckets were mounted at various vantage points in the school with liquid soap and tissues made available for the handwashing exercise after stepping out or before entering the class room. The sanitizer dispensers also served as an alternative for pupils to use before entering their various classrooms. The researcher had a lesson with the class five pupils about Covid19 without using pictures nor drawings. As part of the lesson, the researcher examined their level of excitement and engagement in the lesson, success of awareness creation and their behaviors pattern in the observation of the Covid19 protocols. The observations were under the following themes:

❖ Children's Reactions and Level of Engagement without Comics

- Twenty pupils were used for the pre-test which was the total number of pupils present at the time of the study.
- When the lesson began, the pupils were observed listening with rapt attention during the first few minutes of the lesson.
- Few minutes later, the attention of the children could not be retained in the lesson.
- Twelve pupils out of the twenty-six children, partially listened while others were either playing or chatting with their friends.

❖ **Effectiveness of lesson without comics for awareness creation**

- At the end of the lesson questions were asked to ascertain the success of the lesson.
- Few students were able to answer some of the questions asked.

❖ **Behavioral Changes after Lesson on Health Issues or Crisis**

The covid19 protocols were observed immediately after the lesson. All twenty (20) pupils were seen applying hand sanitizer on their hands and two pupils stepped out of the class room to wash their hands. Those who had nose masks in their bags took it out and wore them. Fifteen (15) pupils were seen wearing the nose masks immediately after the lesson.

Day one

- Ten (10) pupils were seen wearing the nose masks
- Twelve (12) pupils were seen washing their hands before entering their classrooms.
- Social distancing was not observed when they were interacting with one another.
- Three (3) pupils were seen using the hand sanitizer.

Day two

- Ten (10) pupils were in their nose masks.
- Thirteen (13) pupils washed their hands regularly especially before and after break.
- Five (5) pupils also used the sanitizer after washing their hands.
- Three (3) pupils were observed using the sanitizer from the dispenser upon returning from another class.

- Social distancing was not observed on the second day; children were seen playing and touching one another unconsciously.

Two weeks later, the researcher realized total decline in the number of pupils who adhere to the Covid19 protocols in the school. The handwashing exercise was the only protocol that was satisfactorily done.

4.3 Children’s Reactions and Level of Engagement with Comics

Table 4.1 Children’s Reactions and Level of Engagement with Comics

No.	Reactions of children when comics are used as teaching aids in a lesson	SD	D	MD	MA	A	S	Chi - square	df	Asymp. Sig,
1.	Children are excited about a lesson with comics.				2	4	4	.800 ^a	2	.670
6.	Class management is easy when comics is part of the lesson..	1		1	1	3	4	4.000 ^b	4	.406
7.	Children contribute to lesson which involves comics.				1	4	5	2.600 ^a	2	.273
8.	Difficult topics are easy to treat with comics					4	6	.400 ^c	1	.527
9.	Teaching with comics is more effective than abstract					4	6	.400 ^c	1	.527
10.	I prefer teaching with comics					4	6	.400 ^c	1	.527

Table 1.1 Identifies results from responses collected from teachers on reactions of children when comics are used as teaching aids in a lesson. The data set on question one shows that out of ten respondents, 20% moderately agree, 40 percent agree and 40% strongly agree. The data set questionnaire item one shows that majority of children are excited about a lesson with comics. Hence, the χ^2 test for goodness of fit for respondents' responses on the item revealed that the observed data did not significantly depart from the expected Frequency of no difference across the response category; $\chi^2 (2, N= 10) = .800^a$, $p >.001$ that children are excited about a lesson with comics”.

In data set on (question six) indicates that 1 respondents representing 10% responded that they strongly disagree that introduction of comics in a lesson may help in class management, 1 respondent representing 10% responded that they moderately disagree that the introduction of comics in a lesson may help in class management, 1 respondent representing 10% indicated that they moderately agree that introduction of comics in a lesson help in class management, 3 respondents representing 30% indicated that they agree that comics help in class management and 4 respondents representing 40% indicated that they strongly agree that comics help in class management. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of $\chi^2 (4, n= 10) =4.000^b$, $p > 0.001$ that majority teachers believe that comics help in class management.

Data set on (question eight) indicates that 4 respondents representing 40% responded that they moderately agree that difficult topics are easy to treat with comics, 6 respondent representing 60 % indicated that they strongly agree that difficult topics are easy to treat with comics. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of χ^2

(1, n= 10) = 400^c, p > 0.001 that majority teachers agree that difficult topics are easy to treat with comics.

Similarly, data set on (question nine) indicates that respondents representing 40% responded that they moderately agree that teaching with comics is more effective than abstract, 6 respondent representing 60 % indicated that they strongly agree that teaching with comics is more effective than abstract. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of χ^2 (1, n= 10) = 400^c, p > 0.001 that majority teachers agree that teaching with comics is more effective than abstract.

Again, in data set on questionnaire item ten, it indicates that 4 respondents representing 40% responded that they moderately prefer teaching with comics, 6 respondent representing 60 % indicated that they strongly prefer teaching with comics. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of χ^2 (1, n= 10) = 400^c, p > 0.001 that majority teachers prefer teaching with comics.

4.4 Effectiveness of comics for awareness creation

Table 4.2 Effectiveness of comics for awareness creation

No.	Comics effective alternatives for awareness creation of health crisis.	SD	D	MD	MA	A	SA	Chi-Square	df	Asymp. Sig.

12.	Comics are better alternative.		1		1	8		9.800 ^a	2	.007
13.	Highly to understand a lesson.			1		4	5	2.600 ^a	2	.273
14.	Change of behavior after health crisis lesson.		1		5	2	2	3.600 ^b	3	.308
15.	Positive behavior towards observation of protocols.			1	1	5	3	4.400 ^b	3	.221
16.	Comics for teaching new or difficult topic.				2	4	4	.800 ^a	2	.670
17.	Health crisis better explained in pictures.				1	5	4	2.600 ^a	2	.273
18.	Adherence to Covid19 protocols	1			4	3	2	2.000 ^b	3	.572
19.	Mimic Covid19 protocols because of health implications.	1			3	5	2	1.400 ^a	2	.497
20.	Change in behavior of children towards the Covid19 protocols.	1				6	3	3.800 ^a	2	.150

Data Source: Aweke (2021)

In data set on (question twelve) indicates that 1 respondent representing 10% responded that they disagree that comics are better alternative in educating children about health crisis, 1 respondent representing 10% indicated that they moderately agree that comics are better alternative, 8 respondents representing 80% indicated that they agree that comics are better alternative. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result

of $\chi^2 (2, n= 10) = 9.800^a$, $p > 0.001$ that majority teachers believe that comics are better alternative in educating children about health crisis.

Data set on (question thirteen) indicates that 1 respondent representing 10% responded that they moderately disagree that children are likely to understand and explain a lesson that involved comics, 4 respondent representing 40% indicated that children are likely to understand and explain a lesson that involved comics, 5 respondents representing 50% indicated children are likely to understand and explain a lesson that involved comics. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of $\chi^2 (2, n= 10) = 2.600^a$, $p > 0.001$ that children are likely to understand and explain a lesson that involved comics.

In data set on (fourteen) indicates that 1 respondent representing 10% responded that they disagree that, there would be change of behavior after health crisis lesson 5 respondent representing 50% indicated that they there would be change of behavior after health crisis lesson, 2 respondents representing 20% moderately agree that there would be change of behavior after health crisis lesson, and 2 respondents representing 20% strongly agree that there would be change of behavior after health crisis lesson. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of $\chi^2 (3, n= 10) = 3.600^b$, $p > 0.001$ that majority teachers believe that there would be change of behavior after health crisis lesson.

In data set on (fifteen) indicates that 1 respondent representing 10% responded moderately disagree that, there would be positive behavior towards observation of protocols as seen in comic videos or books , 1 respondent representing 10% moderately agree that they there would be positive behavior towards observation of protocols, 5 respondents representing 50% agree that there would be positive behavior towards observation of protocols, and 3 respondents representing 30% strongly agree that there would be positive behavior towards observation of protocols. Thus, the

χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of χ^2 (3, n= 10) =4.400^b, $p > 0.001$ that majority teachers believe that there would be positive behavior towards observation of protocols.

Data set on (sixteen) indicates that 2 respondents representing 20% moderately agree that comics should be the alternative to teach new or difficult topics, respondents representing 40% agree that comics should be the alternative to teach new or difficult topics, and 4 respondents representing 40% strongly agree that comics should be the alternative to teach new or difficult topics. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of χ^2 (2, n= 10) = .800^a, $p > 0.001$ that majority teachers believe that comics should be the alternative to teach new or difficult topics.

In data set on (seventeen) indicates that 1 respondent representing 10% moderately agree that health crisis better explained in pictures, 5 respondents representing 50% agree that health crisis better explained in pictures, and 4 respondents representing 40% strongly agree that health crisis better explained in pictures. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of χ^2 (2, n= 10) = 2.600^a, $p > 0.001$ that health crisis better explained in pictures.

Data set on (eighteen) indicates that 1 respondent representing 10% strongly disagree that comics about covid19 would make pupils adhere to related protocols, 4 respondent representing 40% moderately agree that comics about covid19 would make pupils adhere to related protocols, 3 respondents representing 30% agree that comics about covid19 would make pupils adhere to related protocols, and 2 respondents representing 20% strongly agree that comics about covid19 would make pupils adhere to related protocols. Thus, the χ^2 test for goodness of fit for respondents'

responses on the item revealed a significant result of $\chi^2 (3, n= 10) = 2.000^b$, $p > 0.001$ that comics about covid19 would make pupils adhere to related protocols.

In data set on (nineteen) indicates that, 3 respondent representing 30% moderately agree that children are highly mimic Covid19 protocols because of health implications, 5 respondents representing 50% agree that children are highly mimic Covid19 protocols because of health implications, and 2 respondents representing 20% strongly agree that children are highly mimic Covid19 protocols because of health implications. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of $\chi^2 (2, n= 10) = 1.400^a$, $p > 0.001$ that children are highly mimic Covid19 protocols because of health implications.

Furthermore, data set on (twenty) indicates that, 1 respondent representing 10% strongly comics video on health crisis can elicit change in behavior of children towards the Covid19 protocols, 6 respondents representing 60% agree that comics video on health crisis can elicit change in behavior of children towards the Covid19 protocols, and 3 respondents representing 30% strongly agree that comics video on health crisis can elicit change in behavior of children towards the Covid19 protocols. Thus, the χ^2 test for goodness of fit for respondents' responses on the item revealed a significant result of $\chi^2 (2, n= 10) = 3.800^a$, $p > 0.001$ that comics video on health crisis can elicit change in behavior of children towards the Covid19 protocols.

4.5 Behavioral Changes after Comic Lesson on Health Issues or Crisis

An observation was done in the Fievie E.P Primary School in the South Tongue District which is under the authority of the Ghana Education Service. The adherence of the Covid19 protocols have been extensively preached to all and sundry including the pupils of the Fievie E.P. Primary School. Teachers in the school have been observed to practice social distancing by not allowing any form of social gathering. This is to ensure that there Covid19 virus do not spread in school. In order to

determine the effectiveness of the comic video as an educational aid for change in behavior among children in the school, the researcher observed how the covid19 protocols were observed in the school.

In Fievie E.P Primary school, the researcher noticed that the school has been provided with PPEs by the Ghana Education Service through the Ministry of Education. Veronica buckets were mounted at various vantage points in the school with liquid soap and tissues made available for the handwashing exercise after stepping out or before entering the class room. The sanitizer also served as an alternative for pupils to use before entering their various classrooms.

The researcher used class five as the sample size to test the effectiveness of comics in educating pupils about Covid19 and its protocols. Different data collection tools were used including observation. Observation was used to have a chance to see the changes that may happen in the behaviors of the pupils after watching a comic video about Corona Virus. The researcher observed the reaction of pupils upon seeing how the virus is being transferred from person to person through talking or sneezing as shown in the comics. Some pupils were seen frowning their faces and others held their noses upon viewing that scene in the comic video.

The researcher observed that only a few of the class five pupils observed the Covid19 protocols after watching the comic video. They observed the protocols for one few days and gradually returned to their normal ways of do doing things with less attention given to these health protocols.

The researcher observed the following behaviors the few days after the pupils watched the Covid19 comic video:

Day One

- All 20 pupils were in their nose masks.

- 18 pupils washed their hands regularly especially after break.
- 10 pupils also used the sanitizer after washing their hands
- 5 pupils were observed using the sanitizer from the dispenser upon returning from another class.
- They did not get too close to their friends when talking class and tried as much as possible to observe social distancing in class for the first day after the lesson.

Day two

- 15 pupils were in their nose masks.
- 16 pupils washed their hands regularly especially after break.
- 10 pupils also used the sanitizer after washing their hands
- 8 pupils were observed using the sanitizer from the dispenser upon returning from another class.
- Social distancing was not observed on the second day. The children were seen playing and touching one another unconsciously.

Two weeks later, the researcher observed that the children were doing contrary to what was advised in the video they watched. This time around the researcher did not find a single person wearing the nose mask.

However, handwashing was one of the protocols that was satisfactorily observed by the pupils. Most of the basic five pupils washed their hands or used the hand sanitizer provided. This was the only safety protocol that the researcher observed by the pupils which was highly satisfactory. The Veronica buckets were always filled with water as instructed by the teachers to ensure that pupils wash their hands as often as possible. The class five teacher made it a priority to check if the Veronica bucket had enough water and instructed that it is filled when there was a shortage.

4.6 Discussions of the Results

Comics are effective for educating children on health crisis as seen in level of engagement and being a preferred choice of teachers to make teaching and learning fun and impactful. The health education comic video viewed by the pupils have proved that it can be an alternative in minimizing anxiety and fear and rather create a sense of sense efficacy in children.

In relation to research question one and two, the respondents acknowledged that comics makes teaching and learning interesting and more interactive because pupils tend to engage more as compared lessons without pictures or comics. Again, most respondents prefer to inculcate the use of comics in their lessons since they believe it will be a better option for teaching health crisis. They agreed that comics will possibly help in building knowledge and promoting self-efficacy in children in observing all the Covid19 health and safety protocols.

The empirical studies and the theories (Health Belief Model and Framing Effect model) used in the study have validated the assertions made. However, the third research question could not have an entirely conclusive interpretation or analysis. Although there was a change in behavior among children after the lesson, it was only for some few days. It was noticed that, to achieve a total change in behavior in children, one might need more comic videos on health crisis as a reminder to pupils about the pandemic. Comic strips or posters can also be pasted in class rooms to serve as a form of reminder to reinforce positive habits.

The attention and the engagement of the pupils during the observation was very impressive for the first few days; right from beginning, during and after the lesson. Comics make kids very much attentive, and this greatly helps in managing a class during lessons. Class management is centered

on getting all children involved in the lesson. Comics create humor which is an ingredient used to get the readers' or viewers' attention and are used in health messages to make it memorable. Framing health related comics in positive way is also important to reduce anxiety among children. Educational comics need to have a bit of humor and a compelling storyline to grab the attention of the pupils and increase their engagement in a lesson.

4.7 Limitations

Although one of the ways to have a clearer view of the impact of comic video on health crisis and related protocols was through focus group discussion among the other research data collection tools, the researcher could not use it for data analysis. The children were very tensed when the researcher sampled them for the discussion. The researcher advised the respondents to be relax but they were very tensed and the answers to the questions were not forth coming. Considering this limitation, it was realized that in-depth interview would have been the best data collection tool for this study. It is necessary to adopt an in-depth interview because a respondent will not be intimidated by the absence of people or friends. In-depth interview allows respondents express themselves well.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary, conclusion and recommendations of the entire project.

5.1 Summary of findings

Children can be educated on health crisis provided you involve their way of learning into the lessons. It has been realized that children learn in a relax environment through play and other interest generating methods like the comic videos. The study revealed the importance of comics and its effectiveness in educating children about health crisis. The respondents who are teachers agreed that comics help in managing the class, getting the children engage in the lesson while maintaining their interest till the end of the lesson. It was also revealed that, teachers would prefer teaching with comics when children educating health crisis. Children were seen to observe covid19 protocols as advised in the comic video. However, if there is a change in behavior expected, then there must be reinforcement to serve as a remainder to maintain those behaviors.

5.2 Conclusion

After carefully analyzing the findings, it can be concluded that comics is effective in communicating health crisis to children. However, it does not necessarily result in change of behavior in children - the change in behavior may only last for few weeks or days. In order to change a behavior of a child during health crisis, there must be other activities added as a reinforcement to the health education to ensure that the desired outcome is achieved.

Although it is important to assess the effectiveness of comics in educating children, it is equally essential to examine their psychological well-being and the impact of health crisis on children so that the necessary actions will be taken to revert the situation. Studies in these areas may help unveil the best approaches to use in helping children with psychological needs while promoting self-efficacy and healthy lifestyles among children.

5.3 Recommendation

I recommend that after a comic book, strip or video have been used for a lesson, there should be a follow up reinforcement of what has been taught to ensure that the desired outcome of the lesson is achieved. When children have been enlightened about causes, effects of Covid19, safety protocols to avoid Covid19, the children must be encouraged or reminded of the need to observe these recommended protocols. This makes children observe the protocols or adhere to restrictions to prevent the spread of the virus. They may also remember the health implications associated with non-compliance.

Other researchers can also look into areas that promote self-efficacy among children before, during and after a health crisis like the Corona virus pandemic.

The world is now a global village and what happens in another country is likely to affect other countries if not the entire world, depending on the nature of that crisis. It is therefore necessary for researchers to study proactive health measures on how to handle health crisis like the corona pandemic in order not to leave children confused, traumatized and have their educational journey distorted as witnessed with Covid19.

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APPENDIX A

GHANA INSTITUTE OF JOURNALISM

SCHOOL OF GRADUATE STUDIES AND RESEARCH

DEPARTMENT OF PUBLIC RELATIONS

RESEARCH QUESTIONNAIRE

Dear respondents,

The purpose of the study is to *examine the effectiveness of comics in educating children about health crisis*. The information provided by you is highly confidential. Kindly share your views on the use of comics in teaching and learning and as an alternative in educating children about Covid19 and its protocols. think about each assertion separately and do not let previous assertion influence your answers to subsequent questions. Using the scale below, select and write the number for each column provided.

Responses	Strongly disagree	Disagree	Moderately Disagree	Moderately Agree	Agree	Strongly Agree
	1	2	3	4	5	6

No	Response	
1		Children becomes excited about a topic / subject to be taught when comics are introduced in the teaching and learning process.
2		The children are ready to comply with instructions in the class in order to be part of the lesson.
3		Children are involved in all aspects of the lesson.
4		There is active teaching and learning in all aspects of the lesson.
5		Children are willing to role play when given the chance.
6		Class management is easy when children become aware that comics is part of the lesson going to be taught. They become attentive and quiet for the lesson to go on.
7		Children contribute to what is been taught because they seem to understand a lesson which involves comics.
8		Difficult topics are easy to threat when pictures or comics are used for explanation.
9		Teaching children with comics are more effective than teaching in the abstract.
10		I prefer teaching with comics for effective teaching and learning because I believe it is more effective
11		I prefer comics in teaching children about health issues.

12		I believe comics are better alternative in educating children about health crisis.
13		Children are likely to understand and explain what they have seen perfectly than with the abstract or without pictures.
14		I am sure children behavior will change when comics are used to educate them about health crisis
15		I believe children will have a positive behavior towards observation of protocols because they likely to mimic behaviors seen in a comic book, strip or video.
16		I agree that comics should be the alternative in teaching new or difficult topic so it becomes more meaningful, interesting and understandable.
17		Health crisis can be better explained in pictures rather than in words.
18		Comics about Covid19 would make pupils adhere to Covid19 protocols.
19		Children are highly to mimics Covid19 protocols because they might understand health implications better with the use of comics.
20		I agree that comics can elicit a change in behavior of children towards the observation of Covid19 protocols.

APPENDIX B

GHANA INSTITUTE OF JOURNALISM

SCHOOL OF GRADUATE STUDIES AND RESEARCH

DEPARTMENT OF PUBLIC RELATIONS

INTERVIEW GUIDE

Interview guide for Focus Group Discussion on Effectiveness of Comics in Educating Children about Health Crisis.

1. What got you interested in the lesson?
2. What are some of the things you remember in the video?
3. What was the video about?
4. Where you excited about the video?
5. What are the things you saw that got you excited about the video.?
6. Mention some of the things you learnt from the video.
7. Would you like to be taught with comic videos, strips and books?

APPENDIX C

GHANA INSTITUTE OF JOURNALISM

SCHOOL OF GRADUATE STUDIES AND RESEARCH

DEPARTMENT OF PUBLIC RELATIONS

SPSS (CHI- SQUARE) ANALYSIS

1. Reactions and Level of Engagement

Children becomes excited about a topic / subject to be taught when comics are introduced in the teaching and learning process.

	Observed N	Expected N	Residual
moderately agree	2	3.3	-1.3
Agree	4	3.3	.7
strongly agree	4	3.3	.7
Total	10		

Class management is easy when children become aware that comics is part of the lesson going to be taught. They become attentive and quiet for the lesson to go on.

	Observed N	Expected N	Residual
strongly disagree	1	2.0	-1.0
moderately disagree	1	2.0	-1.0
moderately agree	1	2.0	-1.0
Agree	4	2.0	2.0
Strong ly agree	3	2.0	1.0
Total	10		

Children contribute to what is been taught because they seem to understand a lesson which involves comics.

	Observed N	Expected N	Residual
moderately agree	1	3.3	-2.3
Agree	4	3.3	.7
strongly agree	5	3.3	1.7
Total	10		

Difficult topics are easy to threat when pictures or comics are used for explanation.

	Observed N	Expected N	Residual
Agree	4	5.0	-1.0
strongly agree	6	5.0	1.0
Total	10		

Teaching children with comics are more effective than teaching in the abstract.

	Observed N	Expected N	Residual
Agree	4	5.0	-1.0
strongly agree	6	5.0	1.0
Total	10		

I prefer teaching with comics for effective teaching and learning because I believe it is more effective

	Observed N	Expected N	Residual
Agree	4	5.0	-1.0
strongly agree	6	5.0	1.0
Total	10		

Test Statistics

	Children are excited about a lesson with comics.	Class management is easy when comics is part of the lesson..	Children contribute to lesson which involves comics.	Difficult topics are easy to treat with comics.	Teaching with comics is more effective than abstract.	I prefer teaching with comics.
Chi-Square	.800 ^a	4.000 ^b	2.600 ^a	.400 ^c	.400 ^c	.400 ^c
Df	2	4	2	1	1	1
Asymp. Sig.	.670	.406	.273	.527	.527	.527

a. 3 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 3.3.

b. 5 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.0.

c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 5.0.

2. Awareness Creation

I believe comics are better alternative in educating children about health crisis.

	Observed N	Expected N	Residual
Disagree	1	3.3	-2.3
moderately agree	1	3.3	-2.3
Agree	8	3.3	4.7
Total	10		

Children are likely to understand and explain what they have seen perfectly than with the abstract or without pictures.

	Observed N	Expected N	Residual
moderately disagree	1	3.3	-2.3
Agree	4	3.3	.7
strongly agree	5	3.3	1.7
Total	10		

I am sure children behavior will change when comics are used to educate them about health crisis

	Observed N	Expected N	Residual
strongly disagree	1	2.5	-1.5
moderately agree	5	2.5	2.5
Agree	2	2.5	-.5
strongly agree	2	2.5	-.5
Total	10		

I believe children will have a positive behavior towards observation of protocols because they likely to mimic behaviors seen in a comic book, strip or video.

	Observed N	Expected N	Residual
moderately disagree	1	2.5	-1.5
moderately agree	1	2.5	-1.5
Agree	5	2.5	2.5
strongly agree	3	2.5	.5
Total	10		

I agree that comics should be the alternative in teaching new or difficult topic so it becomes more meaningful, interesting and understandable.

	Observed N	Expected N	Residual
moderately agree	2	3.3	-1.3
Agree	4	3.3	.7
strongly agree	4	3.3	.7
Total	10		

Health crisis can be better explained in pictures rather than in words.

	Observed N	Expected N	Residual
moderately agree	1	3.3	-2.3
Agree	5	3.3	1.7
strongly agree	4	3.3	.7
Total	10		

Comics about Covid19 would make pupils adhere to Covid19 protocols.

	Observed N	Expected N	Residual
strongly disagree	1	2.5	-1.5
moderately agree	4	2.5	1.5
Agree	3	2.5	.5
strongly agree	2	2.5	-.5
Total	10		

Children are highly to mimics Covid19 protocols because they might understand health implications better with the use of comics.

	Observed N	Expected N	Residual
moderately agree	3	3.3	-.3
Agree	5	3.3	1.7
strongly agree	2	3.3	-1.3
Total	10		

I agree that comics can elicit a change in behavior of children towards the observation of Covid19 protocols.

	Observed N	Expected N	Residual
strongly disagree	1	3.3	-2.3
agree	6	3.3	2.7
strongly agree	3	3.3	-.3
Total	10		

Test Statistics

	comics are better alternati ve	highly to understa nd lesson	Change of behavior after health a crisis lesson.	Positive behavior towards observatio n protocols	comics for teaching new or difficult topic.	Health crisis better or explaine d in pictures	Adheren ce to Covid19 protocols .	Mimics Covid19 protocols because of health implications	change in behavior of children towards the Covid19 protocols.
Chi-Square	9.800 ^a	2.600 ^a	3.600 ^b	4.400 ^b	.800 ^a	2.600 ^a	2.000 ^b	1.400 ^a	3.800 ^a
Df	2	2	3	3	2	2	3	2	2
Asymp. Sig.	.007	.273	.308	.221	.670	.273	.572	.497	.150

a. 3 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 3.3.

b. 4 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.5.