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EMERGENCY/DISASTER PREPAREDNESS AND INTERVENTIONS AMONG
EMPLOYEES OF GHANA COCOA BOARD HEAD OFFICE (COCOA HOUSE)

BY

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DECLARATION

I, Ninkabs Ninsaw Kpau hereby declare that: the dissertation entitled **Emergency/Disaster Preparedness And Intervention Among Employees of Ghana Cocoa Board Head Office** is my own work and that to the best of my knowledge it contains no material previously published or written by another person nor material which has been accepted for the award of any degree of a university or other institution of learning except where acknowledgement made in the text and reference.

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DEDICATION

I dedicate this research work to my family and many friends. A special feeling of gratitude to my loving parents, Mr. and Mrs. Kpau whose words of encouragement have taken me this far and their push for tenacity still echoes in my ears. My aunty, Grace Ninsaw, who never left my side and is very special.



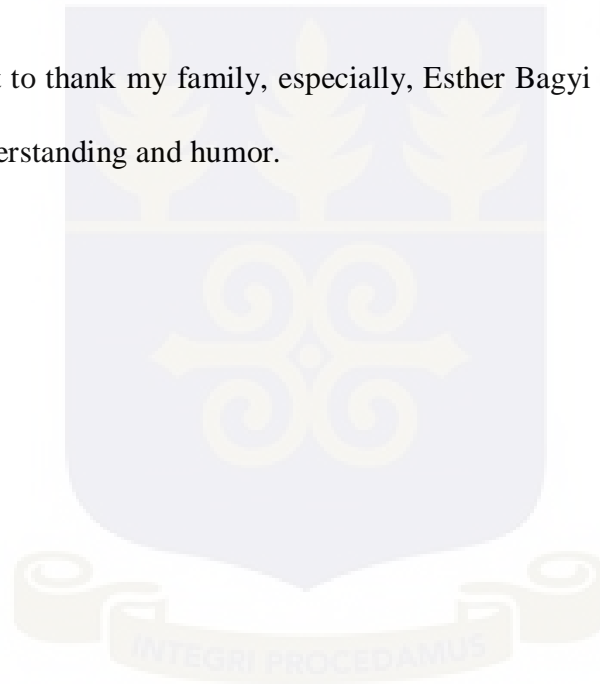
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ABSTRACT

BACKGROUND: Emergencies/Disasters be they natural or manmade can occur without warning and therefore there is the need for effective emergency/disaster preparedness and management plan in any organization. It is therefore important to have knowledgeable personnel in the management of emergencies/disasters through emergency drills training and simulation.

OBJECTIVE: This study evaluated emergency and disaster preparedness in Ghana Cocoa Board Head Office through availability and employees' knowledge about emergency/disaster preparedness plan and its implementation.

METHODS: The study was a cross sectional study conducted to gather data from employees of Ghana Cocoa Board Head Office on availability of an emergency/disaster plan and their knowledge on emergency preparedness. The study used structured questionnaires in addition to personal interview of key informants to evaluate the emergency/disaster preparedness plan and its implementation.

RESULTS: Ghana Cocoa Board as an institution has emergency/disaster preparedness plan. This is in accordance with National Disaster Management Organization Act 517, 1996, which mandates organizations to have emergency/disaster plan.

Majority, 79(75.2%) of the respondents said that they had knowledge on emergency/disaster preparedness and knew what to do before, during and after an emergency, whereas 86(83.5%) of said they were aware of all emergency exits at Cocoa House.

The study showed that 48(47.1%) had ever participated in drills or simulation exercises, even though drill and simulation exercises were not frequent in Cocoa House.

Almost all respondents 103(99%) said they were aware of where fire extinguishers were placed of whom 74(70.5%) said they had knowledge in the use fire extinguishers.

According to respondents, floods (23.8%) and fires (20%) were the most common emergencies that could affect Cocoa House and its surroundings.

Finally, the study also showed that (51.4%) of respondents were aware of any disaster that had occurred at the Cocoa House and surroundings in the past five years.

CONCLUSION: The study showed that although there is an emergency/disaster preparedness plan at Cocoa House, the main focus is on fire and smoke prevention and control. It is important that equal attention is paid to other aspects of the emergency/disaster preparedness plan.



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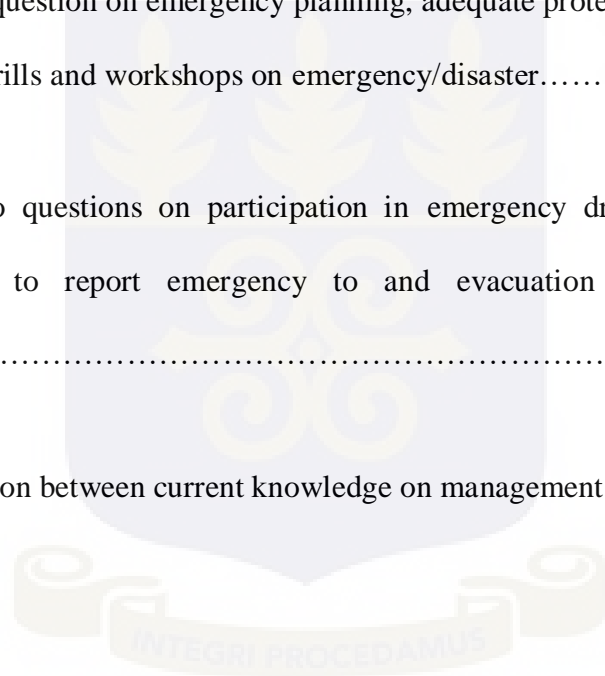
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LIST OF ACRONYMS

COCOBOD – Ghana Cocoa Board

CCOHS – Canadian Centre for Occupational Health and Safety

DHS-Department of Homeland Security

EOP-Emergency Operation Plan

EPA-Environmental Protection Agency

FEMA - Federal Emergency Management Agency

ICS - Incident Command System

IDNDR - International Decade for Natural Disaster Reduction

ISDR - International Strategy for Disaster Reduction

HSPD - Homeland Security Presidential Directive

NADMO - National Disaster Management Organization

NFPA - National Fire Protection Agency

NIMS - National Incident Management system

NRC- National Research Council

NRP - National Response Plan

SHRM – Society for Human Resource Managers

UN – United Nation

WHO - World Health Organization

DEFINITIONS OF TERMS

Emergency: An occurrence of a lesser magnitude as to create a situation in which normal patterns of life within the organizations / community are suddenly disrupted but can be easily handled by the organization/community concern.

Disaster: An occurrence of such magnitude as to create a situation in which normal patterns of life within the organizations/community are suddenly disrupted and people are plunged into helplessness and suffering and as a result, may urgently need food, shelter, clothing, medical attention, protection and other life sustaining requirements.

Disaster Management: The range of activities designed to maintain the control over disaster and emergency situations and to provide a framework for helping persons at risk to avoid or to recover from the impact of disaster. Disaster management deals with the situation that occurs prior to, during and after a disaster occurs.

Internal Disaster: A need for extra institutional personnel to care for employees and possible evacuation of them due to an accident within the facility such as fire, or explosion.

External Disaster: A disaster which occurs outside the organization, somewhere in the community, when there is a disproportionate amount of personnel to care for the incoming emergency victims.

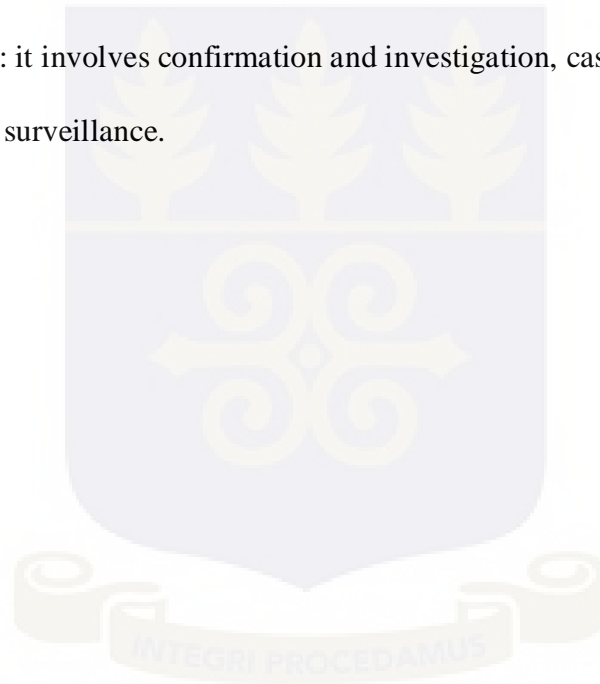
Disaster Preparedness Plan: A formal written plan of action for co-coordinating the response of employees in the event of a disaster within the organization or the community.

Drill: A simulation of a disaster to assess and improve the effectiveness of the organization's disaster preparedness plan.

Disaster Preparedness: It is a process for assessing risks and capacities for responding when disasters occur. It involves co-ordination and planning, surveillance and forecasting, training and orientation, stocks and logistics, and communication and consultation.

Mitigation: A reduction or prevention of a disaster likely to happen. Mitigation plans wish primarily to reduce vulnerability. Active mitigation measures include raising awareness, dissemination of mitigation plans, knowledge promoting safe behavior and rewarding preparedness measures.

Response / intervention: it involves confirmation and investigation, case management, prevention of spread and surveillance.



CHAPTER ONE

1.0 INTRODUCTION

Emergency Preparedness and intervention which is synonymous to Emergency/Disaster management is aimed at ensuring that the resources necessary for responding effectively in the event of a disaster are in place, and that those entrusted with having responsibility to respond know how to use those resources, (Sutton et al, 2006). The activities commonly associated with disaster preparedness include, developing planning processes to ensure readiness, formulating disaster plans; stockpiling resources necessary for effective response and developing skills and competencies to ensure effective performance of disaster-related tasks, (Kapucu, 2008).

Several disasters across the world demonstrate the need for citizens to be better informed in emergency planning and preparedness techniques. In any country, the mission of emergency preparedness is to protect individuals, communities, institutions and the nation as whole by coordinating and integrating all activities important to build, sustain and improve the capability of employees to mitigate against, prepare for, respond to, and recover from threat or actual natural disasters, acts of terrorism, or other man-made disasters, (Wang, 2004; FEMA, 2007).

More globally, countries within the last few years are also looking at disaster and emergency preparedness within their government and businesses. For instance, the city of London has comprehensive and unique emergency and disaster preparedness for the city, people, and businesses in London. It includes weekly duty updates regarding latest and modern preparedness advice for the city, information on citizen and family preparation, business planning and preparation, and data and information on organizations that assist with emergencies and disasters within London, (London.gov.uk, and 2013).

Emergencies and disasters can occur without warning. The more one is prepared for them, the greater the possibility in one's ability to act, therefore reducing fear, panic and confusion when emergencies/disasters occur. Emergencies can create a variety of hazards for workers. Before preparation and prior to an emergency strikes is pivotal to ensuring that employers and workers have the necessary education about designated assembly points, use of personal protective equipment and how to keep themselves safe during such times, (Foster, 2008).

Emergencies/Disasters, be they naturally occurring or man-made require coordinated efforts from many governmental institutions such as the fire service, National disaster management agency and the police to ensuring highest protection to life and property. It has been said that in event of emergency/disaster, chances of survival increases when more and more people help each other by exercising their responsibilities or roles. In particular, emergency/disaster preparedness is carried out effectively as emergency agencies, business institutions, local and national governments work together through information sharing and planning (FEMA, 2008; 2009). Survival plans are developed by emergency planners ahead of time in order to address disastrous events.

According to Grove, (2013) emergency preparedness and intervention encourages a comprehensive inclusion of stakeholders and general public. In order to have a comprehensive and total view of the population, research must measure the specific requirements of individuals within that population. During an emergency, officials and organizations involved are provided with guidance on proper procedures and responsibilities, and are made to provide reports, and are also held liable for their preparedness levels. The general employee is not held to such strict protocol. Their contribution as stakeholders are under-acknowledged, emphasizing the need for research into the current state of employee preparedness.

There are eight dimensions or desired end-states for emergency preparedness planning activities: (1) hazard knowledge; (2) management, direction and control, and co-ordination of emergency operations; (3) formal and informal response agreements; (4) resource acquisition aimed at ensuring that emergency functions can be carried out smoothly; (5) life safety protection; (6) property protection; (7) emergency coping and restoration of key functions; and (8) initiation of recovery activities, (Grove ,2013),

Aside the major benefit of providing guidance during an emergency, developing a plan has other advantages. One may discover unrecognized hazardous conditions that could worsen an emergency situation and one can work to eliminate them, (CCOHS, 2015). The process of planning brings to light, deficiencies such as the lack of resources (equipment, trained personnel, supplies), or items that can be rectified before an emergency occurs. In addition, an emergency/disaster plan promotes and increases safety awareness and shows the organization's commitment to the safety of workers or employees. The lack of an emergency plan could lead to severe losses such as multiple human casualties, property damage, and loss of life and possible financial meltdown of the organization. Employees may not take the time and effort to scrutinize the problem. However, emergency/disaster planning or preparedness is an important part of company operations that take away gross apathy and encourage responsible participation, (CCOHS, 2015).

1.1 Problem Statement

Lack of employee knowledge on emergency preparedness and intervention can result in excessive loss of life and property during both natural and man-made disasters.

In Ghana, according to the National Disaster Management Organization (NADMO), averagely 165, 000 individuals are displaced yearly by emergencies and disasters due to unpreparedness (NADMO, 2014). The recent twin disaster (flooding and Goil fuel station fire) in Accra, 2015, the collapse of the Melcom Shopping Mall in 2013, Accra second hand clothing fire disaster in 2013, the Kumasi gas station disaster in 2012 and Accra sport Stadium disaster in May 2001 brought to the fore the importance of emergency preparedness in any work environment.

The study site, Ghana Cocoa Board Head Office, Cocoa House, is a public institution that employs a multitude of people whose lives could be at risk in the event of any disaster considering the high rise nature of the building they occupy, as well as other threats posed by nearby buildings. Cocoa House is also close to the popular Abuja Market, constructed mostly with wooden structures and occupied by squatters at night when businesses close down. This Market has had its fair share of Market fires. In year 2014 alone, the Market got burnt down three times. For this reason Cocoa House needs to be prepared for any eventuality.

In spite of the problems listed above, there has not been any comprehensive study on emergency preparedness at the organization, and therefore the need for such as study.

1.2 FIGURE: 1 Conceptual Framework for emergency and disaster preparedness



Emergency or disaster preparedness is a continuous cycle of assessment of the jurisdiction for threats, be it natural or man-made and works in a systematic approach toward a cyclical process that ultimately establishes organizational preparedness. This systematic and cyclical approach is defined by the continual evolution of the phases on the exterior ring assessment, planning, preparation and evaluation.

The interior ring defines each of the steps that organizations must work toward in order to be well prepared in identification of hazard, assessment of vulnerability, equipping employees, communication, monitoring and evaluation to ensure effective coordination and the enhancement of capabilities of concern organizations to prevent, protect against, respond to, recover from, create resources and mitigate the effect of natural disasters, acts of terrorism, and other man-made disasters

The cyclical nature of this system is fundamental to defining and applying the successive steps to be taken after determining whether a jurisdiction, or any type of entity, is or is not prepared. Regardless of whether these standards are met, the entity must re-examine its threat regularly because both natural and technological threats change constantly. Organizational acceptance of

the philosophy that defines preparedness as a dynamic state which can rapidly improve and/or diminish independent of known external factors, and in a short time or gradual timeframe, will provide the perpetual vigilance that is required to remain prepared. Using this approach can help to ensure that the overall emergency preparedness and, more importantly, that each of the individual functional areas are prepared as well depending on the type on emergency/disaster.

1.3 Types of emergencies/disasters

An emergency/disaster is either internal or external. An internal disaster is a disaster that occurs in the organization itself or in the area of the organization. An emergency/disaster is external if the disaster occurs outside the organization. Emergencies/Disasters can be divided into three categories

- Natural events- such as storms, drought, earthquakes, disease epidemic.
- Technological events-such as explosions, structure collapse, radiological accidents.
- Civil/Political events- such as strikes, terrorism, biological warfare etc.

1.4 Simplified Emergency/Disaster Preparedness Cycle

Emergency/Disaster preparedness cycle illustrates the ongoing process by which, businesses, civil society and government plan for and minimize the effect of disasters, reactions during and following a disaster, and steps taken to recover after a disaster.

Mitigation/Prevention

Mitigation activities actually eliminate or reduce the probability of disaster happening, or minimize the impact of unpreventable emergencies/disasters. Mitigation includes vulnerability

analyses updates; building codes; land use management and zoning; building use regulations and safety codes; public education and preventive health care. Mitigation depends on the integrating appropriate preventive measures into development planning. Its efficiency also depends on the available hazard information, emergency/disaster risks and threats, and the preventives measures taken. The mitigation phase, and for that matter, total disaster management cycle, needs national policies and plans that can modify the root causes of disasters or reduce the effects on human, property, and infrastructure, (Treglia *et al*, 2011)

Emergency Preparedness

The goal of emergency preparedness programs is to achieve a satisfactory level of readiness to respond to any emergency situation through programs that strengthen the technical and managerial capacity of organizations and communities. These preventive measures is term as resource readiness to handle emergency/disasters and can be improve by developing procedures and responses, developing plans, building warning systems and public education. Preparedness ensures that strategic reserves of food and other important things necessary in cases of emergency/disaster, (Sutton, 2006)

In the preparedness phase, organizations, individuals and governments carve plans to save lives and property, reduce emergency/disaster damage, and accelerate emergency/disaster response activities. Preparedness measures involve preparedness plans; warning systems; emergency communications systems; emergency exercises/training; evacuations plans and training; resource inventories; emergency personnel/contact; and public information/education, (Sutton, 2006).

Emergency/Disaster Response

The object of emergency response is to give early assistance to sustain and maintain life, improve health and boost the morale of the affected community. Such help may be in a form of providing some specific but limited assistance, such as supporting refugees with temporary shelter, and food, transport and to provide permanent settlement in designated locations. It may also include early repairs to damaged structures. The aim in the response phase is achieving the primary burdens of the affected people until more feasible and sustainable solutions are found.

Emergency/Disaster recovery

Emergency/Disaster recovery involves a set of policies and procedures to enable the recovery or continuation of vital technology infrastructure and systems following a natural or human-induced disaster. These includes warning and ongoing public information, evacuation and sheltering, search and rescue, damage assessments, debris clearance, removal and disposal, utilities and communications restoration, re-establishment of major transport linkages, temporary housing, financial management, economic impact analyses, detailed building inspections, redevelopment planning, environmental assessments, demolition, reconstruction, hazard mitigation and preparation for the next disaster.

1.5 Emergency/disaster preparedness planning process

Emergency/disaster planning process is not a single-season event. It is rather a continual cycle of planning, revision, training and exercising that is done throughout the four phases of the emergency/disaster preparedness cycle, thus, prevention/mitigation, preparedness, response, and recovery, (FEMA 2010). Planning process does have multi-purpose focus, the development and maintenance of an up-to-date emergency action plan (EAP). An EAP is defined as a document

that describes the plan for responding to a variety of potential hazards and maintained by various jurisdictional levels, (FEMA, 2010)

It is accepted for a fact that emergency planning process is cyclic, EAP development has an actual starting point. There are six levels in the emergency planning process:

1. Form a collaborative disaster planning committee. A team or group approach helps organizations state their perception of the role to be played during an emergency operation. The goal of encouraging team planning is to build and enhance relationships that foster creativity and novelty in the planning process during an emergency. This method facilitates the establishment of planning routines, this ensures that processes used before an event occurs are not different those used during an event.
2. Understand the situation/condition. Generally, jurisdictional problems that organization or communities face are hazards and threats. Serious analysis and information gathered on potential hazards and threats that jurisdiction faces draw specificity on planning process. When hazards and threats are perceived as problems and emergency action plans are viewed as solution, then hazard and threat identification, analysis and evaluation are important steps in the planning process.
3. Determining goals and objectives. Use hazard profile information as part of the analysis process. Planning team brainstorm about how the hazard or threat evolve in the jurisdiction and defines a successful planning process. Beginning with a given level of risk for the hazard or threat, the planning team forecast an event's evolvment from mitigation and protection efforts, through initial warning, to its effect on the organization or community and its creation of specific

consequences e.g. loss of critical services or infrastructure, collapsed buildings, death, injury, or displacement.

4. Developing the plan. The usual information used during hazard identification are used to develop potential solutions. Some mitigation/prevention and protection solution are developed that might need a significant primary action or generation of an ongoing procedure such as checking personal cards. Emergency/disaster planners takes into accounts the demands, goals, and objectives to develop appropriate response alternatives.

5. Prepare, review, and approve the plan. The planning team generates an initial draft of the broad plan, functional annexes, or other areas of the plan per information in hand. As the emergency team fervently works through successive plan, the members add necessary tables and graphics. The final draft is circulated to organizations and those who have responsibilities to implement the plan to give their comments.

6. Implementation and maintaining the plan. Walking the plan and evaluating its efficiency and effectiveness involve the use of drill training and exercises simulation and evaluation of main events to determine status of the goals, objectives outlined in the plan that might lead to a successful response. Planners should emulate lessons and practices from other organization and communities against the varied forms of emergencies or disasters.

1.6 Objectives

1.6.1 Study Aim

This study evaluated emergency and disaster preparedness in Ghana Cocoa Board Head Office through availability of emergency/disaster preparedness plan and employees' knowledge about emergency/disaster preparedness.

1.6.2 Specific Objectives

1. To examine the existing emergency and disaster preparedness plan at Cocoa House.
2. To assess implementation of emergency and disaster preparedness plan at Cocoa House.
3. To assess the knowledge of employees on emergency and disaster preparedness.

1.7 Research questions

- I. What legislation governs emergency and disaster preparedness?
- II. What major components are covered in the Emergency/Disaster Plan?
- III. What processes are there to monitor and evaluate employees' Emergency/Disaster preparedness process?
- IV. What knowledge of emergency preparedness do employees have?

1.8 Justification of the study

The study had an overall aim of evaluating emergency preparedness plan in Cocoa House and also to assess employees' knowledge about emergency/disasters preparedness. This would help people react proactively in case of disasters. It is hoped that results from the study will be helpful to government, organizations and individuals in terms of policy formulation, implementation and monitoring of disaster preparedness. Moreover, this study is an important contribution to a body of research concerning disaster preparedness, economic impacts and disaster management. The study may also serve as a useful reference tool for future studies. Overall, it may help boost the growth of disaster preparedness research, especially in Ghana.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Emergency/Disaster preparedness planning

Emergency planning and preparedness is the most important components in dealing with a crisis (Cavanaugh, 2006). Planning for emergencies requires collaboration, communication, and control, (Khosa, 2009). But the most important internal factor is the management's commitment to adopt and develop an emergency management plan, which will be a strong guidance and updated message to communicate before, during, and after the crisis, (AlBattat et al, 2013). Della-Giustina (2003) stipulated three steps important in emergency planning: recognize existing threats and risks, develop an up to date emergency plan, and assure the organization's preparedness for the emergencies. The plan should contain the use, maintenance, and upgrading for the security and safety systems (Enz, 2003).

2.2 Dependence on public and humanitarian aid

Monitoring and providing gratuitous relief for unpreventable natural calamities such as droughts, floods, and famines – dates back at least to 1880. Such public relief measures have become institutionalized, (Dekens, 2006). Thus the government has created a relief mentality that fosters expectations and reliance on government as well as international aid. According to Bland *et al*, (2006), people affected by emergencies/disasters play a crucial role in disaster preparedness and mitigation, but their knowledge is often ignored by both international aid agencies and by their national and regional governments. The failure of relief aid following the 2004 tsunami in Virginia, USA for example, is now being attributed to a general misunderstanding of people's needs and practices,

2.3. Emergency Preparedness

Modern emergency preparedness developed from the civil defence and civil protection efforts that began in the 1940s to protect civilians against the effects of warfare and nuclear exchange. In the 1970s, the field expanded to include response to disasters caused by natural, technological and human forces (Alexander, 2003).

Globally, emergency preparedness or management has traditionally been viewed as a four-phase approach: mitigation preparedness, response and recovery. The Department of Homeland Security in the United States, FEMA and other renowned institutions recommended a change to five phases to include prevention, preparedness, response, recovery and mitigation, (FEMA, 2009)

In the past, there were no national or international emergency management standards adopted by all organizations to detail specifically what is required in order to have a successful emergency preparedness program. This situation has changed tremendously, with the objective of establishing national and organization responsibilities in emergency preparedness. For example in the United States, the 2004 National Response Plan (NRP), as well as Homeland Security Presidential Directives, HSPD 8 (2003), expanded the roles and responsibilities of federal, state and local organizations, (Department of Homeland Security, 2004).

National Fire Protection Association (NFPA), (2004) an international codes and standards organization, issued the NFPA 1600 Standard on Disaster/Emergency Management and Business Continuity 2004 Edition. This NFPA Programs, standard provided guidelines for organizations so that their emergency management and business continuity planning will be more complete.

Though these standards are now more widely accepted by public and private organizations as guides, very little information is available to specifically address how to integrate emergency

preparedness processes into normal business processes. In the past, emergency managers were seen as a response group rather than as being proactive in assisting to protect the organization. New thinking on the part of emergency managers as well as other organizational departments is needed to recognize that emergency preparedness contributes to long-term survival of the entity.

2.4 Hazard Knowledge: Hazard Identification and Risk

All preparedness activities must be based on knowledge about hazards, the likelihood of different types of disaster events, and likely impacts on the natural and built environment, households, organizations, institutions and communities. Types of information that provide a focus for preparedness activities include the potential for detrimental impacts of the hazards on health and safety, continuity of operations and governance, critical facilities and infrastructure, delivery of services, the environment, economic and financial conditions, and regulatory and contractual obligations. Community-based disaster scenarios also provide a solid basis for preparedness efforts, (UNISDR, 2004), Community outreach and the development of plans for crisis communications and public information are vital for the continuity of operations in businesses and to ensure public trust within a community. Partnerships between public and private entities that have been established and maintained prior to a disaster event will influence the sharing of resources through mutual aid and enable a capability to deliver emergency public information through previously identified channels. Activities include the identification of publics that will be in need of information and developing communications plans and identifying private resources that can be used in service to the community for response and recovery.

2.5 Emergency Preparedness Personnel

According to FEMA, (2003). There are three main personnel groups under the emergency preparedness and intervention umbrella. One group is first responders. These include the front

line, on-scene field personnel who handle the actual incident itself, in the response and initial recovery phases. This category is dominated by fire, law enforcement and emergency medical responders. Other specialized personnel may also be part of the first responder group, notably those who deal with explosives or hazardous materials.

An incident commander or unified commander manages the scene during initial response. The Incident Command System (ICS), a hierarchical management structure, is generally used in these circumstances to most effectively deal with resources, operations, planning, logistics, etc. ICS can be used no matter how large or small the incident itself is. The ICS system has been integrated into the 2004 National Response Plan under the National Incident Management System (NIMS).

There are differences between field responders in private and public sector organizations. In a local city government, the first responders may be city employees or personnel contracted through the county or state. Most private sector organizations rely on city or other government services. Some very large private organizations have their own, or contract for, private security and fire services. Even if a private organization has its own first responders, at some point public law enforcement, fire service agencies and other agencies may become involved. For example, if a private organization has a hazardous materials spill, a contractor may clean it up, but the Department of Health, Environmental Protection Agency, and other groups may have to come on property to clear the area for use. If a criminal event occurs, law enforcement agencies might come on site and take charge, Beck, (2005).

When a city's first responders are unavailable, an appropriate agency may be called from a nearby city to assist. These mutual aid agreements between cities are normally in place ahead of time. If an incident is too large for a city and its mutual aid partners to handle, the county and

state may send additional personnel to assist. Private sector organizations may also have mutual aid agreements with other local private sector companies. If a regional disaster occurs, local city or other public sector responders may be temporarily unavailable to private organizations, and the private entity will have to do with the resources available on site.

2.6 Emergency Support Resources

The goal of resource management is to identify and establish internal and external resources necessary for emergency/ disaster response and recovery. Identifying resource needs, acquiring resources, and storing and distributing resources are key preparedness dimensions. The resource management dimension of preparedness is closely tied to the planning dimension in that plans commonly involve strategies for resource sharing, such as mutual aid agreements.

Included in the concept of resources are human, material, and informational sources of support. Skilled, well-trained personnel and staff constitute critical resources. Communications resources are critical for all response activities at all levels of analysis, although communications media can vary from low-tech to very high-tech. Emergency/Disaster response tasks, such as evacuation and other self-protective measures, search and rescue, emergency medical care, fire suppression, debris removal, emergency transportation, security and credentialing, and response coordination have specific resource and logistical requirements that must be taken into account during the planning process.

Technologies to assist with important crisis-relevant tasks such as public warning are also critical for effective response. Communications and warning systems are essential to any business operation or community emergency response. They are needed to report emergencies, warn personnel of the danger, keep families and off-duty employees informed about what's happening at a facility or within a department, coordinate response actions, and keep in contact with

customers and suppliers. Preparedness for communications and warning include the development of a communications plan, the establishment of a warning system including developing protocols and procedures, regular testing and support, and addressing the interoperability of multiple responding organizations and personnel.

The resource dimension also includes efforts designed at mobilizing resources to continue with operations when key resources are destroyed. Businesses and communities must prepare for the possibility that an alternate facility, in addition to the primary facility, will be needed for recovery and resumption of services following a disaster event. Emergency preparedness for a community may include an alternate emergency operations center, efforts to introduce redundancy into key response systems, and procedures to locate, acquire, store, and test back-up resources.

2.7 Initiation of Early Recovery

Business continuity planning focuses on avoiding costly downtime, lost revenue, and disaster-induced unemployment. Preparedness for business recovery includes such elements as making contractual arrangements with vendors for post-emergency services such as records preservation, equipment repair, and engineering inspection services. It also includes measures to get employees back to work as soon as possible - even if they must work at another location. Preparedness for recovery is also important for households and communities – especially with respect to the purchase of hazard insurance designed to provide financial protection from disaster-related economic losses (NRC, 2006).

Communities and organizations must also plan in advance for recovery. Such planning should include the use of hazard and vulnerability analyses to determine which neighborhoods, groups of residents, and businesses will be especially hard-hit in future disasters, and then, based on this

information, to decide what should be done following those events. Decisions must be made regarding emergency ordinances (e.g., to restrict access to hazardous locations) as well as new measures that may need to be undertaken to acquire vacant land for redevelopment and to ensure that mitigation issues are addressed during the recovery process. Recovery planning also includes support that communities/organisations can provide to businesses and households to help ensure that they recover as rapidly as possible.

2.8 Emergency Evacuation

Not all disasters require residents to flee their homes or businesses. However, the need for escape or rapid exit is common enough that it should be explicitly addressed as part of emergency planning efforts. Such planning can be a lifesaver. Experience demonstrates that people who are aware of evacuation procedures and who engage in escape drills are more successful in safely escaping buildings than are those who are unfamiliar with the procedures (Laura, 2007).

Although evacuation is generally thought of as a pre-event precaution, in certain types of emergency situations (e.g., a tsunami or terrorist attack) there may be no opportunity to evacuate in advance, while mass evacuations may be necessary after the event. For example, many older persons who safely weathered Hurricane Katrina in their homes were forced to evacuate afterwards when the levees surrounding New Orleans were breached, resulting in life-threatening flooding. Therefore, evacuation planning must include strategies for both pre- and post-event evacuation of elders.

In addition to events observed across the nation following Hurricane Katrina, there is now empirical evidence that many elders and disabled adults would be unable to evacuate without assistance, or at all. Sandy et al. (2010) indicated that older adults are more unlikely to leave their property after disaster and evacuation warnings have been posted. Khosa *et al* (2009),

observed that following the four hurricanes that hit Florida in 2004, many seniors refused to leave their homes – even after their roofs had been blown off.

2.9 Emergency Sheltering

In extreme emergencies, when people are advised to evacuate their homes and seek shelter, the first choice for shelter should always be a friend or relative's house in a safe area. Pre-disaster planning should focus on making elders in the community aware of the need for this type of planning, including elders who currently receive no special elder-related services, (Vigdor, 2007). Additionally, prior to any crisis, the ASN must be proactive in assuring that community-dwelling elders have a place of shelter to go to and a means of transportation to get there.

When conditions prevent sheltering with family or friends in a safe area, elders in areas where voluntary or mandatory evacuations have been ordered may take refuge in a public disaster shelter operated by local emergency management agencies. Designated shelters may include public schools and other county, state, or federal buildings that have been pre-determined to meet safety standards for public sheltering. These public shelters are little more than basic survival facilities. Even with special staff training and consideration for older shelter residents shelters are likely to be difficult for older persons to tolerate. The healthy 70 year-old who spends three nights sleeping on a cot or on the floor, using a public bathroom facility that may be at some distance from the sleeping area, enclosed in a confined space with virtually incessant noise and confusion, (Laura, 2007). They are vulnerable to at least short-term and possibly long-term adverse outcomes, including some physical decline and mental confusion. It is, therefore, essential that the ASN actively participate in planning, training, and staffing all community public shelters, assuring that elders receive special consideration, (Laur, 2007)

During Hurricane Charley some seniors were turned away from shelters as the storm approached because they were already full. It is not clear if these elders were assisted in finding alternative shelter. However, the risk of negative consequences for these older people before, during, and after the crisis is enormous.

2.10 Emergency Communication

Public alert and warning systems save lives and reduce panic. During an emergency situation, most Americans rely on their televisions, radios, or telephones to obtain additional information. However, for many older persons and the disability community, these may not be viable means of receiving such life-saving information. In the public arena (e.g., public buildings, stadiums), oftentimes notification is limited to electronic billboards and loudspeaker systems, if it exists at all. These methods cater primarily to the mainstream public and do not offer sufficient accessibility to emergency alert and warning systems for persons with hearing, speech, and/or vision disabilities. As a result, people with these types of disabilities may not have the information necessary to make informed decisions. This not only increases the likelihood of confusion, but also the potential for bodily harm and loss of life (Individuals with Disabilities in Emergency Preparedness, 2005).

2.11 Emergency Coping and Restoration

In the USA, the Institute of Business and Home Safety (IBHS, 2005) an organization responsible for laying out guidelines for construction of hurricane proof buildings and creating of disaster safety plan, advocates that at the organizational level, planning activities seek to develop strategies to address problems that are likely to develop when a disaster strikes, and training seeks to ensure that all those involved in the response are able to carry out their assigned duties. Emergency preparedness plans seek to do the same thing. However, disasters almost invariably

come with surprises, and for that matter preparedness activities must also focus on improving the ability to improvise, innovate, and think creatively. Preparing to improvise may seem like a contradiction, but in fact the two concepts are complementary. Preparations seeking to enhance adaptive capacity in disasters may include extensive “what if” explorations, various kinds of thought experiments, exercises in which players are required to assume others’ roles, and discussions centering on potential worst cases, (Sutton, 2006). Although an organization may have an evacuation plan, it is also useful to consider what would be done if the plan cannot be executed or if evacuation is impossible. What if help does not arrive in 72 hours? Or if the wait for assistance is even longer? What if critical resources are unavailable? If recent disaster experiences have taught us anything it is that systems can and do fail and that disaster plans can provide wholly inadequate in the face of unexpected contingencies.

According to Business Executives for National Security (BENS) - a U.S business organization that provide support to U.S businesses and defense to boost national security. Emergency response activities also include measures to initiate restoration activities as soon as is feasible following a disaster. Restoration of critical services and facilities is essential, both to contain further losses and to serve as a basis for initial recovery activities. Utility restoration, for example, plays a key role in making dwellings habitable and containing business interruption losses, (Sutton, 2006). Transportation system restoration is crucial to ensure that needed supplies and personnel can reach the impact area.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Type of study

The study was a cross sectional study that used close and open-ended questions as well as personal interview of key informant to gather data. It included all permanent employees in Cocoa House from different disciplines.

3.2 Study Area



FIGURE 3: GHANA COCOA BOARD HEAD OFFICE, (COCOA HOUSE), ACCRA

The study was carried out at the Ghana Cocoa Board (COCOBOD) Head Office usually referred to as Cocoa House located at the central business district of Accra in the Greater Accra region of Ghana. As the headquarters of COCOBOD, Cocoa Houses provides several employees including the Chief Executive Officer and his deputies, several top and middle management personnel and

their support staff. The building is surrounded by a number of important high rise office buildings. In the immediate vicinity of the Cocoa House is a large market, the Abuja Market which has several unauthorized wooden structures and a popular dwelling place for thousands of squatters in Accra.

The Cocoa House building is a six-story structure with mechanical towers on both ends, three stairways and three elevators; one on each end and one in the middle. It has heat and smoke detectors and a fire suppression system. Alarm activators are located at both ends of all corridors on each floor as well as specific fire prone areas, and the building is connected to the central monitoring station, where signals are promptly interpreted and necessary interventions instituted.

Each building floor is occupied by employees of one or two departments. The activities that go on in the various departments are mostly administrative and secretarial duties. Although the building provides office spaces for about 1500 permanent staff, an additional 100 people, including locals and foreigners visit every day ostensibly to transact business. In front of Ghana Cocoa Board Head Office building is the Kwame Nkrumah Avenue Road, one of the busiest roads in the city which links Kwame Nkrumah circle to the central business centre in Accra. It is estimated that over 1000 vehicles ply the road daily. Immediate opposite Ghana Cocoa Board Head Office building is the Accra regional Police headquarters as well as a subsidiary of Ghana commercial bank. These two facilities also attract a great number of people to the area. Immediately behind Cocoa House is a large car park used by employees. Within the car park is a gas filling station where employees fuel both private and official cars. The car park shares a boundary with the popular Abuja Market, with several wooden structures, where brisk business is done during the day and serves as a dwelling place for several squatters at night. Records show

that averagely, fire guts the Market twice yearly and destroys lives and property. This height of Ghana Cocoa Board Head Office building is a potential threats to employees.

3.3 Variables

3.3.1 Dependent variables

The dependent variables for this study were employees' knowledge about emergency preparedness and existing emergency preparedness plan.

3.3.2 Independent Variables

The independent variables for this study were emergency training, employee work floor, employee's job position, level of education, employee's age and religious affiliation

3.4 Population and Sampling

The total number of employees at Ghana Cocoa Board Head Office is 1200. Purposive sampling was used to select four (4) key informants instead of the initial ten (10) who were either directly responsible for emergency/disaster preparedness or head of department, and have valuable information pertaining emergency/disaster preparedness. The criteria that was proposed to be used in selecting the key informants were as follows:

- Key informant must be a member of the emergency preparedness committee.
- Key informant must be part of the disaster command and control in the event of a disaster.
- Key informant must be part of the Ghana Cocoa Board management team.

All the four (4) key informants were from the disaster response unit. The heads of department did not participate due to their busy schedules and were of the view that disaster response unit should be able to provide all information concerning the study.

Also stratified sampling was used to sample 120 respondents from the various departments (Human Resource, Accounts, Finance, and Audit, Estate, Special Service, Procurement and Stores) within the institution. One hundred and twenty (120) persons representing 10% of the total number of employees at the Cocoa House were sampled for the study

3.5 Data Collection Technique/ methods and tools

- i. Questionnaire- opened and closed ended questions.
- ii. Semi-structured interviews of key informants.
- iii. A checklist was used to assess the major components of the emergency preparedness plan

Key informant interviews

Personal interview of key informant facilitated communication that allowed for further probing of answers

Checklist

A standard checklist on emergency/disaster preparedness plan developed by the Federal Emergency Management Agency (FEMA) was used to cross-check the major components of an emergency/disaster preparedness plan at Cocoa House.

3.6 Quality Control

Completed questionnaires were thoroughly reviewed at the end of each day for correctness. A research assistant was employed to compare the entered data SPSS with each questionnaire to ensure accuracy. The daily validation of the password to the folder that contained the data on my computer was done daily for early detection of intrusion.

3.7 Data Analysis

Data from the questionnaire was coded and then analysed using Statistical package for the social sciences (SPSS version 20) for statistical analysis. Chi-square analysis was done to determine the association between various demographic variables and emergency preparedness. Qualitative data from key informant interviews were organized into themes and summaries of the views of the respondents based on the themes.

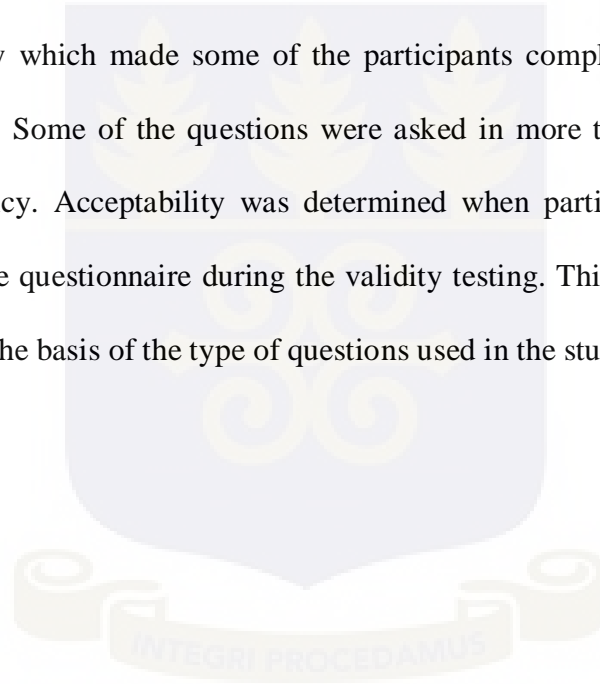
3.8 Ethical consideration

Ethical clearance was sought from the Ghana Health Service Ethical Review Board and permission was also granted by the Management of Ghana Cocoa Board. A consent form that described briefly the study and its importance was provided for respondent's informed consent before participation. The study was self-financed and purposefully to fulfil academic requirement. Participation in this study was voluntary and respondents were at liberty to withdraw from the study at any point in time. Data provided by respondents were stored in a password protected folder on a computer and data protection ensured. Data was only used purely for the academic research. The questionnaire was coded and data analysis done at the aggregate level that ensured anonymity of respondents as well as their privacy and confidentiality. Respondents' efforts were contribution

to the success of this study, and were compensated with refreshment. Respondents were made aware of the accessibility of final result and findings upon a request made to the researcher

3.9 Pretest or Pilot Study

Sample questionnaire was initially “field tested” with Cocoa Clinic employees that assessed the type of questions used in the study and also ensured that the data from the questions were valid and reliable. In this study, interviews were used to assess validity that compared the responses in the questionnaire with the participant’s real opinions. Reliability was also assessed through test-retest reproducibility which made some of the participants complete the questionnaire on more than one occasion. Some of the questions were asked in more than one way in order to assess internal consistency. Acceptability was determined when participants were asked how they found answering the questionnaire during the validity testing. This process helped identify main issues and formed the basis of the type of questions used in the study.



CHAPTER FOUR

4.0 RESULTS

A total of (105) employees comprising of 60 males (57.1%) and 45 females (42.9%) were involved in the study, which sought to find out about the existence of emergency/disaster preparedness plan at the headquarters of COCOBOD, referred to as the Cocoa House, which is one of the largest buildings in the business district of Accra, and to determine the degree of knowledge/awareness workers at Cocoa House had regarding emergency/disaster preparedness.

4.1 Demographic Characteristics

Demographic characteristics of the 105 employees who participated in this study are presented in Table 1 below

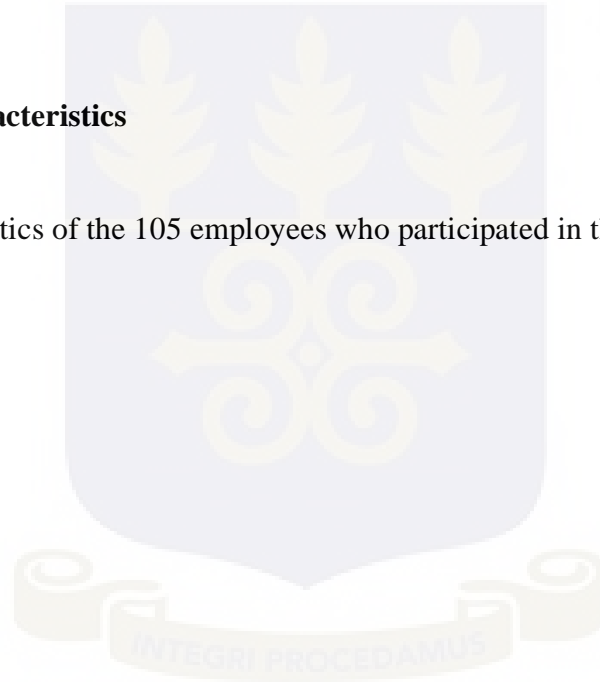


Table 1 DEMOGRAPHIC CHARACTERISTICS OF EMPLOYEES

		Number	(%)
Gender	Male	60	57.1
	Female	45	42.9
	Total	105	100.0
Age	20-30	31	29.5
	31-40	52	49.5
	41-50	13	12.4
	51-60	9	8.6
	Total	105	100.0
Years of work in current position	Less than 1 year	24	23.1
	1-5 years	41	39.4
	5-10 years	24	23.1
	10-15 years	9	8.7
	15-20 years	1	1.0
	More than 20 years	5	4.8
	Total	104	100.0
Highest level of education attained	Primary school	3	2.9
	Secondary school	6	5.8
	Certificate	6	5.8
	Diploma	30	28.8
	Degree	41	39.4
	Post graduate	12	11.5
	Other	6	5.8
Total	104	100.0	
Job position	Security staff	5	4.8
	Clerks	16	15.2
	Officers	62	59.0
	Senior Officers/Administrators	20	19.0
	Secretary	2	1.9
	Total	105	100.0

The age distribution of employees showed that majority were within the “youth bracket, with 52(49.5%) and 31(29.5%) aged 31-40 years and 20-30 years respectively. In contrast, fewer employees were aged 41 years and above, 13(12.4%) were within 41 -50years whereas 9(8.6%) were over 50 years. With regard to number of years in current position, 41(39.4%) had been in their current position for 1-5years. Only 9(8.7%) of employees had worked in their current position for 10-15 years and one respondent (1%) had been in current position for more than 15

years. Unsurprisingly, workers who had been in their position for longer periods were high up in management, which is common in government and quasi government institutions. With regard to educational background, 12(11.5%) had postgraduate certificates, 41(39%) had first degrees, 30(28.8%) had diploma and only a small percentage 6(5.8%) and 3(2.9%) had completed secondary or primary education certificate. The educational background of employees reflect their job positions as shown in Table 4.1 above. The distributions of job positions were as follows, 62(59.0%) were officers, 20(19.0) were senior officers, 16(15.2%) were clerks and 2(1.9%) secretaries.

Another important parameter included in Table 1 is job description. Majority, 62(59.0%) were within the officer rank, 20(19%) senior officers or administrators, 16(15.2%) clerks. Few, 5(4.8%) were security staff who happened to be those with primary or secondary education.

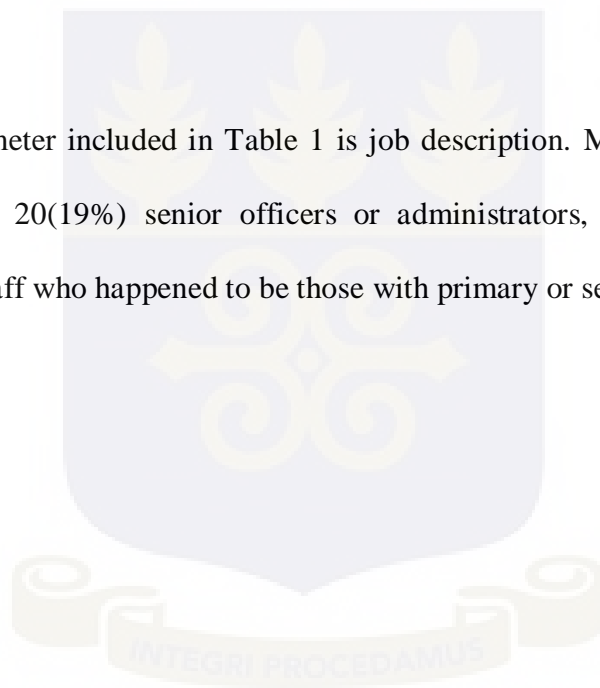


Table 2 DEMOGRAPHIC CHARACTERISTICS OF EMPLOYEES-*CONTINUED*

		Number	(%)
Department	Audit	12	11.4
	Account/Finance	33	31.4
	Human Resource	18	17.1
	legal Service	2	1.9
	Reconciliation	3	2.9
	Procurement	4	3.8
	Estate	4	3.8
	Information	4	3.8
	Technology Services		
	Shipping	7	6.7
	Special service	6	5.7
	General Service	6	5.7
	Scholarship	6	5.7
	Total	105	100.0
Floor of Cocoa Board Building respondent works	Basement	11	10.9
	First floor	4	4.0
	Second floor	11	10.9
	Third floor	7	6.9
	Fourth floor	4	4.0
	Fifth floor	44	43.6
	Sixth floor	20	19.8
	Total	101	100.0
Religious affiliation	Christianity	99	94.3
	Islam	6	5.7
	Total	105	100.0

Table 2 is a continuation of demographic characteristics of employees covering the department of work, floor at which employees work and their religious affiliations. Respondents were as follows; account/finance 33(31.4%), human resource management 18 (17.1%), audit 12(11.4%), shipping 7, (6.7%), special services, general services and scholarships 6(5.7%), procurement,

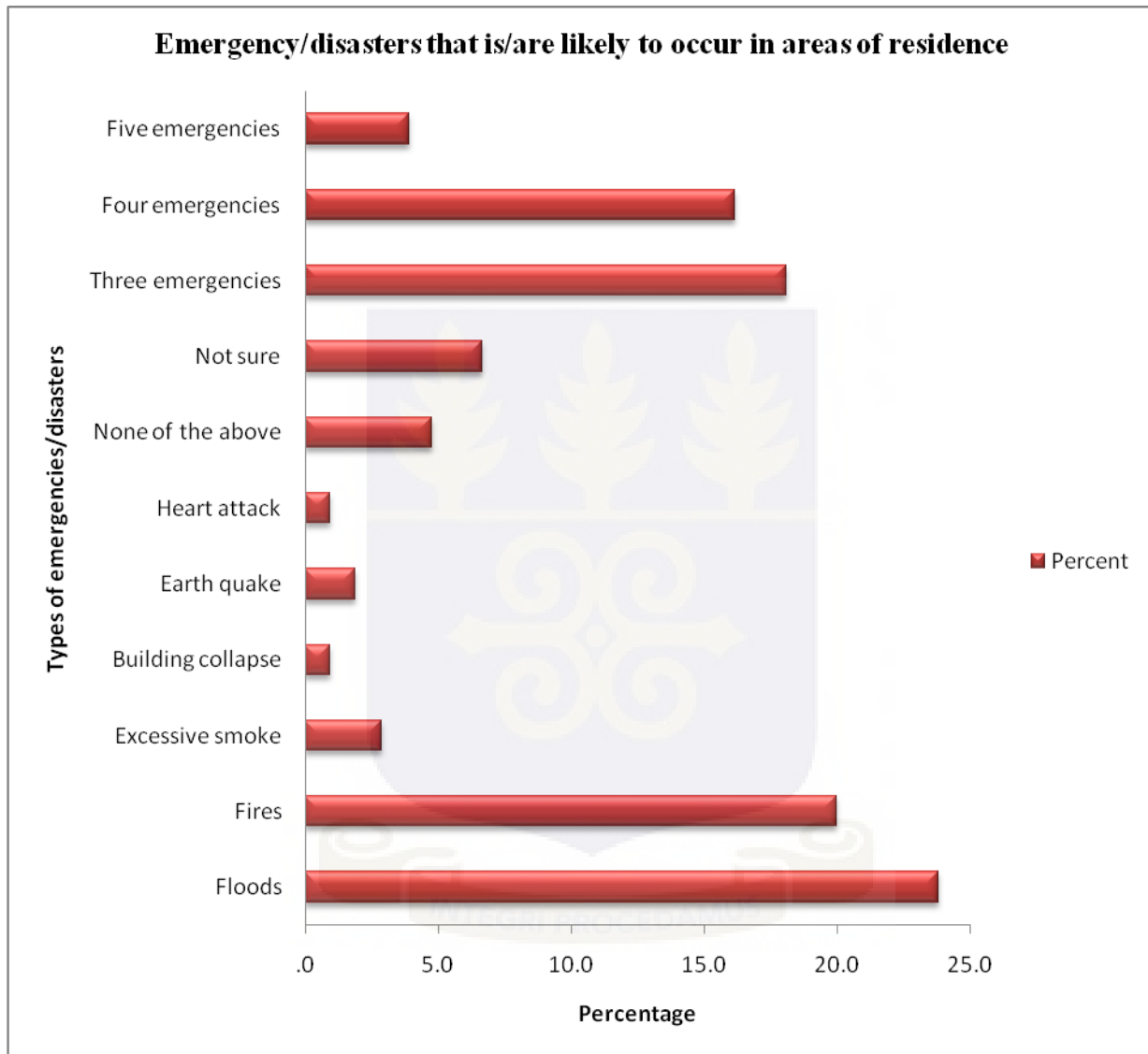
estate and information technology services 4(3.8%), reconciliation and legal services 3(2.9%) and 2(1.9%) respectively.

Another important parameter assessed was floor of building an employee worked. Distribution of workers by floor number was as follows; 20(8.9%) worked on the sixth floor. 44(43.6%) on fifth floor, 4(4%) of respondents on the fourth floor, 7(6.9%) of respondents on the third floor, 11 (10.9%) on the second floor and only 8(7.9%) worked on the ground floor. Part of the second and third floors are occupied by Cocoa Marketing Company who did not take part in the study. The results show that the middle floors of the block were densely populated by employees generally. With regard to religion, 99(94.3%) were Christians and only a small proportion 6(5.7%) were Muslims.

4.2 General awareness of previous emergencies/disasters in the vicinity of Cocoa House within the last five years.

Over 51.4% of respondents were aware of an emergency/disaster that had occurred either at Cocoa House or a nearby building/structure. However, a comparable number 51 (48.6%) said they were unaware of any previous emergencies that had occurred within their work area.

Figure 3 Respondents knowledge on different emergencies that could occur at Cocoa House and surrounding buildings



Floods and fires were the main likely emergencies/disasters workers said could affect Cocoa House and surrounding buildings. Twenty five (23.8%) mentioned floods and 21(20%) said fire outbreaks were likely to occur. Only a few, 2(1.9%) and 1(1%) respectively thought earthquakes and collapse of buildings were of major concern. When respondents were asked whether they

thought more than one emergency was likely to occur within a calendar year, 19(18.1%), 17(16.2%) and 4(3.9%) respectively said three, four and emergencies could occur within a year.

4.3 Features of the emergence/disaster response plan in Cocoa House.

This was aimed at bringing to the limelight the major components of the emergency/disaster plan available at Cocoa House.

Table 3: Employees/Worker responsibility and features of emergency response plan at Cocoa House

Categories	Responses	Number	(%)
Knowledge of role during emergency/disaster	Yes	68	65.4
	No	36	34.6
	Total	104	100.0
Presence of emergency exits in organization	Yes	86	83.5
	No	17	16.5
	Total	103	100.0
Presence of fire extinguishers at workplace	Yes	103	99.0
	No	1	1.0
	Total	104	100.0
Knowledge on how to use fire extinguishers	Yes	74	70.5
	No	31	29.5
	Total	105	100.0
Attendance to workshop/training related to emergency/disaster	Yes	48	45.7
	No	57	54.3
	Total	105	100.0

Majority, 68(65.4%) of employees claimed they had adequate knowledge on the “do’s” and “don’ts” during emergency situation. Eighty six (83.5%) of respondents said they were aware of all emergency exits at Cocoa House. Only 17(16.5%) respondents were unaware of these exits. With regard to awareness of availability of fire extinguishers at vantage points, nearly all respondents 103(99%) were aware of where they were placed. Employees were also assessed on the use of fire extinguishers of which the majority 74(70.5%) said yes. The results showed that more than half, 57(54.3%) of those interviewed had not attended any workshop on disaster/emergency management. Knowledge of employees on the components of the organization`s emergency plan was above average but this knowledge was not attained from training through workshops organized by the organization.

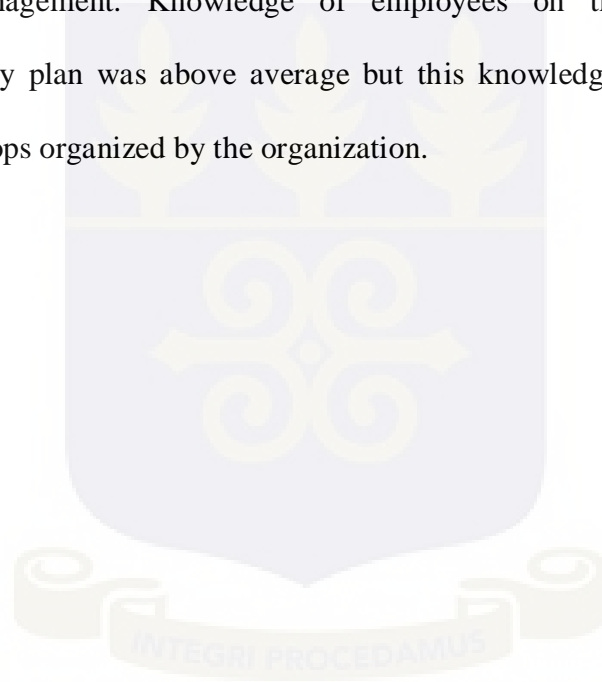


Figure 4 Rating of current knowledge regarding management of emergency/disaster situations

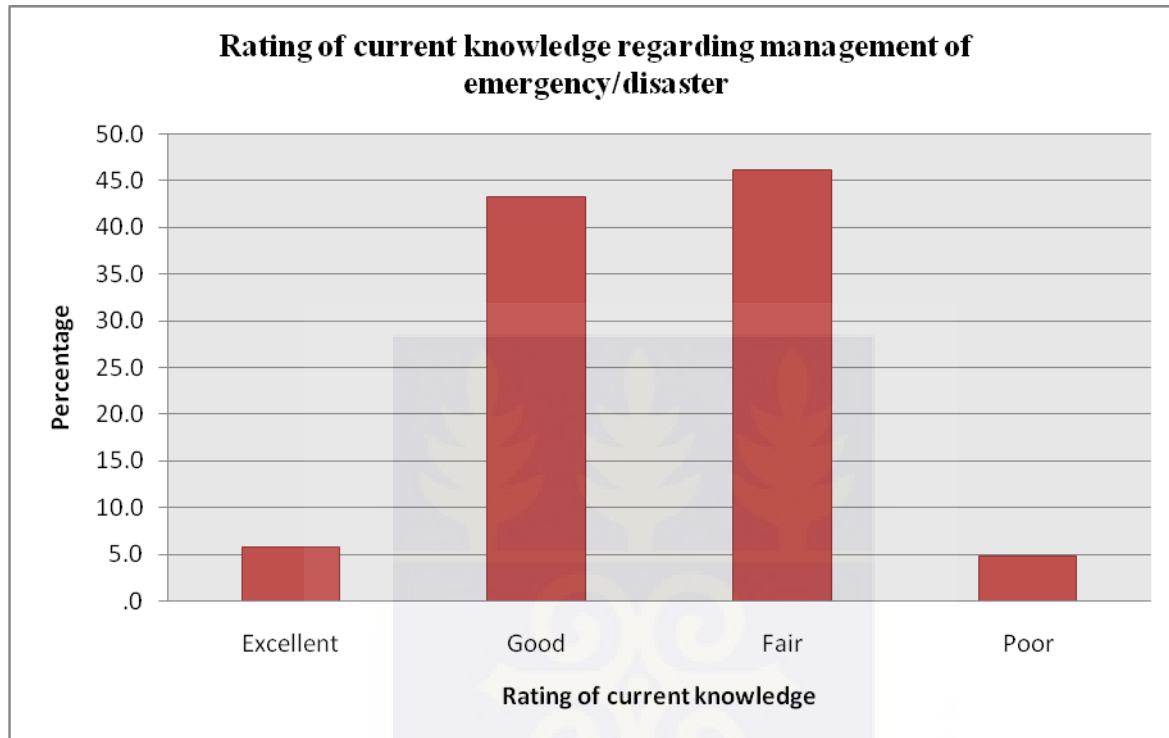


Figure 5 gives a graphical representation of the rating of current knowledge regarding the management of emergency/disaster situations by the organization. The graph shown here mimics a normal distribution curve or a bell shape. This shows that majority of the employees in this study indicates that their current knowledge was intermediate since majority of them being 48(46.2%) and 45(43.3%) respectively rated their knowledge as fair to good. Relatively small percentage, 6(5.8%) and 5(4.8%) respectively said that their current knowledge was excellent or poor. With a mean of 2.5 out of 4 points and a standard deviation of 0.683, the rating of employee knowledge on management of emergency/disaster was found to be intermediate or good. The results present an average level of knowledge on the management of emergency/disasters situations in the organization.

4.4 Knowledge of emergency planning, availability of personal protective equipments, emergency drills and training in emergency preparedness

This was aimed at identifying whether employees had been adequately sensitized and equipped with issues and logistics for effective disaster/emergency management situations.



Table 4 Knowledge of emergency planning, availability of personal protective equipments, emergency drills and training in emergency preparedness

		Number	(%)
Responses to whether emergency/disaster planning is only for administrative staff and head of departments	Yes	9	8.6
	No	81	77.1
	Do not know	15	14.3
	Total	105	100.0
Responses to whether there is a need to know emergency/disaster plans	Yes	100	95.2
	No	5	4.8
	Total	105	100.0
Responses to whether there is a provision of adequate personal protective equipments for staff	Yes	45	42.9
	No	37	35.2
	Do not know	23	21.9
	Total	105	100.0
Responses to whether organization conducts emergency/disaster drills or exercises	Yes	64	61.5
	No	12	11.5
	Do not know	28	26.9
Total	104	100.0	
Responses to whether organization conduct training/workshops to educate staff members on emergency/disaster	Yes	67	63.8
	No	14	13.3
	Do not know	24	22.9
	Total	105	100.0

Majority 81(77.1%) of respondents clearly knew emergency/disaster preparedness was not only for the administrative staff, whereas 15(14.3%) stated they did not know if emergency/disaster planning was exclusively for administrative staff and head of departments. Only a few 9(8.6%) thought emergency/disaster management planning was a preserve of the administrative staff.

In assessing the readiness of the organization in handling situations of emergency/disaster, employees were asked whether adequate personal protective equipments were provided. Forty five (42.9%) indicated that the provision was adequate. Thirty seven (35.2%) stated emergency equipments provided were inadequate for staff whereas 23(21.9%) said they were not certain whether it was adequate or not.

4.5 Workers' Participation in emergency drills, role of employees, knowledge on person to report emergency to and evacuation from building during emergencies

Drills and exercises which could be likened to simulation of emergency situations can be of great importance to preparedness for emergency/disasters. In view of this, respondents were asked how often these drills were conducted and their participation. Sixty four (61.5%) indicated such drills/exercises were conducted. Only 12(11.5%) said there were no drills conducted in the organization. It was rather alarming to note from the results that as many 28(26.9%) of the employees said they don't know whether the organization conducts the emergency/disaster drills and serves as an indicator that the emergency preparedness is incomplete. Finally on measures of preparedness of the organization in the management of emergency/disaster, employees were asked whether training/workshop programmes are conducted to educate staff members. As shown in table 5, two thirds, 67(63.8%) of the employees said that such programmes were

conducted. Fourteen (13.3%) did not partake in any training/workshop for disaster/emergency management

Table 5 Workers' Participation in emergency drills, role of employees, knowledge on person to report emergency to and evacuation from building during emergencies

		Number	(%)
Participation in emergency/disaster preparedness drills	Yes	48	47.1
	No	50	49.0
	Do not know	4	3.9
	Total	102	100.0
knowledge on what to do in the event of an emergency/disaster	Yes	79	75.2
	No	19	18.1
	Do not know	7	6.7
	Total	105	100.0
Participation in emergency preparedness drill in the last 12 months	Yes	32	31.4
	No	70	68.6
	Total	102	100.0
Identification of emergency assembly point in your organization	Yes	81	77.1
	No	19	18.1
	Do not know	5	4.8
	Total	105	100.0
Knowledge of the person to report an emergency incident to in the organization	Yes	71	67.6
	No	26	24.8
	Do not know	8	7.6

	Total	105	100.0
Knowledge on how to evacuate from building during an emergency/disaster	Yes	84	80.0
	No	19	18.1
	Do not know	2	1.9
	Total	105	100.0

An assessment of the processes that have been put in place to monitor and evaluate employees' preparedness in emergency situations was done as summarized in Table 5 above. Only 32(31.4%) compared to 50(49.0%) employees indicated they had participated in emergency preparedness drills in the past twelve (12) months. Majority, 81(77.1%) of workers interviewed were aware of designated assembly points in the event of an emergency at the Cocoa House. Similarly, the data attained from employees on identifying an emergency assembly point were given a positive response, knowledge on person to report an emergency event to and how to evacuate from the building which also attained 71(67.6%) and 84(80%) respectively. overall, it can be rightly mentioned that employee readiness for emergency/disaster situations was above average except for participation of emergency related drills which was less organized and patronized.

4.6 Demographic characteristics and knowledge about the management of emergency/disaster situations.

Demographic characteristics of employees in Cocoa House were tested against their current levels of knowledge on the management of disaster/emergency situations. The chi-square computations had 0% with expected count less than 5. With an alpha of 0.05 which is the reference point and a confidence interval of 95%, the p-values were compared to test for significance.

Table 6: Cross tabulation between current knowledge on management of emergency and demographic variables

Employees Age					
Rating of current knowledge regarding management of situations in emergency/disaster		Below 40 years	40 years or older	Total	p-value 0.561
	Adequate knowledge	39(76.5%)	12(23.5%)	51(100%)	
	Inadequate knowledge	43(81.1%)	10(18.9)	53(100%)	
Total		82(78.8%)	22(21.2)	104(100%)	
Respondents level of education					
Rating of current knowledge regarding management of situations in emergency/disaster		Below diploma level	Diploma level and above	Total	p-value 0.301
	Adequate knowledge	5(10%)	45(90)	50(100%)	
	Inadequate knowledge	9(17%)	44(83%)	53(100%)	
Total		14(13.6%)	89(86.4%)	103(100%)	
Respondents Job Position at Cocoa House					
Rating of current knowledge regarding management of situations in emergency/disaster		Below officer level	Officer level of above	Total	p-value 0.919
	Adequate knowledge	11(21.6%)	40(78.4%)	51(100%)	
	Inadequate knowledge	11(20.8%)	42(79.2%)	53(100%)	
Total		22(21.2%)	82(78.8%)	104(100%)	
Respondents Religious affiliation					

Rating of current knowledge regarding management o situations in emergency/disaster		Christianity	Islam	Total	p-value
	Adequate knowledge	49(96.1%)	2(3.9%)	51(100%)	
	Inadequate knowledge	49(92.5%)	4(7.5%)	53(100%)	
Total		98(94.2%)	6(5.8%)	104(100%)	
Floor of Cocoa House Building respondent works					
Rating of current knowledge regarding management of situations in emergency/disaster		Basement to third floor	Fourth floor or higher	Total	p-value
	Adequate knowledge	15(31.9%)	32(68.1%)	47(100%)	
	Inadequate knowledge	15(28.3%)	38(71.7%)	53(100%)	
Total		30(30.0%)	70(70.0%)	100(100%)	

Table 6 above shows that workers who had adequate knowledge on how to manage emergency is very high for respondents aged below 40years since more than one-third (78.8%) of them were within this range, whereas the remainder of the respondents (21.2%) were above 40 years. Out of this distribution, majority (76.5%) who were aged below 40 years had knowledge on how to manage disasters or emergency and 81.1% who had no knowledge were of ages below 40 years. It is also indicated with a p-value of 0.561 which is way above the reference point being 0.05 that there is no significant relationship between knowledge level and age among the workers.

Highest educational levels attained were grouped into two segments being, educational level below diploma and diploma level or above. Among the respondents sampled who had knowledge

on disaster management 10% had below diploma level education whereas 90% had either diploma level education or above. Whereas those with inadequate level of knowledge (53) recorded (17%) with educational level below diploma and 83% of those who had adequate knowledge about disaster management were with diploma educational level or above. There was no significant relationship between the level of knowledge on disaster or emergency preparedness and the level of education. It is therefore noted that educational level did not affect the level of knowledge on disaster management among the employees sampled.

Table 6 also shows a cross comparison of level of knowledge on disaster management among the employees and their job positions. Job positions were designated into two, being job position below the officer rank or officer rank or above. The results in Table 6 above presents that both employees with adequate and inadequate level of knowledge were almost equally distributed with regard to the job position designation employed. For both officers and below officers rank, the proportion of respondent with or without adequate knowledge on emergency preparedness were similar; 78.4% and 79.2% or 21.6% and 20.8% respectively. The job position of employees therefore had no effect on their knowledge concerning emergency or disaster management among employees at Cocoa House.

The floor of work of employees was compared against the level of knowledge on emergency/disaster management in the organization. Table 6 shows that the floors were grouped into two, being from the basement or ground floor to the third floor and from the fourth floor to the six floor. The designations used were considered the distance from the ground. The study found that the distribution of employees from the basement to the third floor did not differ much in terms of level of knowledge on emergency/disaster management as compared to those in floors from the fourth to the last. The results recorded 31.9% and 28.3% for adequate and

inadequate knowledge respectively for basement to third floor workers whereas 68.1% and 71.7% were attained from adequate and inadequate knowledge respectively for those who worked in the fourth floor or higher. The insignificant relationship between the variables was further proven using the chi-square computations and an attained p-value of 0.694 being way above alpha (0.05). Hence floor of occupation did not contribute to any difference in knowledge on emergency management among employees.

Finally, religion as a demographic factor was compared with the level of knowledge on emergency/disaster management. Results show that only Christians and Muslims were captured in the study and among them 51 out of the 104 respondents had adequate knowledge on emergency management whereas 53 did not. Statistically, no significant relationship was found between the level of knowledge on disaster/emergency management and the religion of employees in Cocoa House.

4.7 Emergency/Disaster plan at Cocoa House

The goal of emergency preparedness is to provide the basic steps for responses to emergencies that are threat to organization and the records needed for continuity of operations. Survival is getting through the immediate emergency. It also means maintaining the competitive edge and financial sufficiency of an organization immediately and after an emergency.

Preparedness process may lead to written records and information for emergency preparedness plan. Management accords the plan the necessary authority, structure, policies, procedures, and provide resources to equip the organization through an emergency.

The study established that Cocoa House has an emergency/disaster plan formulated in 2009 which outlines various responsibilities and authority. It contains most of the major components of standard emergency/disaster preparedness plan. The exception was that it does not include plans on terrorism safety. The outline of the emergency/disaster preparedness plan at Cocoa House is shown below.

4.7.1 Policy Statement

Emergency plan includes the policy statement in the formulation process. The policy is said to be communicated by the management of the organization, which clearly mandates the implementation of the emergency preparedness plan. It links goals and aims so that everybody in the organization knows what the plan intends to achieve.

4.7.2 Responsibilities and Authority

The policy statement describes wider responsibilities of key personnel. The plan list the positions deemed to activate the plan as well as the conditions those designated personnel authorized to activate the plan. The emergency intervention team and their roles and responsibilities are also stipulated in plan.

4.7.3 Hazard and risk assessment

Cocoa House emergency/disaster preparedness team are mandated by the authorities to have a bi-annual full scale assessment of the organization and its surrounding for new hazards and threats. The plan shows a detailed profile of the existing hazards.

4.7.4 Task Organization

Several external teams are involved in the plan. Each team and its responsibilities are included in the plan. These partners included in the emergency process, are Ghana Armed Forces, Ghana Police, Ghana Fire Service and National Disaster Management Organization, (NADMO).

4.7.5 Information Dissemination Procedures

The emergency/disaster plan details how employees should communicate in an event of an emergency. It explains employees should use a dial-up telephone, radio, cellular telephone, or any method of communication available at the time. It outlines the various authorities who are to be contacted in an event of an emergency/disaster.

4.7.6 Mitigation Checklist

The emergency/disaster plan listed special mitigation measures that included use authentic electrical cables, prohibition of smoking within the Cocoa House, yearly civil work evaluation of the structure, provision of fire extinguishers and presence of trained emergency/disaster personnel and continuous education of employees in emergency/disaster issues.

4.7.7 Preparedness Checklist

The emergency/disaster plan addresses unique emergencies and how they should be handled. It provides for both minor and major emergencies and include both Cocoa House and community-wide events. Cocoa House has a checklist that covers various emergencies/disasters and the necessary steps and knowledge to prepare against and control the emergency.

4.7.8 Response Checklist

Cocoa House emergency/disaster preparedness includes a response checklist for the various emergencies in the plan. The steps are sequential from the mitigation phase to the recovery phase for any emergency addressed. Sample of checklists included were the records recovery priority and record schedule lists, disaster recovery services, disaster recovery resources, and procedures, and equipment and supply lists. The plan shows when an emergency status are upgraded from one level to the next level.

4.7.9 Recovery Checklist

Recovery checklist at Cocoa House shows the continuing steps from the response level to the recovery level. The recovery checklist indicates brief statements concerning particular activities to be performed in the recovery level.

4.7.10 Training Programs

The emergency/disaster plan provides how employee training is planned and organized. It showed at minimum, response personnel should be trained annually. The training program is included in the plan and documents areas in which employees are to be trained and the frequency of the training to be given. It states that in the event of resources shortage to conduct training in-house, then training will be outsourced to professionals in the field.

4.7.11 Testing Procedures

The plan includes goals, aims, and detailed schedules for conducting drills or simulations. Cocoa House emergency/disaster plan also contains specific testing procedures that are done only by the partner agencies.

4.7.12 Damage Assessment

Plans include guidelines for evaluating damage and channeling it to the right authority. Damage evaluation included, detailing a team to evaluate the damage immediately after an emergency. It shows procedure to document damage to institution's assets, recording and reporting the results to the right authority.

4.7.13 Communications Directory

The emergency plan includes information the preparedness team gather during development of the plan. It also includes an appendix of information containing various addresses (including e-mail) and names (individual and company), telephone numbers, as well as inventories. This list was separate because the information changes frequently, and is updated as and when necessary.

4.7.14 Succession of Authority

The plan also has succession plan in it. When organization loses one or more of its members, the remaining members would be assigned temporary authority. The plan includes a concise and clear statement of line of authority and composition of emergency/disaster committee, even when main officers are absent.

4.7.15 Review and Update the Plan

The plan shows when and how the preparedness and response teams should review and update the plan. It spells out how to integrate new things and information can be added into the plan. Changes made to the plan are communicated to authorities and employees. These changes are documented showing the description of the change. This documentation gives the historical development from its inception to the current period.

4.7.16 Test the Plan

Organization's testing or exercising an emergency preparedness plan is very crucial. Its purpose serves to ensure that the plan is adequately functional and to train all employees.

The plan indicates that the organization must provide annual drills and exercises/simulations. It mandates the coordinator to change the type of drills depending on the type of emergencies they simulate towards. It also permits the coordinator to plan a tabletop exercise, functional exercise and full-scale exercise as and when necessary.

4.8 Key informant semi-structured interview results

Key informants semi-structure interview information gathered from four (4) persons instead the proposed ten (10) persons due to their heavy workload and external schedule. The interview on emergency or disaster preparedness in Cocoa House identified five themes.

4.8.1 Emergency/Disaster policy at Cocoa House

All the four key informants corroborated to the existence of emergency/disaster policies that governed preparedness at Cocoa House. There was also disaster risk and vulnerability profile that outlined the organization's main hazards and threats, but the hazards were not ranked according to calculated risk. The latest vulnerability assessment was conducted in 2010 and was conducted by Ghana fire service. The policy called for a vibrant emergency preparedness committee for effective and efficient emergency response and recovery at all levels of the organization. The emergency preparedness committee also mandated by the policy to prepare and coordinate all emergencies by making right policy decisions, gathering resources, and providing need support to organization and communities when emergencies occurs. One of the key informants said "the policy contains splendid ideas and rules but you know in our part of the world nobody respects policies". He said the policy has many plans but the plan on fire prevention is the only one given attention.

4.8.2 Hazard/Risk/Vulnerability assessment

Information gathered from the interviews with key informants show that employees were living in fear and anxiety. This is because they can personally attest to their vulnerability considering the location of Cocoa House and its surroundings. "After the 2010 vulnerability report, no such thing has been done in this organization" said an informant.

A vulnerability/Risk assessment identifies hazards and threats, defines their possible impact on a community, organization, or property and provision of information that is important for emergency mitigation, preparedness, response and recovery. This is not given the needed attention that could promote sustainable development of the organization.

It was clearly made known that there was no vulnerability assessment committee. It was not also clear how soon vulnerability assessment will be done within the organization. Furthermore, the previous risk profiles did not show what factors made the organization vulnerable, and the possible impacts of the hazards and threats.

Some informants believed emergencies and disasters were unpredictable and uncommon in Cocoa House. This may account for non-existence of the vulnerability/risk assessment committee and the lack of risk and hazard profiling for the last five years.

4.8.3 Implementation of emergency/disaster preparedness plan

The emergency/disaster plan is just one of the aspect of the emergency/disaster planning process. The existence of an emergency/disaster plan does not guarantee that the organization is prepared. It does also mean that the emergency plan is anything more than a paper on the shelves that is dusted off when an emergency/disaster occurs (FEMA, 2010; Bennett *et al*, 2007). However, it does not mean the plan is less essential in preparing for emergencies and disasters.

Ghana Cocoa Board is responding positively to the call by the national policy on organizations to have emergency preparedness plan. Cocoa House has emergency/disaster preparedness unit that is responsible for emergency preparedness activities.

4.8.4 Monitoring and Evaluation of employee's emergency/disaster preparedness

The emergency/disaster preparedness process is not totally complete without the means of monitoring and evaluation. Monitoring and evaluation helps emergency planners to track

progress towards achievement of the goals and objectives by analyzing root causes of defects and defining corrective measures.

Most of the key informant did not know about drills and simulation exercises were conducted at Cocoa House. The sole informant who knew about it said it has never been given prominence and recognition it deserve. This is because, simulation exercises and drills were on a small scale that it did not attract attention of workers/employees. The workers or employees had a negative attitude towards drills and exercises and so they knew little about the conduct of drills and exercise

4.8.5 Emergency/Disaster Training and Education

Most of the informants who were interviewed had not attended any training/workshop in preparedness of emergencies and disasters. None of them could list any topics covered in the training/workshops. Some of the informants claim they learnt about emergencies/disaster as modules in the various universities. “There is no even new employee entry orientation on emergency/disaster preparedness”, said an informant. “Much needs to be done concerning training and educating staff at Cocoa House on emergency and disaster” said another informant. The Cocoa House might have an emergency/disaster plan, but without training/workshop and education, the employees who are supposed to make use of the emergency/disaster plan may lack preparedness skill for emergencies.

CHAPTER FIVE

5.0 DISCUSSIONS

This study was carried out to evaluate the emergency/disaster preparedness plan and its implementation at Cocoa House, a six storey high building and head office of Ghana Cocoa Board. Furthermore, knowledge of employees on emergency preparedness was also evaluated.

Strategic emergency/disaster preparedness plan is required to ensure that common goals and common practices are pursued within and across organizations (WHO, 2006). Emergency/disaster Plan is also required in order to ensure effective coordination of activities thereby guaranteeing good results.

5.1 Emergency/Disaster Plan in Cocoa House

In 1996, Act 517 passed by the parliament of Ghana mandated public institutions and organizations such as Ghana Cocoa Board to draw up an emergency/disaster plan consistent with that for large institutions, or organization. This led to the formulation of an emergency preparedness plan at the COCOBOD in 2009, which is currently used by the organization.

In this study, all key informants who were persons with knowledge on emergency preparedness confirmed the existence of an emergency/disaster plan in the organization which is also adopted for use at the Cocoa House. The emergency/disaster plan contains almost all major components of a standard disaster plan as previously described in the results above. Nowadays, terrorism has become an important component in emergency/disaster plans and therefore there was the need to include preparedness towards a terror attack in the current plan.

5.2 Emergency/Disaster preparedness plan implementation

Cocoa House had a disaster unit which oversaw the day to day management of emergency preparedness and safety. However, there was no emergency/disaster committee in place. For an effective implementation of disaster management plans, it has been suggested that large organizations need to form emergency committees to oversee the effective implementation of emergency/disaster plan (Sutton, 2006). It is possible that management have misconstrued the emergency department for a disaster committee, which are supposed to be two separate entities in any organization. Several studies (WHO, 2009; Collins *et al*, 2008; Jerolleman *et al* 2012; Koehler, 2003) have suggested that that many organization in one way or the other tend to focus on one or two hazards and ignore other equally important threats and hazards. This assertion was corroborated in the current study where emergency preparedness was focused on smoke and fire prevention or containment.

As part of effective implementation of emergency/disaster plan, it is recommended that employees are occasionally taken through workshops and disaster management simulations, including emergency/disaster exercises and drills. The emergency/disaster preparedness plan at Cocoa House has such a provision. However, it is either infrequent or employee participation in these workshops/simulations is usually low with less than 50% participation. This situation does not auger well for the organization's emergency/disaster preparedness effort. There is the need to enforce mandatory participation of employees in emergency/disaster training and workshops. Surprisingly, almost all respondents knew the immediate action to take in an event of an emergency. This could probably be due to employees receiving information on emergency/disaster situations from other sources such as television, radio or the internet.

5.3 Employees' knowledge on emergency/disaster preparedness.

Studies have shown that most employees were usually aware of multiple disasters that could occur and therefore affect them in a defined period. However, floods and fire outbreaks are the most common disasters that employees perceive as likely to occur within their work place or its immediate surroundings. This is consistent with findings in this study where employees perceived fire or flood as the most likely emergency/disaster that could happen. In general, fires and floods have been the most persistent disasters in Ghana, as well as in Accra, which have resulted in loss of lives and property. In fact, in mid-July, there was a fire outbreak at the Abuja market just adjacent to the Cocoa House.

Majority 74(70.5%) of employees said they had knowledge in the use of fire extinguishers. This seems to suggest that employees would be able to combat at least small fire outbreaks thereby preventing loss of lives and property.

Effective emergency/disaster communication is an important component of disaster management. It is absolutely important for employees in any organization to understand the channel of communication in the case of an emergency. In this study, 71(67.6%) of respondents said they had knowledge on how to report an emergency and who to report to. Effective communication between emergency first responders and employees in an organization is critical and has always yielded satisfactory results when done right during emergency situations. Miscommunication among employees and between employees and external disaster management agencies have resulted in destruction of lives and properties due to unnecessary delays before help is provided by the expert external agency. With regards to Cocoa House there is ultimate hope that employees would use their emergency communication ability to get information across

to the right authorities, individuals and organizations concerned on time during emergencies. Majority of employees 84(80%) in Cocoa House said they knew how to evacuate from the building in case of an emergency. Experience demonstrates that people who are aware of evacuation procedures and who engage in escape drills are more successful in safely escaping buildings than are those who are unfamiliar with the procedures, (Palen et al, 2007). It is very crucial during and after emergency or disaster to know the number employees who were at work and the number of employees that are still present. The presence of adequate, well designed emergency/disaster exit routes in buildings is a modern mitigation measure to facilitate evacuation of victims who unfortunately find themselves trapped during emergency/disaster. Employees' awareness of the presence of the exit routes coupled with knowledge on how to use these exit routes is a good measure that they would be able to evacuate in times of emergency/disasters. Fortunately in this study majority of employees were aware of emergency exit points. It is therefore not surprising that 81(77.1%) were also able to identify an emergency assembly point.

The fact that most employees knew their roles and responsibilities during an emergency would suggest that workers were highly aware of the emergency/disaster plan. However, it has been reported that knowledge in itself does not always translate to action (CDC, 2013; Uddin *et al*, 2008). The fact that more than 50% of employees do not participate in emergency/disaster preparedness drills and simulation exercise could mean that care must be taken not to substitute knowledge for practicality. During emergencies/disasters some key people must lead in management. In situations where roles and responsibilities are not designated to individuals, there is a likelihood of confusion leading to delays and possible loss of lives and properties. .

Overall, there is an emergency/disaster plan that governs emergency and disaster preparedness at Cocoa House. Also, employees have good if not excellent knowledge on emergency/disaster preparedness. There is an existing emergency/disaster risk profile that showed the organization's main hazards but did not include terrorism.



CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

This study found the existence of an emergency/disaster preparedness plan at Cocoa House. However, an emergency/disaster committee usually responsible for making recommendations as well as overseeing implementation of the plan had not been duly constituted.

In general, employee's perception of knowledge on emergency/disaster preparedness was very good. However, employees' participation in drills and simulation exercises on emergency/disaster preparedness conducted was low, and therefore employees' perception of their knowledge emergency/disaster preparedness cannot wholly be attributed to the organization's effort but individual effort to be abreast with knowledge on emergency/disaster due to the rampant fire outbreaks and floods in Ghana.

The organization has adequate emergency/disaster resources such as fire extinguishers, personal protective equipments, and communication gadgets. However, it lacked trained emergency personnel to use such equipment and avenues is not well planned to effectiveness.

6.2 Recommendations

The study recommends the following based on the findings made;

1. A review of the disaster/emergency policy of the organization in a more proactive manner. This can be achieved through proper mitigation practices through the setting up of a well composed emergency/disaster management committee. This committee should be composed of at least one member from each department in the organization and should be headed by an emergency/disaster management experts or a safety expert.
2. Workers should be well equipped materially and in knowledge on the best practice in emergency/disaster management and should be trained by experts in the field. Drills and simulation exercises should be used to train employees to get them fully prepared for emergencies. Simulation should be well planned to mimic real disaster situations. This will be a good means of measure the actual preparedness of employees for emergency/disasters.
3. The organization should make it a point to have their building well evaluated in terms of strength by civil engineering experts such that any hitch or loophole of weakness can be worked on and expert recommendations made and carried out to the latter. This will ensure the optimum safety of employees and reduce any disaster costs.
4. Employees should be given induction orientation in emergency/disaster preparedness when employed to signal the importance of emergency preparedness in Cocoa House

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APPENDIX I

DISASTER PLAN CHECKLIST

Name of Investigator: Ninkabs Ninsaw Kpau

Date:

Introduction: A disaster plan is an agreed set of arrangements for responding to and recovering from disasters and it describes responsibilities, management structures, strategies, and resources for preparing, responding to, and recovering from disasters (WHO). Organizations should have a well-documented and tested disaster plan in order to respond in an efficient and effective way.

Without a disaster plan, institutions may fail to respond effectively and efficiently and there may be improper use of resources. There may also be many points of command, with staff doing their work without effectively contributing to the response.

This checklist has been designed to assess the disaster plan of Ghana Cocoa Board. It is based on the recommended components described by nonprofit coordinating committee of New York.

Instructions: This checklist is for assessing the disaster plan of Ghana Cocoa Board. Indicate with an (X) in the relevant column showing whether the component is available or not.

PLANNING TEAM	YES	NO
Planning Team established?	<input type="checkbox"/>	<input type="checkbox"/>
Planning Team Schedule Established?	<input type="checkbox"/>	<input type="checkbox"/>
Budget Developed?	<input type="checkbox"/>	<input type="checkbox"/>

INTERNAL PLANS AND POLICIES REVIEW

Evacuation Plan?	<input type="checkbox"/>	<input type="checkbox"/>
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Fire Protection Plan?	<input type="checkbox"/>	<input type="checkbox"/>
Safety and Health Program?	<input type="checkbox"/>	<input type="checkbox"/>
Security Procedures?	<input type="checkbox"/>	<input type="checkbox"/>
Insurance Programs?	<input type="checkbox"/>	<input type="checkbox"/>
Employee Manual?	<input type="checkbox"/>	<input type="checkbox"/>

CODES AND REGULATIONS REVIEW

Fire Codes?	<input type="checkbox"/>	<input type="checkbox"/>
Electrical Codes?	<input type="checkbox"/>	<input type="checkbox"/>
OSHA Regulations?	<input type="checkbox"/>	<input type="checkbox"/>

CRITICAL SERVICES AND OPERATIONS REVIEW

Services provided by your company identified?	<input type="checkbox"/>	<input type="checkbox"/>
Operations vital to the continued functioning of the facility?	<input type="checkbox"/>	<input type="checkbox"/>
Equipment vital to the continued functioning of the facility?	<input type="checkbox"/>	<input type="checkbox"/>
Personnel vital to the continued functioning of the facility?	<input type="checkbox"/>	<input type="checkbox"/>
Services provided by vendors identified?	<input type="checkbox"/>	<input type="checkbox"/>

INTERNAL RESOURCES AND CAPABILITIES REVIEW

Personnel

Fire Warden(s)?	<input type="checkbox"/>	<input type="checkbox"/>
CPR Training?	<input type="checkbox"/>	<input type="checkbox"/>
First Aid Training?	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/> <input type="checkbox"/>		
Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>
Communications?	<input type="checkbox"/>	<input type="checkbox"/>
First Aid Supplies?	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Power?	<input type="checkbox"/>	<input type="checkbox"/>

Backup Systems (Arranged with other facilities)

Payroll?	<input type="checkbox"/>	<input type="checkbox"/>
Communications?	<input type="checkbox"/>	<input type="checkbox"/>
Customer Services?	<input type="checkbox"/>	<input type="checkbox"/>
Computer Support?	<input type="checkbox"/>	<input type="checkbox"/>

EXTERNAL RESOURCES REVIEW

YES NO

Emergency Management Office?	<input type="checkbox"/>	<input type="checkbox"/>
Fire Department?	<input type="checkbox"/>	<input type="checkbox"/>
Police Department?	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Medical Services?	<input type="checkbox"/>	<input type="checkbox"/>
Telephone Companies?	<input type="checkbox"/>	<input type="checkbox"/>
Electrical Utility?	<input type="checkbox"/>	<input type="checkbox"/>
Insurance Policy Review with Broker?	<input type="checkbox"/>	<input type="checkbox"/>

PLAN DEVELOPMENT

Plan Purpose?	<input type="checkbox"/>	<input type="checkbox"/>
Responsibilities of key personnel?	<input type="checkbox"/>	<input type="checkbox"/>
The types of emergencies that could occur?	<input type="checkbox"/>	<input type="checkbox"/>
Where response operations will be managed?	<input type="checkbox"/>	<input type="checkbox"/>

EMERGENCY MANAGEMENT ELEMENTS IN PLACE

Direction and Control?	<input type="checkbox"/>	<input type="checkbox"/>
Communications?	<input type="checkbox"/>	<input type="checkbox"/>
Life Safety?	<input type="checkbox"/>	<input type="checkbox"/>
Property Protection?	<input type="checkbox"/>	<input type="checkbox"/>
Community Outreach?	<input type="checkbox"/>	<input type="checkbox"/>
Recovery and Restoration?	<input type="checkbox"/>	<input type="checkbox"/>

EMERGENCY RESPONSE PROCEDURES ADDRESSED

- Assessing the situation?
- Protecting employees, customers, visitors, equipment, vital records, and other assets?
- Getting the business back up and running?

PROCEDURES FOR BOMB THREATS ADDRESSED

- Warning Employees and Customers?
- Communicating with personnel and community responders?
- Conducting an evacuation and account for all persons in the facility?
- Shutting down operations?
- Protecting vital records?
- Restoring operations?

SUPPORT DOCUMENTS AVAILABLE

YES NO

- Emergency Call Lists –People responding, their responsibilities and phone numbers?
- Employee Lists - Employees with their home phone numbers?
- Resource Lists – Equipment and supplies that could be needed in an emergency?

DEVELOPMENT PROCESS

YES NO

- Task list identifying persons, tasks and timetables?
- Needs of disabled persons and non-English speaking personnel?
- Training schedule for employees established?

PLAN DISTRIBUTION

- Copies distributed to employees?

Current date and revision number on plan?

PLAN IMPLEMENTATION

All personnel trained in procedures?

Orientation and Education Sessions?

Walk Through Drills?

Evacuation Drills?

Plan tested to assure that employees know what to do?

EMPLOYEE TRAINING ADDRESSES:

Individual roles and responsibilities?

Information about threats, hazards, and protective actions?

Notification, warning and communication procedures?

Means for locating family members in an emergency?

Emergency response procedures?

Evacuation, shelter and accountability procedures?

Location and use of common emergency equipment?

PLAN EVALUATION AND MODIFICATION

A formal audit of the plan conducted at least once a year?

Does the plan reflect lessons learned from drills and actual events?

Are photographs and other records of facility assets up to date?

Are the names, titles and phone numbers in the plan current?

APPENDIX II

INFORMED CONSENT: Non- Key Informants

Institutional Affiliation

Department of Biological Environmental and Occupational Health Sciences (BEOHS): School of Public Health, College of Health Sciences, University of Ghana-Legon.

Background

Dear Colleague, my name is Ninkabs Ninsaw Kpau and I am a student at University of Ghana, School of Public Health. In partial fulfilment of my Master's Degree in Occupational Hygiene, I am conducting a research on knowledge of emergency/disaster preparedness and intervention among employees of Ghana Cocoa Board Head Office.

I would be very grateful if you could be a participant in this study. If you agree, you are kindly requested to complete the questionnaire below as accurately and completely as possible. The objective of the study is to assess your knowledge with regards to the management of emergencies and disasters such as fire, flood, smoke and earthquake. The study has been approved by the management of Ghana Cocoa Board and Ghana Health Services ethics committee.

The information you give will be kept confidential and your name shall not appear on the questionnaire. As a participant, the study is voluntary and you are under no obligation to fill the questionnaire. You can also drop-out of the study at any time if you do not feel comfortable.

The risks to you by participating in this project are minimal. However, it is possible you may be frustrated by the questions asked or the time needed to participate.

If you have any questions about this project or your participation, you can email me via (fredatech@yahoo.com) or call on 0244028108. You may also contact Madam Hannah Frimpong, GHS-ERC administrator on issues of ethics, on 0243235225 or 0507041223.

I hereby consent to take part in the research on Emergency/Disaster preparedness and intervention among employees of Ghana Cocoa Board. The study investigator has explained to me the nature of the study and I understand that participation is voluntary and I can pull out of the study if I wish to do so. I am aware that there is no direct material or financial benefit to me accruing from participation in this study. I understand that I will not lose my current privileges by participating in this study. I understand that the information I give is confidential and my name shall not appear on the questionnaire. I have had an opportunity to ask questions and I fully understand the objectives of the study. I consent voluntarily to participation.

Name of Participant (Please print):

Signature of Participant:

Date:

I have explained the nature of the study to the participant and have witnessed the signing of the consent form by the participant. I accept that the participant can pull out of the study if they wish to do so. Name of Researcher (Please print):

Signature of Researcher:

Date:

QUESTIONNAIRES- Non Key Informants

Code:

Section 1: Demographics

1. What is your gender? Male Female

2. Age at next birthday. Below 20 20-30 31-40 41-50 51-60
 61+

3. How many years have you worked in your current position? Less than 1 year 1-5 years 5-10 years 10-15 years 15-20 years More than 20 years

4. What is the highest level of education that you have completed? Primary school
 Secondary school Certificate Diploma Undergraduate Degree
 Postgraduate Degree Other (specify).....

5. Job position:

6. Department:

7. On which floor of Ghana Cocoa Board Head Office building do you work?
.....

8. Religion: Christianity Islam Buddhist Hindus
 Africanism

Section 2: Emergency/Disaster knowledge and awareness

9. Are you aware of any disasters that have occurred in your area in the past 5 years?
 Yes No.

10. To your knowledge, which of the following emergencies is/are likely to occur in your area?

(Please check all that is applicable- more than one answer if applicable) Floods Fires

Excessive smoke Building collapse Earth quake Heart attack

None of the above Not sure other (specify).....

11. Do you know your role during emergency/disasters?

Yes No.

12. Are there emergency exits in your organization?

Yes No

13. Are there fire extinguishers at the workplace?

Yes No.

14. Do you know how to use a fire extinguisher?

Yes No.

15. Have you attended any workshops/training related to emergency/disaster?

Yes No

16. How would you rate your current knowledge regarding the management of situations in

emergency/disaster? Excellent Good Fair Poor

17. Emergency/Disaster planning is only for administrative staff and heads of departments.

Yes No Don't know

18. Do you need to know about emergency/disaster plans?

Yes No Don't know

19. Does your organization provides adequate personal protective equipment for staff members?

Yes No Don't know

20. Does your organization conduct emergency/disaster drills or exercises?

Yes No Don't know

21. Does the organization conduct training/workshops to educate staff members on emergency/disasters?

Yes No Don't know

21. Have you participated in emergency/disaster preparedness drills? Yes No

23. Do you know what to do in the event of an emergency/disaster?

Yes No Don't know

24. Have you participated in emergency preparedness drill in the last 12 months?

Yes No Don't know

25. Have you already identified emergency assembly point in your organization?

Yes No

26. Do you know the person to report an emergency incident to in your organization?

Yes

No

27. Do you know how to evacuate yourself during an emergency/disaster?

Yes

No

Thank you



APPENDIX III

KEY INFORMANTS INFORMED CONSENT

Background

Dear Sir/Madam, my name is Ninkabs Ninsaw Kpau and I am a student at University of Ghana, School of Public Health. In partial fulfilment of my Master's Degree in Occupational Hygiene, I am conducting a research on knowledge of emergency/disaster preparedness and intervention among employees of Ghana Cocoa Board Head Office.

I would be grateful if you could be a participant in this study. If you agree, you are kindly requested to complete the questionnaire below as accurately and completely as possible. The objective of the study is to assess your knowledge with regards to the management of emergencies and disasters such as floods, fire, smoke, and earthquake. The study has been approved by the management of Ghana Cocoa Board and Ghana Health Services ethics committee.

The information you give will be kept confidential and your name shall not appear on the questionnaire. As a participant, the study is voluntary and you are under no obligation to fill the questionnaire. You can also withdraw from the study at any time if you do not feel comfortable.

The risks to you by participating in this project are minimal. However, it is possible you may be frustrated by the questions asked or the time needed to participate.

If you have any questions about this project or your participation, you can email me via (fredatech@yahoo.com) or call me on 0244028108. You may also contact Madam Hannah Frimpong, GHS-ERC administrator on issues of ethics, on 0243235225 or 0507041223.

I hereby consent to taking part in the research on Emergency/Disaster preparedness among employees of Ghana Cocoa Board Head Office. The study investigator has explained to me the nature of the study and I understand that participation is voluntary and I can pull out of the study if I wish to do so. I am aware that there is no direct material or financial benefit to me accruing from participation in this study. I understand that I will not lose my current privileges by participating in this study. I understand that the information I give is confidential and that my name shall not appear on the questionnaire. I have had an opportunity to ask questions and I fully understand the objectives of the study. I consent voluntarily to participation.

Name of Participant (Please print):

Signature of Participant:

Date:

I have explained the nature of the study to the participant and have witnessed the signing of the consent form by the participant. I accept that the participant can pull out of the study if they wish to do so. Name of Researcher (Please print):

Signature of Researcher:

Date:

KEY INFORMANTS QUESTIONNAIRES

Code:

Section 1: Demographics

1. What is your gender? Male Female

2. Age at next birthday. Below 20 20-30 31-40 41-50 51-60
 61+

3. How many years have you worked in your current position? Less than 1 year 1-5 years 5-10 years 10-15 years 15-20 years More than 20 years

4. What is the highest level of education that you have completed? Primary school
 Secondary school Certificate Diploma Undergraduate Degree
 Postgraduate Degree Other (specify).....

5. Job position:

6. Department:

7. Religion: Christianity Islam Buddhist Hindis
 Africanism

Knowledge on emergency preparedness and Intervention (Part II)

8. What is Emergency/Disaster Preparedness?
.....
.....

9. What is your current background knowledge about disaster preparedness, response, recovery and mitigation? None Basic intermediate Advance

10. Do your organization have an emergency preparedness action plan?

Yes No Don't know

11. Has your organization's emergency preparedness plan been updated in the last one year?

Yes No Don't know

12. Has drill been conducted in your institution in the last 12 months?

Yes No Don't know

13. Has your organization had emergency preparedness drill with first responders in the last

12months? Yes No Don't know

14. Shelter-in-place refers to?

.....

15. Would you be willing to offer your skills in a disaster situation?

Yes No

16. Are you interested in helping to create and participate in your organization's emergency plans?

Yes No

17. Does your organization have specific guidelines to help evacuate persons with disabilities during disaster?

Yes No

18. What type of special training do you receive? (Please select all that apply.)

AED training CPR and/or first aid training

Crisis management Fire suppression

Hazardous materials response and containment

Training in assisting persons with disabilities during a disaster

Training in dealing with hazardous materials

Training in keep others calm in a crisis None of the above

Thank You

APPENDIX IV

Key Informant Interview Guide

Name of Interviewer: Ninkabs Ninsaw Kpau

Date of Interview:

Introduction: My name is Ninkabs Ninsaw Kpau and I am studying for a Master's Degree in Occupational Hygiene at the University of Ghana, School of Public Health. I am carrying out a research on emergency/disaster preparedness among employees of Ghana Cocoa Board Head Office. This is in partial fulfilment of the requirements of the degree. I would like to ask you some questions on emergency/disaster preparedness. The information you give will be instrumental in the strengthening disaster preparedness not only at Cocoa House but also at other Ghana Cocoa Board subsidiaries.

Notes for Interviewer: This is an interview guideline and the questions provide the general information required for the study. The guide contains six sections: General information; policy issues; vulnerability assessment; emergency/disaster planning; training and education; and monitoring and evaluation.

Section I: General Information

1. What is your current position at the organization?
2. How long have you been working in that position?
3. Are you a member of the emergency/disaster preparedness committee? (Ask about their role in the committee)

4. Have you had any direct personal or professional experience of an emergency or disaster (ask interviewee to describe their experience, what were their concerns)

Section II: Disaster Preparedness Policy

5. What legislation governs disaster preparedness at Ghana Cocoa Board Head Office? (Probe: these may be in the form of Acts (Disaster management Act)). If there is legislation then who formulates it and is there a process of consultation of key stakeholder. If no legislation find out whether interviewee thinks in terms of the importance of legislation.)

6. What does this legislation say about Disaster Preparedness in the public institution? (Probe: find the main issues in the legislation and find out if there are any requirements that organization should have preparedness plans; find out what the interviewee thinks about the legislation; does interviewee place any importance to legislation regarding disasters).

7. Do you have any comments on?

i) The organization's policy on Emergency/Disaster preparedness

ii) The country's emergency/disaster preparedness policy.

(Probe: is the policy adequate in their view and are there any changes that need to be done, if the country or organization does not have what interviewee think should be done).

Section III: Vulnerability Assessment.

8. Is there an existing disaster risk profile that shows the potential hazards that may affect the organization? (Probe: Find out whether there has been any vulnerability assessments done and if none does the interviewee think it is important to conduct the vulnerability assessment).

9. If there is an existing disaster risk profile, what processes (or tools) were used to come up with this profile?(Probe: find out how the vulnerability assessment was done and if possible get a copy of the tools used for this process)

10. Do you have any further comments on the organization's vulnerability assessment?

Section IV: Organization Emergency/Disaster plan

11. Who is involved in disaster preparedness planning at the organization? (Probe: find out if there is a multidisciplinary disaster preparedness committee.)

12. Does your organization have a disaster plan? (If yes ask for a copy and indicate that the plan will be reviewed using a checklist to find out whether the main components have been included; if no ask whether they think it is important to have one).

13. Who was involved in the formulation of the disaster plan? (Probe: find out if the employees were consulted in the formulation process of the plan)

14. What hazards are covered in this plan? (Probe: Find out whether this plan uses the WHO "all hazard" policy or there are different plans for different hazards).

15. Do you have any further comments on the emergency/disaster plan (Probe: Do they think it adequately covers all issues on disaster preparedness at the organization).

Section IV: Training and Education

16. What measures are in place in order to ensure that the staff members know about disasters and disaster preparedness plans? (Probe: elicit whether interviewee will volunteer information on any training and education of staff members; ask about their opinion on the importance of staff education and training)

17. In your opinion, do you think employees know what to do when there is a disaster or emergency?

Section V: Monitoring and Evaluation

18. What measures are in place for monitoring and evaluating the disaster planning process? (Exercises, drills).

19. How do you assess or how are you going to assess the disaster preparedness plan?

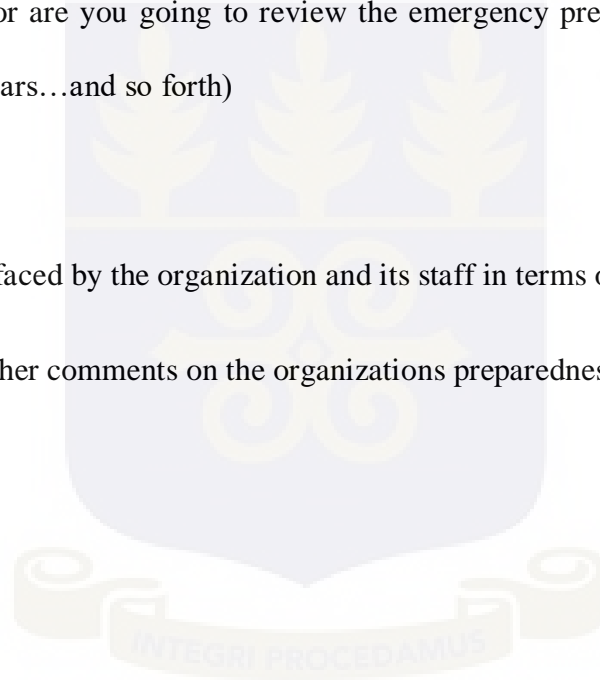
20. How often do you, or are you going to review the emergency preparedness plan? (Yearly, every 6mnths, every 2 years...and so forth)

Conclusion

21. What challenges are faced by the organization and its staff in terms of disaster preparedness?

22. Do you have any further comments on the organizations preparedness for disasters?

Thank you





GHANA COCOA BOARD

COCOA HOUSE
P. O. BOX 933
ACCRA
GHANA

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E-mail: cocobod@cocobod.gh
WEBSITE: www.cocobod.gh
CABLE: COCOBOD, ACCRA.

IN YOUR REPLY

PLEASE QUOTE: *PER/INT/AT/V.22/262*

DATE: *13th April 2015*

SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCE
P. O. BOX LG13
LEGON-ACCRA
GHANA

Dear Sir

RE: LETTER OF INTRODUCTION- MR KPAPU NINKABS NINSAW

We acknowledge receipt of your letter dated 24th March, 2015 on the above mentioned subject and are pleased to inform you that approval has been given for the above-named student to collect relevant information from Ghana Cocoa Board for his research work on the topic **"EMERGENCY/DISASTER PREPAREDNESS AMONG EMPLOYEES OF GHANA COCOA BOARD, COCOA HOUSE."**

We hope the information gathered will be used for academic purposes only.

Kindly inform him to contact the Prin. Disaster Management Co-ordinator, Special Services Department Cocoa House, Accra for assistance.

You can rely on our co-operation.

Yours faithfully,


F.A. TEMANG
DIRECTOR, HUMAN RESOURCE

cc: Dep. Human Resource Manager
Director, Special Services
Prin. Disaster Management Co-ordinator

*Cal/zg