

ESSENTIAL LEADERSHIP SKILLS NEEDED TO RESPOND EFFECTIVELY IN THE AFTERMATH OF MAN-MADE DISASTERS

A descriptive review

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Thesis, Fall 2015
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ABSTRACT

Disaster response phase is arguably the most intricate phase, in the entire disaster management processes. This is due to the fact that, leadership functions in this phase are discharged under extreme stress conditions, without ample time to think and consult before making decisions, constrained by inadequate information. While responding emergencies, leaders are judged from their actions and in actions. Leaders are expected to take charge of the situation, mitigate the effects of the disaster, while being decisive in the midst of anxiety, confusion and chaos. Leaders are expected to be vision oriented, guide the public to safety, while reducing the risks, and navigate through to the murky fields, to the path of recovery and normalcy.

This literature review, sought to identify and explore existing literature, on disaster leadership, with a view of identifying the essential leadership skills that are needed by leaders, to effectively respond in the aftermath of manmade disaster. The review intends to explore challenges that these leaders face, with a view of improving disaster response leadership.

A descriptive literature review method, was adopted for this review. It followed four main stages that included problem identification, literature search, data analysis using both descriptive analysis and thematic analysis methods to synthesise the review literature, and finally discussion and presentation of the essential leadership skills. The review identified 15 articles that qualified for the inclusion and exclusion criteria.

Key essential leadership skills identified in this review included Insightfulness, decisiveness, communication, networking, accountability, and learning. Findings from this study provided not only an overview of leadership skills needed to face challenges, but also the challenges that these leaders face, with a view of equating the challenges with appropriate skill needed to respond.

In conclusion, it is important to note that the outcomes of this descriptive review, demonstrated the importance of leadership skill, for leaders whom are responding in the aftermath of manmade disasters. The success of the disaster response phase, are greatly tied to the leaders having the right skills and putting them into practice when needed. However, while dynamics of manmade disaster leadership continue to shift, the future focus will no longer be only on leadership skills that the leaders have, but on organizational structures and cultures, that affects to a greater extent, the bearing and quality of leadership performance in disaster response phase.

Key words:

Leadership, Disaster, Disaster response leadership, manmade disaster, Technological Disaster, Leadership skills, Crisis Leadership.

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1. INTRODUCTION

In the contemporary disaster response phase, Leadership performance both in public and private circles undergo deeper scrutiny in the wake of disaster. Their skills and performance to guide the response phase, is thoroughly tested right from the onset of the disaster (Boin et al. 2013, 79-80; Marcus et al. 2014, 27-28; Özerdem & Kapucu, 2013 153-154.). Never are the leadership skills much more tested and needed in disaster situation than in the response phase, and more so, in the aftermath of a manmade disaster, when leaders are responding to complex and fast changing situations.(Boin & Renaud 2013, 42; Sjoberg et al. 2011, 199-200 .)

Disasters have the capabilities to override and destroy the local emergency response systems that have been put in place in disaster planning phase. A leader's response to a disaster, can either be the much needed help and rescue, that reduces the effects of the disaster for the victims and the affected populations, that set them to the path of recovery, or it can be the catalyst that escalate and make the conditions worse, making them even more vulnerable. This depends on the leader's skills, character, and actions in disaster response phase (Sweeny et al 2011, 22; Özerdem & Kapucu, 2013, 154.).

While responding emergencies, leaders are judged from their actions and in actions. Leaders are expected to take charge of the situation, mitigate the effects of the disaster, while being decisive in the midst of anxiety, confusion and chaos. Leaders are expected to be vision oriented, guide the public to safety, while reducing the risks, and navigate through to the murky fields, to that of normalcy (Christensen et al. 2013; Demiroz and Kapucu 2012, 92.).

Research on leadership skills in disaster response phase, has not been explored in detail, as compared to those of leadership styles that are essential in disaster response management. A growing school of research (McCarthy 2014, 55; Hahm et al.2013, 178 -187; Wheeler et al. 2013, 79- 80; Demiroz and Kapucu 2012, 91; Özerdem & Kapucu, 2013,154.), have pinpointed the need

for leaders who engage in disaster response, to have the essential leadership skills, that will enable them to respond effectively in the aftermath of manmade disasters.

A study conducted by the Consortium of British Humanitarian Agencies (CBHA) in 2010, in around 15 humanitarian based organizations, that provided relief assistance in the wake of disaster, on their views on what competencies or skills they felt were critical for a disaster response employee or leaders, to provide effective response, the following skills were deemed as essential, they included decision making, critical judgement, resilience and personal awareness. (CBHA, 2011, 4-6)

Much of the contemporary literature on disaster and emergency leadership in disaster response phase, agrees that, there is a need for leaders to poses the right skills needed to respond and lead in the aftermath of manmade disasters (McCarthy 2014, 55; Hahm et al.2013, 178 -187; Wheeler et al. 2013, 79- 80; Demiroz and Kapucu 2012, 91; Özerdem & Kapucu, 2013, 154.). This has been attributed to the challenges these leaders face, the failures and lessons leaders have learnt while responding to recent string of disaster globally.

Manmade disaster, have become a daily occurrence or part of life in our societies or communities today. Going by the recent examples of manmade disaster such the terrorist attack on the 13th November 2015 at the Paris night club Bataclan club, café and football stadium, killing 130 people, wounding 352 and about 99 in critical condition (CNN 2015).The China's Tianjin industrial explosion on the 12th of August, 2015 that killed over 50 people and wounded many (CNBC news, 2015). The recent stampede in mecca killing over 1000 people on a pedestrian street on the 2nd of July, 2015(New York times, 2015), which are just but a few examples of manmade disaster that the global community have experienced, it opens our eyes on the diversity of challenges leaders need to handle.

This list of disasters is endless, and goes as far as highlighting the destruction and loss of lives and property resulting from manmade disasters. However, given the magnitude of these occurrence, it is perturbing that, limited research has been carried out to unravel the concept of leadership skills that leaders need to mount an effective disaster response.

Thus, this review process therefore, intended to fill the void in literature, by unwarping the core fabric of leadership disaster response, to unleash these essential leadership skills that are needed by leaders at all levels, to respond effectively in the aftermath of manmade disasters. The focus on manmade disasters, is due to the fact that, leaders are able to learn from them and improve their performance. This review, has been is organized in seven key chapters that explore the various facets of leadership in dis-aster response context, and the processes and methodologies that are involved throughout these review.

The purpose of leadership that the review will focus on, will be the ability of the leaders to provide leadership, gauged by the standard by which their intervention, or action taken are able to accomplish the target of disaster response phase, which is that of saving lives and property, mobilizing resources, and setting path to recovery and normalcy. (Kahn 2012; Damon 2015)

2 THEORITICAL FRAMEWORK OF DISASTER RESPONSE LEADERSHIP

This chapter, shades more light on disaster leadership, based on literature gathered from other sources, that explores the concept of disaster leadership. The various facets of disaster response leadership are introduced here. It brings into play, the key definitions of core terms that the review focuses on, while exploring the leadership theories, and how they have developed through time. The chapter further, brings forth the reasons why leaders need these skills to effectively respond to the aftermath of manmade disaster, based on the challenges that disaster pose on a leader's response capabilities. Leadership in disaster response phase is explained in further details here, in an attempt to deepen the understanding of the whole concept of the review.

2.1 Overview of leadership in disaster response phase

Leadership according to Buchanan-Smith and Scriven (2011, 4), is the most explored subject in the business field that is now developing tentacles in humanitarian and disaster research world. Buchanan-Smith and Scriven (2011, 5), further points out the fact that most the humanitarian interventions globally, do not succeed due to ineffective leadership. This has been portrayed as gap of effective leadership in humanitarian and relief response. This is seen as an impediment in the humanitarian action and disaster response globally.

Leadership has been defined as the ability to guide and motivate individuals, groups or communities to achieve a specified goal, by guiding them and providing focus and inspiration. Leadership is not a preserve of those at the top but can be practiced by anyone with the right skills (DuBrin, 2010, 3.)

Disaster response phase, involves marshalling the needed emergency services and first responders to the disaster scene. The first responders are usually the heart of emergency service in any community or setting, and involves the ambulance, police and firefighters. In some response cases, rescue teams may be accompanied the first responders. (Singh 2008, 12-14.)

According to Kahn (2012) and Damon (2015), disaster response is carried out in two stages. The first involves responding to the disaster as it unfolds and responding to restore normalcy. This involves gathering the response team that will put the response plan into action. The next step is to roll the plan out into action and assess the safety and risks of those affected by the disaster and the populations around them. This is essential in taking steps towards recovery. The third steps involves the traditional rescue and salvaging what remains after the disaster and the mobilization of resource to build a capacity, with the intentions of saving lives, property

Veenema (2012, 6), adds that, for the disaster response to be successful, the response plan should be made clear, and easy to understand and follow. The response plan needs to have at least an incident command system put in place and that these plans need to be continuously rehashed and adjustments made. Daily and Powers (2010, 353- 354), further adds that, the main features of disaster response, involves four main distinct aspects. This includes search and rescue that is performed by the first responders at the scene, whom are usually the local populations or teams close to the place where the disaster strikes.

The second future involves carrying out triage, whereby the victims are grouped or categorized according to the level of fatality or seriousness of injuries. Those with serious injuries are given immediate medical attention. The third characteristic in disaster response involves stabilization and providing care to the victims. The fourth aspect in disaster response, is that of rescue, where victims of the disaster are moved to safety. (Daily & Powers 2010, 354- 356.)

Boin et al, (2008, 8), explain that, leaders in disaster situation, are faced with three main type of challenges. The first challenge is usually the emergency response in the aftermath of a disaster, the challenge here involves dealing with handling the victims and psychological challenges, the logistical challenges, and the institutions that are involved in the disaster response.

The second challenge for the leaders in the aftermath of disaster, is the media, thanks to the nature of global communication network. When disaster strikes, media usually get hooked on the unfolding events all around the clock, reporting the response to the disaster, with leaders expected to give an up-to-date account of the progress and decision they make as the events unfolds. The global internet village, has also made communication easier and quicker, thus the response to the disaster can be accessed worldwide. Thus, leaders tend to receive lots of criticism and support from the various communication media. (Boin et al, 2008, 8.)

The third type of challenge according to Boin et al, (2008, 8), in the response phase for the leaders, comes from the government policies and the rules and regulations that govern the given area where the disaster occurs. Leaders usually have to deal with the legal and policy repercussion that come with the disaster. This often continue to the later phases and stages of disaster management. The effectiveness of disaster response, depends on several other factors come into play in disaster response phase. This includes the actions and decisions by actors within the response fraternity such as the media, non-governmental organizations, victims, and all the stakeholders. (Boin et al 2008, 8.)

Beckett (2014, 2-7), suggests that the response operations, should be carried out based on the core principle of partnership, working together, adapting, with a clear unity of purpose flexibility and command, for an effective tiered response. While understanding the risks and vulnerabilities the response fraternity face at all levels.

Sweeney et al (2011), further explains that, the degree of response to these disasters, depends on the type of disaster and the preparations made in the preparedness and mitigation stages. This is greatly determined by the leader's ability and skills to work effectively in disaster response networks, both local, national and international, with the limited hierarchical space.

However, it is important to note that, for an effective leadership in disaster response to bear fruits of success, leaders need to take a deeper look into all the intertwined aspects and conditions that prevail in the response phase, that have a greater bearing towards their skills and performance. This is because, it takes more than just the essential skills in the disaster response field, to turn the tide to recovery and normalcy. (Fredholm & Göransson, 2010, 76 -104.)

Disaster has been viewed to have varied impacts on populations, depending on the socio-economic factors, religion, ethnicity and political affiliation.

Vulnerability in the aftermath of a disaster tends to be greater with certain groups within the population such as women, children, elderly and the disabled. In order to achieve an effective response, these vulnerable groups need to be treated as unique entities and not approached as a group. (Norman & Binka, 2015, 50-52.)

Leadership performance as part of the disaster response team, is determined by the leadership competencies they possess, the magnitude of the disaster, and its duration (Özerdem & Kapucu, 2013 154-155). By knowing these essential skills and putting them in to action, leaders will be able to lead through the response phase, and improve their chances of succeeding in providing the much needed help and support, to the victims of disaster, that they need most, and throughout the other stages of disaster management (Demiroz and Kapucu 2012, 97).

The response phase, is the most publicized, phase of disaster management. This is based on the fact that, it attracts huge attention from the wider public, both local, national and even in a global scale. In the Aftermath of disaster,

everyone is glued to media channels following every inch of the rescue process. This can be overwhelming to leaders responding to these disasters. (Statler & Penuel, 2011, 97.)

The concept of leadership in disaster response, has been widened to also incorporate also those whom are, being led. According to Foster et al, (2012, 129 -133), Leadership in disaster and emergency response is that of mutual relationship between the leader and his followers. The relationship here, is considered to be interdependent and reciprocal.

2.2 Leadership theories

Leaders have been in existence since time immemorial. The concept of leadership was for a time viewed as hereditary. It was believed that leaders were born to lead, this developed a theory known as the Great Mans theory, which based on the concept of heroic leaders. These leaders were believed to be born with the personality and charisma to lead and that they had qualities and skills such as intelligence, determination, integrity, sociability, that were unique only to them, and made them great. (Northouse, 2010, 20-21.)

The challenge for these leaders was, how their style of leadership would be applicable in different context and be influential. This led to a search for these specific traits and skills these leaders possessed that made them heroic. This gave rise to Trait theory. This theory was coined from the exploration of lives of prominent individuals throughout history by Stogdill between 1949 and 1970. This theory evolved from the great man theory (Stogdill 1974.)

Marquis and Hutson (2009), further explains that these traits identified in the great man theory, are still being applied today to describe leadership skills, such as confidence, judgement skills, adaptability among others. These skills are still

considered as good skills that leaders need to have when they exercise their leadership.

Katz (1955, 33-42), moulded a different argument on how to approach leadership theories, he focused on skills that could be learnt, as opposed to studying the traits that the leaders were born with. This gave a new focus in understanding leadership theories and developing it further. Katz (1955, 33-42), argued that the leadership skills are what leaders could learn and achieve, while traits was who they were as a person. It was believed that if leadership skills could be described through tangible actions, then leadership skills could be learnt. (Bowman 2011, 33-39).

It is important to note that both the great man theory and the traits theory, had shortcomings. These shortcomings were for example, their inability to demonstrate how these leaders interacted with others. This led to a need to further study in developing leadership theories that would show how the leaders behaved with their followers. (Derue et al, 2011.)

This was then followed by the behavioral theory that dwelt more on what the leader did, and not only their traits. Focusing on the different ways by which leaders carried out their leadership in relation to their followers. Behavioral theories focused on how the leaders handled their followers. (Day & Antonakis 2012, 9.)

Behavioral theory, gave rise to leadership styles such as autocratic (a leader who have full control of the power to make decisions and does not share it with followers), democratic leaders (who share the power to make decisions with followers), and Laissez-faire (who leaves the power to make decisions to their followers). This opened up a new front on developing further leadership theories. (Barr and Dowding, 2008.)

Situation theory of leadership then came into play, this was based on the fact that leaders change their behaviors towards followers, from one behavior or style to another, depending on the situation. (Hersey et al. 2008). Thus, the challenge was to determine which leadership style was fitting with situation.

According to situational theory, the leader will change their style based on the situation and the readiness of his followers to follow. This meant that a leader needed to do more than just choosing a style that fits with the situation, but to motivate and influence the followers to move together. (Hersey et al. 2008.)

This meant that leaders needed to build and maintain relationships and stronger connection with the followers (Trevor and Kilduff, 2012, 150 - 155). This relationship would only be viable and productive if both the parties' involved had something to gain from their relationship. Thus, leaders would re-ward loyal followers and recognize their efforts. This developed a transactional leadership theory developed by Bass between 1960 and 1980. (Bass, 1985.)

Leadership theories further developed into transformational leadership theory. Here, the leader that recognized the need to change, and works as a source of inspiration with intellectual stimuli, and a role model in order to achieve effective leadership. Both leaders and followers according to this theory, need to be reading from the same script and have same direction to increase performance, and have a shared vision, developing and creating a loyal relationship and trust.(Marshal 2011, 16 -22.)

Leader has the responsibility to mobilize followers and act as a driver for change. This has gave rises to the Integrative Leadership theory, that is based on the fact that, in contemporary leadership settings, leaders, followers and situation , have a greater bearing on how effective the leadership will be effected. Leaders need to be able to understand themselves, their surroundings to offer a holistic approach to leadership in integrative theory. (Day, 2014, 57.)

The approach in studying leadership theories, have developed a need to understand further, the leadership skills that keep evolving today from time to time. This has resulted today in the need for leaders to have the necessary skills to lead followers to achieve the desired change in disaster response phase.

2.3 Why leaders need essential skills

Disaster creates a vacuum of order in daily the lives of affected populations. When disasters strikes, it brings with it a state of confusion and uncertainty, lack of direction and control, agony, loss of property and lives. The aftermath of disasters, brings with it, the demand for a leader to step into action, and take charge of the daunting task ahead. Leaders in this situations are need to set direction in the mid of confusion, encourage rescue and rebuilding efforts, be a comforter, a source support, hope and purpose.(Boin et al. 2013, 81 – 87.)

In disaster response, leaders from all levels (local, national or international), may be directly or indirectly affected in one way or another by the disaster. Affecting their decision making and response capabilities. Those at the local level are usually directly affected, depending on the severity and magnitude of the disaster. Their close family, relatives, friends could be victims of the disaster. (Fredholm & Göransson, 2010, 40-50.)

McGlown and Robinson (2011,68), states that, leaders responding to disaster always feel left alone when disaster strikes, having themselves and their teams to depend on, while being bombarded by unclear and contradicting information and directions from all quarters that includes local government, state and international organizations, making leadership even more challenging.

Disaster response phase, standouts as a phase where leadership skills are tested to the limits. This is based on the fact that it is characterized by injuries, death and loss of property, that demand immediate action, in a limited span of time since time is key in saving lives and property and there is no time to make consulted decisions. (McGlown and Robinson, 2011, 70- 75.)

The list of expectation from leaders is usually overwhelming and demanding. Responding and managing this volatile situation, depends on the magnitude of the disaster and the leader's personal traits, and skills (Boin et al. 2008, 4-8). Leaders need to be armed with the necessary tools and abilities to help them maneuver in this challenging times, and to adapt to the dynamic challenges they face, in an attempt to create unity of purpose, and steer the response mission to a success. (Boin et al. 2013, 82-87.)

When people are boxed in by the complexities and uncertainties, coupled by myriad of challenges in the event of a manmade disaster, and their efforts have runout, they yearn for effective and better leaders who can turn the tide of times (Özerdem & Kapucu, 2013, 155). These complexities, make it much harder for leaders to act effectively. Leaders responding to these disasters, face limits on what they are able to accomplish. This calls on the part of leaders to develop skills that enable them to wade through the murky waters, when our regular skills, seems not to be yielding effective results. (McGlown and Robinson, 2011, 70).

Essential leadership skill that a leader posses and is able to put into practice in disaster response phase, can be the difference between providing a successful disaster response that minimize the effect of the disaster, and that of a failed one, which my make the conditions that have been worsened by the disaster, even worse. This is due to the fact that, success of the response and recovery process, is attached to the leader's actions. (Demiroz and Kapucu 2012, 91).

Leaders globally, possess various skills that they use in their daily activities. These similar competencies, play an important role when it comes to responding to disasters. These daily skills tend to be overwhelmed when disaster strikes. By deepening their understanding of these essential skills in a disaster context, Leaders will be able to handle effectively the aftermath of manmade or technological disasters, learn from them and ensure that they do not occur in the future. Disasters are usually never the same, but their characteristics tend to be similar (Clifford 2011, 324).

The expected outcome for leaders with essential skills, is the leadership that is prepared to take control when disaster strikes and guide response operations towards recovery, think critically and make important decisions that will have positive and lasting effects throughout the other phases of disaster management, and ensuring that the necessary aid and resources are available. Leaders with these skills are able to reduce the effect of the damage caused by the disaster through their actions. (Oliver 2010, 324.)

2.4 Definition of key disaster response leadership terms

Leadership

Several definitions of leadership exist, depending on the context in which it is explored. Tracy (2014, 2-3), defines leadership as the capacity of a leader to inspire followers, who are normal people to produce unexpected results. While the Chartered Institute of Personnel and Development (2015), defines leadership as a behavior of an individual guiding and influencing a group or mobilizing people with targets and values and has the power to bring change. For the sake of this review, Leadership will be described as a process of social interaction, whereby a leader impacts a purposeful effect on an individual or a group of people, geared to model their behavior and conception, with the aim of

achieving a specific result or goals (Bass, 2008; Northouse, 2010, 3; Day & Antonakis 2012, 5; Silvestri 2013, 19; Hackman 2013, 11).

Leadership Skills

Leadership skills in disaster context, can be defined as the ability or competencies of a leader has, that enable them to dispense their leadership roles that originates from ones knowledge, experience, practice and amplitude. (McGlown & Robinson, 2011, 67). Skills according to Cambridge online dictionary (2015), is the ability to use one's knowledge effectively and readily in execution or performance.

Disaster

A disaster is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts that exceeds the ability of the affected community or society to cope using its own resources and therefore requires urgent action (Coppola 2006, 2; Daily & Powers, 2010, 2; Sphere Project Glossary 2012, 4).

Manmade or technological disaster

Manmade or human or technological disaster, are emergency and sudden events that results from the actions of human activities or technologies developed by humans, that have the capacity to cause loss of property and life, and occurs in human surroundings or their neighborhood. Examples of these disasters include, industrial accidents and pollution, terrorist acts, transport accidents, wildfires, war, famine, environmental degradation, nuclear radiation, toxic wastes, chemical spills, forest fires, dam failures among others (IFRC 2015; UNSIDR 2009, 26.).

Disaster Response

This refers to the processes geared to meeting the needs of those affected by a disaster through emergency services and public assistance during or in the aftermath of a disaster. This is with the intention of saving lives, reducing risks and related health influences, guaranteeing safety to those affected and provide them with the basic needs (food, clothing and shelter) (Kahn 2012,7; Ramesh et al. 2007, 17; Sphere Project Glossary 2012, 12.)

Emergency services

These are services offered during emergency or disaster situations, by the local governments agencies, whom are tasked with the duty of providing emergency services and protecting the people or the populations affected by the disaster and their properties. These agencies includes civil protection unit, ambulance services, police, firefighters, Red Cross and special emergency response teams or units within government units such as the communication , transportation among others. (UNISDR 2009, 14.)

3. AIMS AND REVIEW QUESTION

3.1 Review question

The review process, will be trying to answer, the following question:-

- What are the essential Leadership skills needed by a Leader to effectively respond in the aftermath of a manmade disaster?

This review question will form the main focus and the benchmark for the entire review process. The review process thus, will explore an array of literatures, with a view of find out the all-important answers to the review question.

3.2 Aims

The following aims were crafted with a view finding answers to the review question, thus the aims are:-

- Identify these essential leadership skills, which are needed by leaders to respond effectively in the aftermath of manmade disasters.
- Explore the leadership challenges that these leaders face in the aftermath of manmade disasters. This, is with the view of identifying these challenges, and be able to align them with the appropriate leadership skills needed to respond effectively.

4. METHODOLOGY

The chapter highlights the study methodology design and highlight the inclusion and exclusion criteria used in the review, it illustrates the result of the literature search process, giving a detailed account of every stage and result of the search process, showing the databases used and the result yielded by the searches. It displays the literature found in the searches, those that were eliminated from the search, and the final result of the articles that will form the basis of the review. The chapter takes a look on the analysis of literature to be used in the review and the critical appraisal methodology used.

4.1 Design

A descriptive review method was used in this review, based on the fact that it provides a critical summary of literature, with a view of gaining deeper understanding of a specific phenomenon and reveal a pattern, through description. It is based on providing description of facts, without judgment. (Graham et al, 2014, 53-56.)

Descriptive review, has been regarded by critics as a review method that has no proper defined search strategy for data collection. Hence, contemporary descriptive review must be conducted both methodically and systematically in an elaborate manner, with a view of generating new ideas and facts (Aveyard 2010, 17; Coughlan et al. 2013, 14.).

A comprehensive and methodological literature review, should be able to analyze all the relevant literature, scrutinize it carefully, and to reveal its strengths, weaknesses. It should be able to also show, how valid and reliable are the findings in relation to the suitability of the method used in the data sources of the literature to be included in the review (Oliver 2013, 75; (Booth et al. 2012, 72-80.)

Coughlan et al (2013, 2-3), further illustrates that, a literature review should be able to produce new viewpoints, and identify gaps in research. This, through discussion of previous conducted research in a given area of interest, which in the case of this review are the essential leadership skills in manmade disaster response. This was achieved in the review, through various steps and processes, as shown in Figure1 below. They range from, review topic identification, collecting literature from different sources, as described in the search strategy and critically analyze findings and produce a publication.

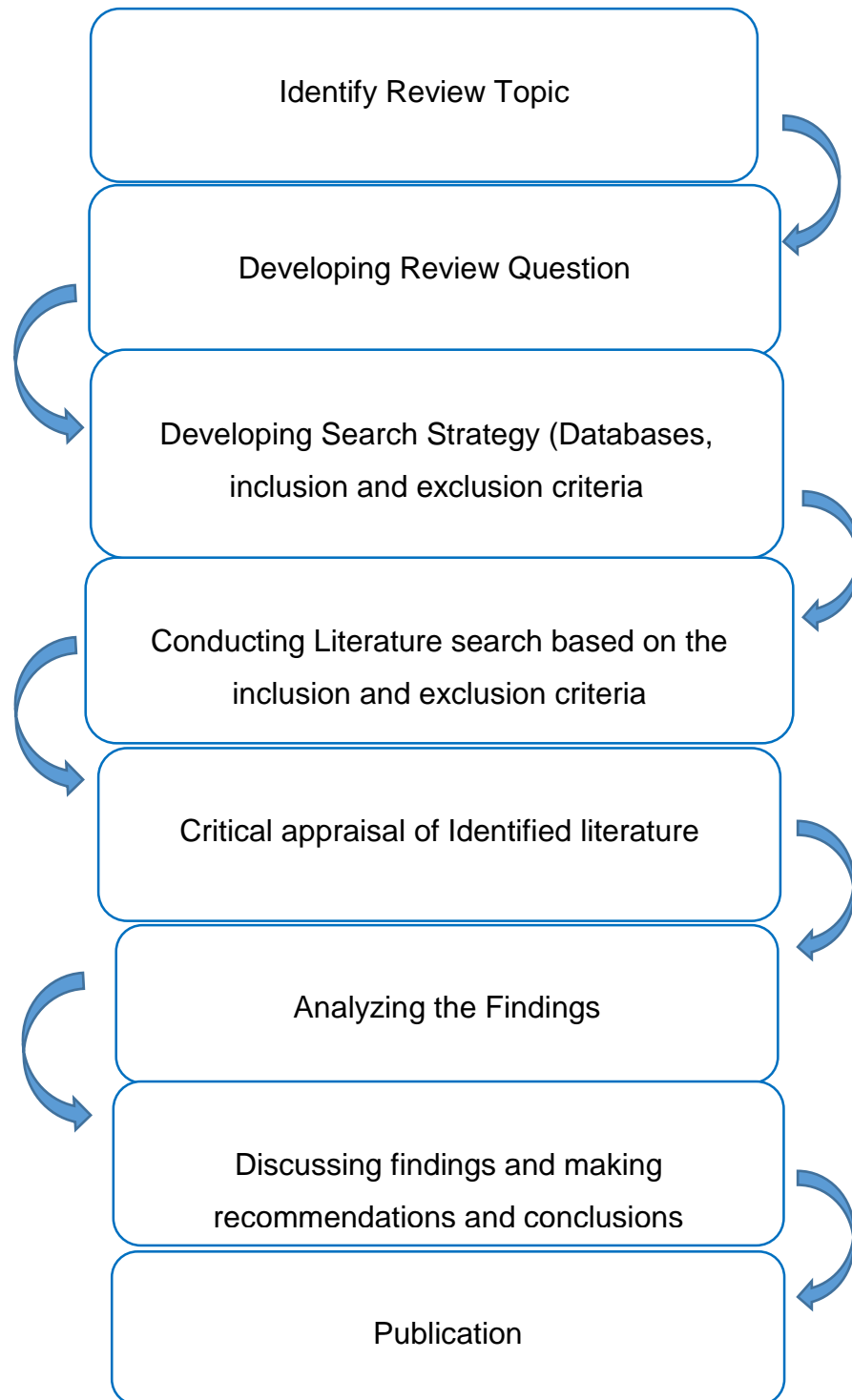


FIGURE 1. Summary of the main literature review processes

4.2 Inclusion and exclusion criteria

In this review, both inclusion and exclusion criteria was developed, with a view of capturing a wider in scope of disaster response leadership skills in manmade disaster response, through the inclusion of relevant literature, which can be easily reproduced with similar results (Randolph 2009, 6). The first criteria was that of inclusion criteria that spelled out the types of literature that are to be included in the review, and was crafted as follows:-

- To reflect the current knowledge on leadership skills in manmade disaster response, literatures published in the last five year period (2010 -2015) were considered eligible for inclusion. This included both peer-reviewed empirical literature and also grey literature. This was essential to ensure that all relevant literature was included without publication bias.
- All English language based literature, were selected for the review based on the fact that the review is intended to be conducted in English, and a larger quantity of research data on disaster response leadership have been published or written in English.
- Literature that focuses on Leadership skills and challenges in leadership response in the aftermath of man-made disaster, were eligible for inclusion. Since this is the main focus of the research question.

However, the second criteria, the exclusion criteria, was used to trim down the search results and eliminate literature that did not fit the review parameters, based on the review question and objectives of the review (Aveyard (2010, 71). The criteria was designed as follows:-

- All non – English based literature which are published in other languages apart from English were excluded.

- Literature that were based on leadership skills in natural disasters, or other forms of disasters that were not related to manmade disaster qualified for exclusion.
- Literature that did not focus in disaster response phase, and focused on other phases such as preparedness, mitigation, and recovery also qualified for exclusion.
- Literature published outside the time limit of 2010- 2015, were to be exclude. Since they were deemed not to have a current knowledge on leadership skills in manmade disaster response

4.3 Data collection strategy and databases

A comprehensive search strategy was deployed to gather relevant review literature from both published and unpublished literature sources, based on the exclusion and inclusion criteria explained in the previous subchapter. Search terms such as Leadership skills AND disaster response, OR Leadership Skills AND Technological disaster, OR Leadership skills AND manmade disaster NOT Natural disaster, were used as search terms in three databases, namely ProQuest Research Library, Sciencedirect, and EbscoHost.

While, search terms as leadership"[MeSH Terms] OR "leadership"[All Fields]) AND skills [All Fields]) AND "disasters"[MeSH Terms] response, was used in PubMed database as shown in appendix 1. , were used to scout for eligible literature to be included in the review. The search terms, were chosen based on the research question.

Before the initiation of the review process, an initial scoping search for existing reviews with the same focus as in this study, was carried out in December 2014, in the following databases: International Prospective Register of

Systematic Reviews (PROSPERO), Centre of Review and Dissemination CRD, Database of Abstract of Reviews of Effects (DARE), CINAHL, and JBI Library of Systematic Reviews, with the goal of avoiding literature review duplication, with no results found. This therefore, provided the needed nod to proceed with the review of relevant literature to fill the void of information.

The literature search for relevant literature, was conducted between February 2015 and June 2015 in the following databases ProQuest Research Library, PubMed, Sciencedirect, and EBSCOHOST. These databases were chosen based on the fact that they had a broader coverage of peer reviewed articles and empirical studies, and journals, from a broader field of leadership, disaster leadership, Disaster response, manmade disaster and crisis leadership.

The search strategy, employed the use of Boolean operators, such as AND, OR, NOT in the search of relevant articles in the various search databases as shown in appendix 1. Boolean operators according to Jesson et al (2011, 28), are essential in gathering specific data on a given topic, by adding connectors to increase or eliminate search results that have no clear focus on the search terms.

Boolean operator AND, was used in various search databases to narrow the data retrieved, the key word leadership was combined with disaster (Leadership AND Disaster) to retrieve articles that had both leadership and disaster components. The results were further narrowed by including AND Response, AND manmade, to specifically source articles that focused on manmade disaster response phase. (Graham et al. 2014, 70-71.)

The operator NOT, was used to exclude articles that had Natural disaster, or other phases of disaster cycle. The other operator OR was used in situations where there was one or more similar search terms, such as Manmade OR Technological, to bring results from either technological or manmade disaster.

The medical subject headings (MeSH), were also used in the search strategy for articles from PubMed database. MeSH terms were used to adjust the search terms and vocabularies, for example leadership, down to specific leadership skills or planning, and for disaster, to specifically disaster response as shown in the appendix 1, of the table that displaying keywords and databases searched.

The search strategy was broadened by the inclusion of Grey literature. Farace & Schöpfel (2010), describe grey literature as a form of literature that is not produced or published by commercial publishers for commercial purposes, but is available through the reference sources and databases, and is available in the form of government reports, academic institutions repositories documents such a dissertation, company reports and publication, conference proceedings, fact sheets, newsletter and videos.

Critiques however have argued that grey literature are not scholarly by nature, and lacks strict reference control and therefore it is difficult to critically appraise the methodology used. They further argue that since these literatures are not peer-reviewed and published in renowned academic databases, they are cumbersome to source (Vaska et al 2010, 16.)

However, contrary to the critiques, while carrying out literature review, Vaska et al (2010, 12) suggest that, it is important to include grey literature to eliminate the publication bias, but the reviewer must always be critically focused and goal oriented when sourcing information. Grey literature today is easily accessible, thanks to the various governmental agencies, organizations and academic institution and libraries globally that have open access journals.

Grey literature searches were conducted in July 2015, with a view of including all relevant literature that qualifies the inclusion protocol and have a clear focus on the review questions, both published and unpublished. This was intended to remove publication bias. The grey literature sources included disaster leadership symposium reports and materials from disaster management associations on disaster leadership that were deemed relevant to the review.

The target for the data collection strategy, was to exhaustively explore the various source of literature and gather relevant reference that represented the concept of leadership skills in manmade disaster response. The search strategy, also involved visually scanning of selected literatures reference lists for relevant studies to ensure that all relevant and available literature, were included in the review.

A further hand searching of disaster leadership materials in hard copies was also conducted in various libraries to source more relevant literature. It is important to note that during the search process, guidance and assistance was obtained from experienced University librarian. The results of the search reference were then kept in a reference manager Refworks for future use in the review and for creating the bibliography.

Literature review questions and objectives according to Jesson et al (2010, 28), must be able to address a void on information on a focus group, whom are intended to benefit from the review. In the case of this review, the void that the review intend to address is that of the essential skills that are needed by leaders at all levels, in response to manmade disaster. The focus group here being the leaders.

According to Randolph (2009,6), literature reviews search strategy must be able to clearly identify, collect and accurately document the data gathering process detailing how the data was retrieved, so that other reviewers conducting a similar review, with a similar search strategy would be able to reproduce a similar result. Thus, the search process should be systematic and methodological. In addition, the review question is intended to steer the review process in the right direction, by providing the bearing for the review, in which all the components of the review will follow (Randolph 2009, 6; Aveyard 2010, 24.). A well-defined review aim, enables easy identification of the themes that support and strengthens the review idea (Coughlan et al.2013, 14).

4.4 Data collection outcomes

The initial search resulted from the electronic databases yielded 446 reference as shown in figure 1 below. A further Search for unpublished grey literature from disaster and humanitarian organizations conducted in July 2015, yielded a further 6 viable references to be included in the search results. Hand searching of reports, books and materials in the field of disaster response and Leadership and identifying key citation and carrying out citation search, for further relevant literatures resulted into 10 more references.

The sum of 462 references identified from the electronic search, were then exported to Refworks, which is a web based research tool that assist reviewers and researchers to handle the bulk of research materials to produce citations and bibliography (Refworks, 2009). This tool was used to identify duplicate references. Out of these, 146 articles turned out to be duplicates, and were eliminated, resulting into 316 reference for further scrutiny.

In the second phase, 213 studies were eliminated based on the exclusion criteria, this was because they were either focusing on natural disaster leadership, or did not have any relation to the disaster response phase and had no focus on leadership skills or challenges in the aftermath of manmade disaster or were published earlier than the time limit of the review (2010-2015).

In the third phase, abstract review was then carried out the on 103 remaining articles. Out of this 56 studies were eliminated based on the fact that they had no deeper connection with the aims and objective of the review. A total of 47 full text articles were read, of which 15 empirical studies and 6 non- empirical studies were excluded based on their context.

The remaining 26 articles, were then critically appraised. This was achieved by the help of, Critical Appraisal Skills Programme (CASP) tool. This was used to assess the weaknesses and the strengths of references to be included in the review. After conducting the appraisal, 9 references, were found to have

weakness in data collection or data analysis methodology and were eliminated. This resulted into 15 articles to be used in the review, as shown in appendix 2. (CASP, 2013.)

The quality of the data included in the analysis was, underwent through individual critical appraisal to ascertain their quality whether they were viable and reliable. The literature were appraised according to the Critical Appraisal Skills Programme (CASP, 2013).

CASP Qualitative Checklist tool was used to critically access articles with qualitative background and those that were descriptive in nature that included the symposium and inquiry reports, while those with literature review background were accessed using the CASP checklist for systematic reviews. The studies with mixed methodologies were accessed using either of the above. (CASP, 2013).

The CASP Checklist tools had outlined a rigorous 10 questions that the studies or the data to be used in the review had to qualify. The CASP tool was developed by the United Kingdom Public Health Unit. Most of the literature used in the review, 12 were qualitative/descriptive in nature, while 1 were quantitative and the other 2 used mixed methods (CASP, 2013.)

The main steps in appraising the literature was carried in three main phases. The first step was to determine whether the literature was valid. This was achieved by determining the methodology used in data collection and analysis, those with clear methodology were considered to be of good evidence level. (CASP, 2013.)

The studies had to qualify in the first three questions for the assessment to continue. This included a display of clear aims, appropriately methodology chosen and finally if the study design would assist essential in answering the research question and aims of the studies. This was a common step in all the checklists used. (CASP, 2013.)

The next steps, was to look into the findings and the reference used, and if the studies achieved the desired results or answered their research questions, and the importance of the results obtained. The third step involved comparing the achieved results and the aims of the study or research question. (CASP, 2013.)

The appraisal tool took a deeper and a critical look into the methodology used in the research, data collection and synthesis methods, with a view of identifying possible weaknesses and strengths of these literatures. In cases where the article did not satisfy the appraisal criteria, stipulated by CASP tool, they were dropped.

In most of the cases, the articles were dropped due to lack of proper or sufficient research process, right from the study design, data collection methods and analysis. The studies which were not eliminated, had also incidences of shortcomings, but these weaknesses did not warrant to preclude for elimination.

Finally, a total of 15 studies were considered to have qualified for the inclusion criteria and the critical appraisal process to be included in the review. These studies had a clear focus on leadership skills needed by leaders in the aftermath of disaster and focusing on specifically on manmade disasters and challenges that these leaders face in response to disasters.

Critical appraisal has been described by Aveyard (2014, 110 -150), as a process of critiquing and ascertaining the strengths and weakness of review material, with a view of determining the contribution they bring to the review. This is needed to ensure that the literature is credible, reproducible and trustworthy. The reviewer should make sure that the data used in the review are of high quality, relevant and are the best possible evidence available (Steen and Roberts, 2011.)

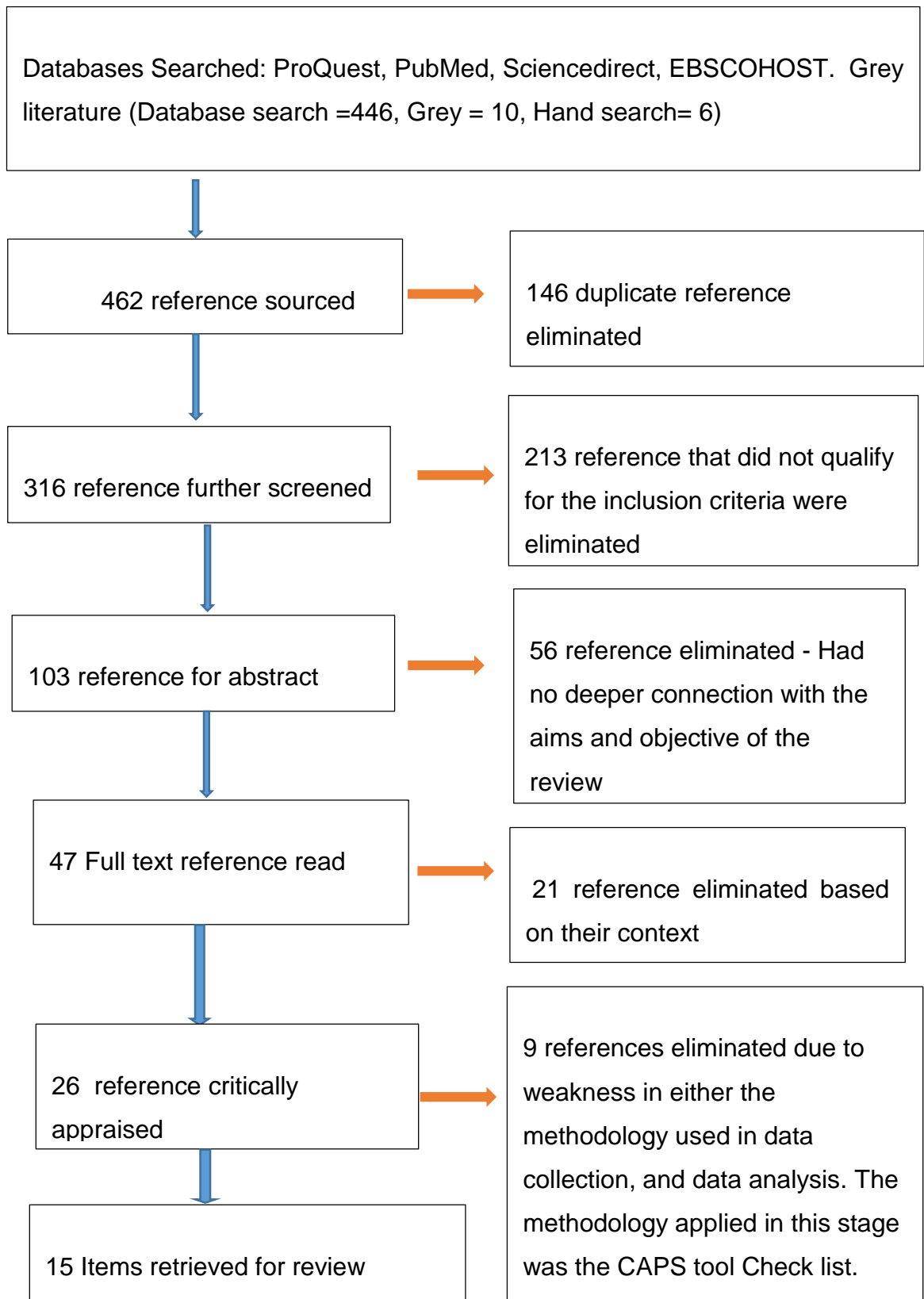


FIGURE 2. Flow chart for identifying eligible articles.

4.5 Analysis of review literature

The review adopted both descriptive analysis and thematic analysis methodologies to synthesize the review literature. The first stage, involved conducting a descriptive analysis. A descriptive analysis was used to make intelligible the main characteristics of relevant articles. This was achieved reading through each and every article and categorizing them according to study methodology, objectives, targeted population, findings and their strength and limitations based on the critical appraisal. This was then followed by a comparison of findings of every article, in relation to the review question, with the results displayed as shown in appendix 3. (Aveyard 2010, 130.)

In the second stage, in order to come up with themes that represent the various leadership skills, a thematic synthesis was employed. This is due the fact that thematic synthesis provides the possibility of including together data from different methodologies into a single analysis to produce key themes (Thomas & Harden 2008; Barnett-Page & Thomas 2009.)

Thematic Analysis was used in the analysis process since it is a synthesis tool that explore review data with a view of identifying and describing the themes elicited by the data collected (Guest 2012, 10.) Critiques of thematic synthesis, argue that, thematic synthesis tend to represent the ideas that prevails in the literature being reviewed, without creating or developing new ideas or concepts. They further argue that it is difficult to understand the process of developing the themes. (Snilstveit et al. 2012, 419.)

Thus in this review, a clear and detailed description of the various steps undertaken in the analysis process was provided, with a view of demonstrating the transparency of the processes of developing the themes. Thematic analysis in this review was carried in three distinct phases. The first phase involved identifying and developing codes. This was then followed by grouping the codes, and finally developing the themes. Coding process in the literature review was conducted through a coding software for systematic review, EPPI –

Reviewer 4. This software, has been built by the EPPI- Center at the University college of London, by the University of London, for systematic review. (EPPI, 2010.)

The initial step in coding, involved uploading whole data from the 15 articles used in the review into the software, which then runs an inductive coding with set parameters, which were in my case the leadership skills and challenges leaders face. It codes line text and creates a graphic display of related themes identified in the process. Secondly, after completing the coding process, the process of developing the themes was then initiated. Here, the coded words, were then grouped together to identify the similarities, and differences in meaning and context, using the coding software. The codes with similarities (synonyms from coding word frequency), formed the key themes, which were then given names that represented the key leadership skills that the review identified. Those that were different, were further harmonized to find the themes that they were compatible with.

The final process was the theme creation, the coded literature was then explored and interpreted further, to determine the similarities and difference that accrued from the data gathered. The coded words generated, were then developed into themes, which formed the main findings of research papers and discussion points. These themes depict the key skills for leaders, and they include Insightful, decisive, communication, accountability, networking and learning. (Aveyard 2014, 144- 155.)

The next step in the analysis was to counter check that the themes developed with the codes, to ascertain that the wording assigned to each theme matched with the codes and contents from the discussions and main findings from the literatures, to avoid mismatch codes. This was important in order to confirm the credibility of the coding process. Aveyard (2014, 147), describes the counter checking as an important stage of coding in literature review, since it gives the researcher the confidence of the process can be reproduced and open to critique.

5. RESULTS

The chapter starts by illuminating the type of studies used in the review, showing the varied forms of literature used. It ends, by displaying the key themes identified in the analysis process that represents the essential leadership skills that are needed in the aftermath of manmade disaster. It expounds on each and every skill, giving details why it is considered as an essential skill, needed by leaders and the challenges that are related to them. Thus, this chapter intends to provide answers to the research question.

5.1 Description of studies used in the review

After conducting a comprehensive search and a rigorous elimination process, fifteen references that qualified for review were retrieved. Out of these 15 literature sources selected for the review, quantitative studies was 1 (Sjoberg et al, 2011), Literature reviews were 2 (Christensen et al. 2013; Knox 2013). While symposium articles and reports were 4 (Boin et al 2013; Boin and Renaud 2013; Trainor and Velotti, 2013; Marcus et al. 2014).

In addition to that, mixed method articles were 3 (Norman & Binka 2015(used qualitative and quantitative); Van Wart et al. 2011(used survey, questionnaire, phone inter-views); Buchanan-Smith and Scriven 2011(used Case studies, Literature review and interviews). Those that used qualitative methodology were 3 (Demiroz and Kapucu 2012; Useem et al. 2011; Thach 2012). Book review was 1(Özerdem & Kapucu. 2011), and other methods was also 1 (Wheeler et al, 2013 (used q-method)). The summary of the types of literature sources has been shown in Figure 3 below.

In eight of the studies included in the review (Demiroz & Kapucu 2012; Norman & Binka 2015; Marcus et al. 2014; Useem et al. 2011; Sjoberg et al. 2011; Özerdem & Kapucu, 2011; Van Wart et al. 2011; Knox 2013.), focused deeper on the leadership skills that the leaders who responded to various disasters needed or displayed, in order to achieve an effective leadership.

Three studies (Christensen et al. 2013; Wheeler et al. 2013; Thach 2012), focused on leadership skills and the challenges that leaders face. While the last four (Boin et al.2013; Trainor & Velotti 2013; Boin and Renaud 2013; Buchanan-Smith & Scriven et al.2013.), focused on leadership roles, skills and their performance while responding to disasters.

One of the studies in the review articles (Demiroz and Kapucu 2012), had shortcomings in the data collection methodology and analysis, which was not clearly stated. Others such as (Sjoberg et al. 2011) had shortcomings in sample sizes, the response rates in the quantitative study, resulting into findings that could not be generalised. However, this articles had a higher and relevant information content regarding the review question in relation to the skills needed by leaders to respond in manmade disaster, and the aims of the review, hence, they were included in the review.

Most of the articles used in this review 5(Christensen et al. 2013; Wheeler et al. 2013; Boin et al.2013; Trainor & Velotti 2013; Boin and Renaud 2013; Buchanan-Smith & Scriven et al.2013.) were published in 2013. While only one article (Norman & Binka 2015) was published in 2015.

Articles from search databases were (Wheeler et al. 2013; Boin et al.2013; Norman & Binka 2015; Knox 2013; Buchanan-Smith & Scriven et al.2013; Sjoberg et al. 2011; Demiroz and Kapucu 2012; Thach 2012; Marcus et al. 2014; Useem et al. 2011; Van Wart et al. 2011) while those from grey literature (Christensen et al. 2013; Trainor & Velotti 2013; Boin and Renaud 2013) and hand searched (Özerdem & Kapucu, 2011), were included in the review.

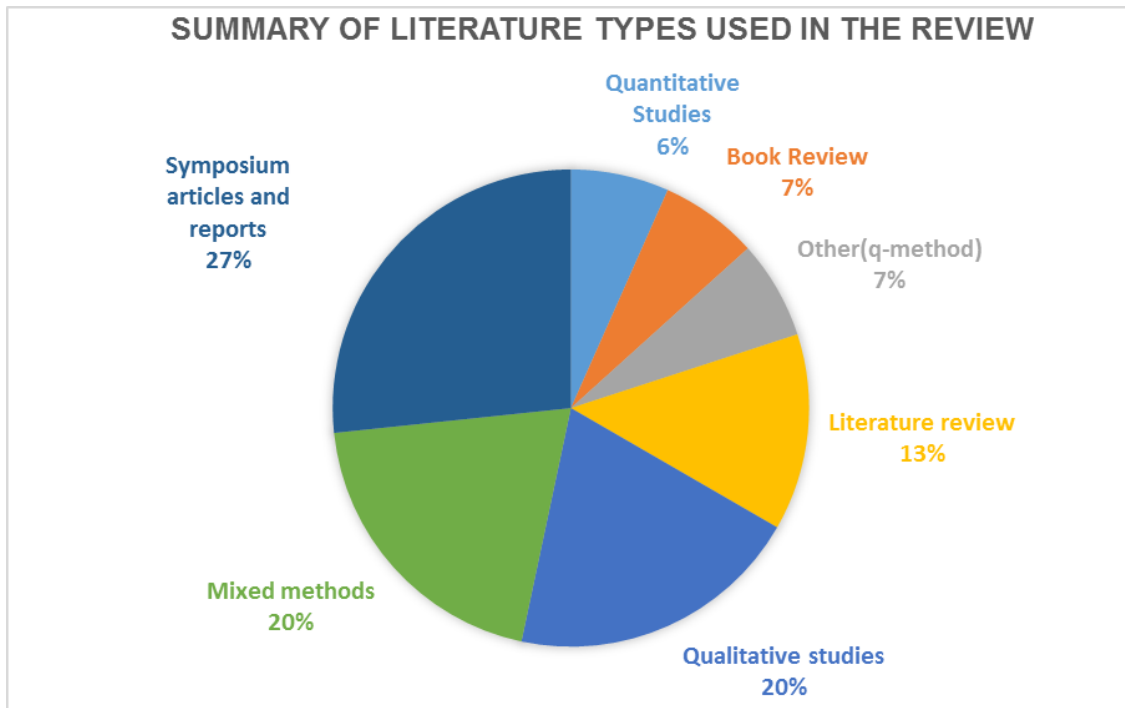


FIGURE 3. Summary of literature types used in the review

5.2 Key themes representing leadership skills and challenges identified

5.2.1 Insightful

This review, was set out to answer to the question of, what are the essential Leadership skills needed by a Leader to effectively respond in the aftermath of a manmade disaster. These skills, have been described as the necessary competencies that a leader need to have to be able to accomplish the task of leading a disaster response phase effectively.(Buchanan-Smith and Scriven, 2011; Knox 2013, 37; Wheeler et al. 2013, 79- 80; Demiroz and Kapucu 2012, 91; Özerdem & Kapucu, 2013, 154 . That is considered as the purpose of disaster response leadership.

In the wake of manmade disaster, according to Boin et al. (2013, 84-85) victims, communities and the entire population that has been hit by the disaster look out for their leaders to respond effectively and gauge the scope of what has befallen them. Boin and Renaud (2013, 42-45), argues that, in the initial stages of disaster response, the public and the entire response fraternity are always concerned, whether the leader, understood and interpreted the scope of the disaster correctly and how will they be led out of it. This calls for a leader who has insightful skill that give them the rich and profound understanding of the complex challenges that they are about to face and deal with (Van wart et al. 2013, 490 -491).

According to Christensen et al.(2013, 170-171), The ability of a leader, who is leading a disaster response mission, to come into terms with the occurrence of a disaster, by understanding the causes or vulnerabilities, challenges and opportunities, is key in achieving an effective response. This is through examining and interpreting the scope of the disaster, in the first case to themselves and then to the public (Boin et al. 2013, 85).

When disaster strikes, the challenge for leaders and those that are part of the disasters response team face, is the ability to have a mutual understanding and comprehension of the scope, magnitude, characteristics and consequences that accrue in the aftermath of disaster (Marcus et al.2014, 16-23). This has been proven to be a stumbling block for leaders who respond to manmade disasters. (Chisteren et al. 2013, 171).

Leaders who poses the skill of insight, are able to overcome this challenge, by taking the responsibilities in building a common understanding, motivation, inspiration, trust and hope for the victims, and the entire populations that have been affected by the disaster. (Trainor & Velotti, 2013, 39; Norman & Binka 2015, 52.) This is intended to give the victims and the inspiration that they will be able to wade through the aftermath and to recovery. (Boin et al.2013, 82)

Buchanan-Smith and Scriven (2010, 2013, 45 – 67), adds in to the argument that, building a common understanding in this case, is a process that starts with the leaders outlining the scope of the disaster to all stakeholders, giving details of what has transpired in the disaster based on an informed knowledge, sources and experience. This is seen as an important first step in creating awareness to the public and taking of control of the response phase by the leader. (Chirestene et al. 2013, 168).

However, Boin and Renaud (2013, 43-45) and Marcus et al, (2014,9-14) acknowledge the fact that, not in all situations, will the leader be able to guide and create a mutual understanding, to the public and the response teams, of the challenging and bumpy road ahead. Leaders are therefore bound to experience resistance from all quarters. The response phase where the rescue and aid operations are carried is in a vital step towards the path of recovery and normalcy. (Chirestene et al 2013, 170.)

Creating an understanding of the prevailing situation and taking control of the disaster response phase is a key first step for leaders, to be able to effectively lead disaster response. (Buchnan.Smith & Scriven, 2013, 5- 20.) Leaders who are insightful while responding to disasters are able to actively gauge the response capacity that is needed to be deployed in terms of resources. However this can be a daunting challenge. (Özerdem & Kapucu 2011, 156; Knox 2013, 32-45.)

5.2.2 Decisive

Decision making has always been considered as the main function or role of a leader in every sphere and organization, with disaster leadership not excluded. (Useem 2013, 50-52; Chisteren et al. 2013, 172-174) Having created the atmosphere of understanding and coming into terms with the facts related to the disaster, comes the need for the leader to make the all but important step to

make decision. This brings into play, the need for the leader to have a central skill of decisiveness.

Van Wart et al. (2011, 503) and Wheeler et al (2013, 30), describe the capacity of a leader to make decisive, difficult, sensible and competent decisions, that affects the lives of many in disaster response phase, relying only on limited information and quick evaluation, as the core of disaster response leadership and the benchmark by which leaders actions are to be judged. In the aftermath of manmade disaster, leaders have the responsibility to make decision on the on all the aspects and bearings of the response phase. This is on behalf of the victims whom are in distress and have no power to decide on their own. (Buchnan.Smith & Scriven, 2013, 7.)

Disaster response leadership, has always been gauged and analysed by the decisions that the leaders make throughout the process. (Demiroz & Kapucu 2013, 95-99; Özerdem and Kapucu 2011, 133- 139; Knox 2013, 19). Leaders need to be able to prioritize their decision making process on the needs and resources, and be able to focus on their consequences. (Useem et al. 2011, 49-55; Özerdem & Kapucu, 2013, 156.).

In addition to that, Van wart et al,(2013,507), suggests that, Leaders responding in the aftermath of manmade disasters need to be able to make decisions on the deployment and running of the response plan, since the response phase is marred with confusion and interruptions that require urgent and swift actions, to save lives and property

In everyday life, leadership decisions are made after careful thinking, after a consultations and gathering of ideas form colleagues, and experts on a specific issue (Boin 2013, 83; Özerdem 2011, 156-159). This is a different story when disaster strikes. This is because, disaster complicates the usual channels and conditions that a leader may require to make informed decisions (Wheeler et al, 2013, 80; Van Wart & Kapucu, 2011, 507.).

Decision making is considered as a process that is usually conducted in stages depending on the organizational structure or hierarchy. (Boin et al. 2013, 84). However in disaster response phase, the time to make decisions is always shortened by the fact that the regular channels and processes have been compromised by the disaster, and that the speed at which the events are unfolding, is at a higher pace than usual. (Buchanan-Smith & Scriven, 2011, 30-31; Knox 2013, 50-51)

Marcus et al. (2014, 19), further explains that, leaders responding to manmade disaster need to be decisive and make swift and assertive decisions that will spell their success or failure of the response operations. But in the contrary, Knox (2013, 19-25), argues that the ability to make quick decisions, does not in mean that they portray the quality of the decisions made. Quality of the decisions made can be viewed as a major challenge while responding to manmade disasters.

Effective decision making process in disaster response phase, involves delegating the authority and power to make decision, from the leader to a team or individuals that run operations in different section of the response field. This involves, clear information on how the response phase is going to be run, dividing clearly the duties and ascertain that they know what is expected of them and how they are going to accomplish them. (Sjoberg et al, 2011, 199-200; Christensen et al 2013, 173 -174; Marcus et al. 2014, 11).

This can be a challenging and complex process, but an essential step need for effective leadership process. This is based on the fact that as a leader, one is not able to be present in all quarters and section of disaster response mission. Thus, a leader will therefore delegate their role of making decision and give authority to team commanders or supervisors, and still be in-charge of the whole process and operations. (Van Wart et al. 2011, 504-505.)

Norman and Binka (2015, 52) and Buchanan-Smith & Scriven (2013, 30-31), argues that, the delegation of duties require strict boundaries, and clarity in order to limit the wastage of scarce resource and motivate the response

fraternity, to take action on the shortcomings. Effective leadership response in the aftermath of disasters always involves fostering team spirit and working not as individuals, but together as a team to overcome the challenges. (Marcus et al. 2014, 5-20.)

Leaders responding to disasters have the responsibility to make quality decision and be able to abide with them, since it spells the future of all the stakeholders involved in the entire operation. (Demiroz & Kapucu, 2012, 90-96) However, it is important to note that , in order to achieve effective and successful response, leaders need to flexible to adapt into changing events and make changes in their decision for the benefit of all the stakeholders involved, while maintaining control of the whole process.(Buchnan.Smith & Scriven 2013, 5 -30; Useem et al. 2011.)

5.2.3 Communication

Communication is the core component of disaster response (Knox 2013,40-65 ;Demiroz & Kapucu 2013,94-98; Trainor and Velotti, 2013, 38-39), since it is essential in informing, assembling the response team, give instruction and commands to the teams, and information to the all the stakeholders involved in the operation process and general public. (Marcus et al. 2014, 21-22) Leaders with effective communication skills, have the ability of openness, they are able to listen from all quarters and is able to learn from challenges faced. They are ready to share information they have without discrimination, and have the ability to express their view without fear. (Wheeler et al, 2013, 28-30)

Communication in disaster response phase occurs between leaders and disaster response teams responding to the disasters, between several teams themselves, the teams and the public and the leaders and the general public and victims that have been affected by the disaster (Trainor & Velotti, 2013, 39).

Disaster causes disruption in communication (Boin & Renaud 40-45; Wheeler et al, 2013, 84-93), thus lack of up to date information to make important decisions. This will result into delayed or lack of the much needed resources to effectively respond in the aftermath of disaster. The main challenge for leaders, in the response phase is the communication breakdown or overload. Leaders responding to disaster have the challenge of verifying information in the dynamic, and the ever changing context they operate around. (Özerdem & Kapucu, 2013, 157)

Christensen et al,(2013, 167-174), brings into the fore, the fact that, the first responders in disaster response phase, are always relying on the information sharing from the different departments such as the police, ambulance and local government authorities to be able to launch effective response operations. Thus, leaders need to restore communication, by employing the use of technologies to lessen the burden of gathering and disbursing information and commands efficiently. (Özerdem & Kapucu, 2013, 157.)

Leaders, thus need to have critical communication skills that involve actively listening and ascertaining that they grasp the scope of information relayed and are able to relay it efficiently and appropriately. (Boin et al. 2013, 83-86; Buchanan-Smith & Scriven et al.2013,28-30).Leaders responding in the aftermath of disaster should be able to handle media fraternity and the general public, that are following the response events, in some cases leaders may employ the use of spokesman, who is trained in dealing with media and public relations. (Knox 213, 65.)

The core challenge for leaders responding in the aftermath of disaster is the ability of the leader to be able to receive and distribute effectively. To provide clear, accurate and steady picture of the events if the response field, while maintaining control of ambiguous and conflicting messages to the public. (Özerdem & Kapucu, 2013, 158 -160.) Failure to provide clearly provide

appropriate information on the unfolding events to the public may create and fuel chaos and uncertainty that would spell doom in the response phase among the stakeholders and teams. (Boin et al.2013, 85.)

Disasters are always prone to interrupt communication channels and the ability of leaders to make decisions, thus, leaders with good communication skills are able to turn the tables and reinstate an effective communication. (Knox 213, 70-76). Communication systems are usually either crashed due to an overload by desperate victims, family and friend and the general public trying to get information about the disaster and come into terms with the events. (Boin et al. 2013, 83-86; Buchanan-Smith & Scriven et al.2013, 28-30.) This complicates the coordination of the various response teams that could hinder the goal of saving lives and property that is pegged on quick and timely response. Thus, leaders need to counter this, by transgressing the communication tailback. (Demiroz and Kapucu, 2012, 95-99.)

In disaster response situation, information is usually held and disbursed by several organizations, teams that are conducting the rescue and relief efforts. (Özerdem & Kapucu, 2013, 171-174). This information is usually critical for leaders to make decisions, thus, effective leaders with good communication skills, should work out modalities that would increase sharing of information through proper communication channels, by taking advantage of the several communication technologies and channels available to eliminate the barriers. (Knox 2013, 40-68). Leaders with effective communication skills, are therefore able to communicate effectively with teams, victims, and the entire public. (Wheeler et al, 2013, 87.)

Thus, leaders with good communication skills, should try to reach out in whichever efficient means available, when pre-planned communication systems in the disaster response plan fail to work. An effective disaster plan should always anticipate failures in communication systems that might hinder response efforts. Disaster response plans, should be able to clearly state how the

challenges associated with communication disasters will be dealt with. (Sjoberg et al, 2011, 211-213.)

5.2.4 Networking

Networking, can be described as a process whereby all the stakeholders involved in disaster response, partner together and coordinate their activities, with a goal to achieve the goals of disaster response of saving lives and property (Buchanan-Smith & Scriven et al.2013, 29; Boin et al 2013, 84; Useem 2011, 52-53). Networking forms the structures, whereby individuals or groups with common purpose join together to share experience and information to benefit them in disaster response. (Norman & Binka 2015, 52-53)

Disaster response require proper networking and partnership that are essential in generating the resources needed to respond (Özerdem & Kapucu, 2013, 155). When leaders respond to disasters, they engage with different teams, authorities and agencies that they have never worked or operated with before. This organizations or units usually have different roles and systems of operations. Hence with leaders need the networking skills to overcome this hurdle (Van Wart et al. 2011, 506)

Markus et al.(2014, 21-26), further states that, leaders with networking skills, will use their personal influence and vigour, to engage all stakeholders and authorities', right from the local community level, which involves the first responding organizations such as the police, ambulance and the entire community, to the higher levels such as national and international arena. This depends on the magnitude of the disaster and the quantity of the resources needed, in cases where the disaster overwhelm local resources and expertise. (Özerdem & Kapucu, 2013, 155). Open channels of communication, coordination are key ingredients for a successful networking process in disaster response. (Chirestene et al 2013, 170-171.)

Networking process in the aftermath of manmade disaster, is usually complicated by an influx stakeholders whom are interested in gaining information, and assisting in the disaster response. (Boin et al. 2013, 83-86; Buchanan-Smith & Scriven et al.2013, 28-30)Thus leaders with networking skills have the ability to coordinate successfully the activities, through organization of resources and allocate them appropriately to achieve effective response. (Marcus et al. 2014, 11.)

Leaders with networking skills are able to build respect, trust and relationships, at all level of disaster response both locally, nationally and even internationally (Özederm & Kapucu 2011, 155). This is essential in achieving a working platform that will reduce conflicts and create conflict resolution mechanism that can promote cooperation and networking. (Demiroz & Kapucu, 2013, 155-156.)

Disaster response, demands for a focused and mutual cooperation between the leader and all the stakeholders involved. Leaders with effective networking skills, are able to adapt quickly, to the changing environment. (Wheeler et al, 2013, 17-18) They achieve this through building teams and bridges, entrust operations and authority to others, instead of centralizing command and decision making. Technology has been used by leaders responding to disasters to facilitate the networking process, this includes telecommunication networks, internet interfaces among others. (Markus et al 2014, 23.)

Leaders who have the skills and ability to network effectively, are able to know and relate with all the organs in the field (Wheeler et al.2013. 84 -91). The success of disaster response leadership is directly related to the interactions and partnership they create and sustain throughout the process. These networks are essential in developing a common approach in dealing with challenges in the response phase. (Boin et al. 2013, 85; Demiroz and Kapucu, 2013, 97-98.)

5.2.5 Accountability

Disaster response phase is crucial for any community that has been affected by a disaster. This is because the actions and decisions made at this stage have resonate effect in the other phases of disaster management (Boin et al. 2013, 84-87). Leaders with the accountability skills, are able to take responsibility of their action and inactions throughout the whole process. (Van Wart & Kapucu 2011, 506 -507). These leaders have the courage to explain to the community what worked and what went wrong and the reasons behind the failure and success. (Knox 213, 60-70.)

In the aftermath of manmade disaster response, Leaders are expected to be accountable. Accountability entails that the leaders have to account on how they exercise their power to make decisions and relocate resources. (Van wart & Kapucu 2011, 20-25) A leader who is accountable, is able to build trust and confidence with all the stakeholders involved. It is considered in several quarters as being able to show that a leader recognise their moral and legal obligations, however this is not always the case. (Thach 2012, 720-.722.)

Christensen et al, (2013, 170-175) , paints the picture of leaders who are responding to terrorist attacks , dealing with countless criticism, which is a key character of manmade disaster, where one has to take the fall for the disaster. This is usually sparked by intense blame games that tend to disrupt the response phase. These blame game are always politically motivated or due to lack of transparency in the side of the leader in disclosing how the operations run. (Boin et al. 2013, 86.)

Buchanan-Smith & Scriven (2013, 26-44) and Trainor & Velotti (2013, 44-45), argues that, while responding to disaster, leaders do allocate resources, to different sections to help in rescue and relief mission for those affected by the disaster. However, leaders who leading the response missions, usually find it difficult to account for how the resources have been spent. This is usually as a result of inadequate data or information to be able to evaluate the response

activities, and assess their effects. This is also contributed to by the fact that, in response strategic plans usually lack indicators, by which performance can be gauged. (Sjoberg et al, 2011, 208-213.)

According to Thach (2012, 47-50), Accountable leaders are able to employ means and systems that will boost transparency in the rescue and relief activities, making sure that all the resources are appropriately utilised and accounted for, for effective leadership. Systems should therefore be put in place to get feedback from those affected populations and modalities to solve the conflicts amicably, made operational (Marcus et al 2014, 13-40).

5.2.6 Learning

Leadership skills in disaster response and specifically in manmade disasters, are based on the ideology of learning, which is the ability to acquire knowledge and skills through training or experience (Boin et al 2013, 86). Leaders with this ability to learn, are able evaluate their performance, and generate a pool of experience whether positive from their success stories or negative from their failures, and share them and learn from them. (Demiroz & Kapucu 2013, 97; Norman & Binka 2015, 54)

Furthermore, Buchanan-Smith and Scriven (2011, 57-61) and Sjoberg et al, (2011, 208 -211) have demonstrated that, Leaders with the skills to learn, are able to recognize their errors and learn from them and build up experience to ensure that the disaster response phase keeps developing based on the best practices and better policies and approach. It is however important to note that no two types of disasters can have similar experiences, but usually there are lessons to be learnt and shared amongst leaders (Knox 2013, 36-60).

Learning is considered as continuous process in disaster response, based on the fact that leaders responding to disasters, faces challenges from all quarters

of the stakeholders. Thus, those with the learning abilities are able to adapt to the dynamic conditions that they operate. The learning process, continues through all the phases of disaster management, and even later. (Norman & Binka 2015, 52)

An effective leader in disaster response, according to Demiroz and Kapucu (2013, 91-92) and Boin et al,(2013, 86), is one who learns to take a keen interest in the loopholes created by factors such as policy and regulations, cultures and systems that have greater bearing to the activities and function of rescue and relief efforts. These leaders are ready to challenge the status quo and initiate the change processes needed in the rescue and relief field. (Buchanan-Smith and Scriven, 2011, 45.)

6. DISCUSSION

This chapter, opens the discussion on the various essential leadership skills that have been identified and how they are regarded as essential skills based on the challenges the leaders face in manmade disaster response phase. It focuses on the key results gathered and compares them with the previous studies on leadership skills. The chapter also, display the reliability and validity, ethical considerations, limitations in the review. It takes a keener look on the suitability of the research method used and creates avenues for further research and development. It ends with the conclusion part that focuses on the practical applications of the results.

6.1 Discussion of the results

Throughout this review process, the focus was on identifying leadership skills that leaders responding in the aftermath of manmade disasters need, to effectively respond. With the goal of adequately accomplishing the purpose of leadership, and exploring the challenges leaders encounter, with a view of equating them with necessary skills needed to handle them effectively.

The aftermath of manmade disaster, has the potential to expose leaders to a myriad of challenges that are compounded by inadequate information, higher expectations from the public, overwhelming number of casualties, inadequate resources at local level, time limits, bureaucratic and hierarchal organization structures and cultures. Under these circumstances leaders need the essential skills to help them navigate through the difficult terrain.

The review identified six skills that are essential or necessary for a leader to perform their functions effectively, they included insightfulness, decisive, communication, networking, accountability and learning. These skills were each presented together with the challenges that leaders face, that required these kinds of skills. This was intended to develop a deeper understanding of the

importance of the leadership skills in improving the disaster response phase and provide practical applications of the various skills identified. Hence, based on the results of the review, it is appropriate to confirm that, the need for boosting leadership in disaster response, can be achieved through developing and improving a leaders skills.

In addition to that, the first four skills identified in the review insightfulness, decision making, communication and networking skills, are considered as skills that are directly related to the actions that a leader undertakes in the actual rescue and response phase. Thus, to this extent, based on the review results, I can therefore suggest that a leaders who intend to provide effective leadership in the aftermath of manmade disaster, should have these four basic skills.

The other two skills identified in the review, accountability and learning, are considered as essential skill that a leader needs in assessing how the implementation of the whole leadership process took place. This is with a view of discovering the loopholes, shortcomings and success stories, to be able to build on and improve even more the leadership role in disaster response. Hence, they too are considered as essential skills for effective leadership, and that all leaders need to acquire.

Previous studies on leadership skills needed in the aftermath of manmade disaster, have proven that leaders who had the right skills needed to execute their duties had, a higher degree of success as compared to those who did not. (McCarthy 2014, 55; Hahm et al.2013, 178 -187). The evidence from the review, seems to confirm the notion that leaders who had the skills such as insightfulness, decision making, communication, networking skills, accountability and learning, are able to overcome the core challenges that manmade disaster.

A study conducted by the Consortium of British Humanitarian Agencies (CBHA, 2010), identified competencies needed in disaster response phase, they included decision making, critical judgement, resilience and personal

awareness. Thus, based on the results of this review, the evidence appears to show that a further additional skills such as communication, networking, learning and accountability were identified. Decision making skills and insightfulness (critical judgment) skills had been identified in the previous studies. This can be construed as an additional knowledge of skills needed in manmade disaster response.

Manmade disasters, demands that leaders be supple in decision making, be pivotal and instrumental in empowering first responders and the local community to find solutions to the challenges they phase in the aftermath. The decisions leaders make in the response phase, are usually directed to the implementation of response and evacuation plans, realigning of command structure and hierarchy. The ability to make sound decisions in the midst of confusion and uncertainty, marks the quality of leadership while responding to disasters. It provides the bearing for success or failure of the whole process and those of others stages in disaster management process. (Van Wart et al. 2011, 503; Wheeler et al. 2013, 30; Buchnan.Smith & Scriven, 2013, 7.).

According to Christensen et al,(2013, 170-171), The ability of a leader, who is leading a disaster response mission, to come into terms with the occurrence of a disaster, by understanding the causes or vulnerabilities, challenges and opportunities, is key in achieving an effective response. This is through examining and interpreting the scope of the disaster, in the first case to themselves and then to the public (Boin et al. 2013, 85).

Leadership in the event of a disaster, is always directed by the leader's ability to operate in networks from all levels of response that includes local, national and even international. Leaders who tend to be conversant with only their team or organizations in disaster response phase tend to be unsuccessful, when working in networks responding to disasters. Thus, in order to effectively respond in the dynamic context of manmade disaster response, leaders need networking skills to be able to interact effectively. Disasters predisposes local

leaders to the need to build networks, when their resources and capabilities are overwhelmed.

The core challenge for leaders responding in the aftermath of disaster is the ability of the leader to be able to receive and distribute effectively. To provide clear, accurate and steady picture of the events if the response field, while maintaining control of ambiguous and conflicting messages to the public. (Özerdem & Kapucu, 2013, 158 -160.) Failure to provide clearly provide appropriate information on the unfolding events to the public may create and fuel chaos and uncertainty that would spell doom in the response phase among the stakeholders and teams. (Boin et al.2013, 85.)

In the aftermath of manmade disaster response, Leaders are expected to be accountable. Accountability entails that the leaders have to account on how they exercise their power to make decisions and relocate resources. (Van wart & Kapucu 2011, 20-25) A leader who is accountable, is able to build trust and confidence with all the stakeholders involved. It is considered in several quarters as being able to show that a leader recognise their moral and legal obligations, however this is not always the case. (Thach 2012, 720-.722.)

An effective leader in disaster response, according to Demiroz and Kapucu (2013, 91-92) and Boin et al,(2013, 86), is one who learns to take a keen interest in the loopholes created by factors such as policy and regulations, cultures and systems that have greater bearing to the activities and function of rescue and relief efforts. These leaders are ready to challenge the status quo and initiate the change processes needed in the rescue and relief field. (Buchanan-Smith and Scriven, 2011, 45.)

6.2 Ethics, validity and limitations of the review

This sub-chapter, takes a critical look into the reliability and validity, ethical and limitations throughout the review process. It start by focusing on the ethical considerations that were observed in the review, throughout the various stages. This is then followed by an assessment of the validity and reliability of the studies used in the review focusing on how strength the results achieved and possible bias that might affect the findings. Finally, it focuses on the limitations of the entire review process.

First and foremost, throughout the review process, ethical considerations were taken into account at every stage, making sure that the principles of literature review ethics have been observed. The key ethical principles includes, confidentiality, integrity, beneficence, informed consent, anonymity, respecting rights and avoiding contending interest in the review process. (Creswell 2009.)

Ethical considerations in this literature review commenced from the initiation of the literature review process, prior to conducting the review. An approval was obtained from Diak University of Applied sciences to conduct the literature review, and two supervisors assigned to guide the progress of the review. A further agreement was signed by the Crisis Preparedness in Health Care Education (CRIPS) project, who commissioned the review.

This was then followed by scouting for professional organizations standards, this involves finding out the various ethical standards that the research area focuses on, identifying and scoping out the various ethical dilemmas that the review might encounter. After getting the approval from the university, to conduct the review, since it is a secondary review and did not require ethics committee approval.

The research questions and objectives were crafted in such a way that they did not, prejudice the primary participant views from the literature used in the review. According to Creswell (2011), while conducting a literature review that

is ethical, the review should be conducted with the view of critically analyzing the literatures, while presenting the facts as presented in the literatures included in the review without distorting the meaning.

However, Parry and Mauthner (2004, 146), contradicts this view by stating that, due to the fact that the data used in the review is considered as a secondary source, and is in a way, not obtained directly from the participants or subjects in the review, rather from the literature documented, therefore the process or step of consent should be null and void. This therefore, opens up a new dilemma box for researchers whom are conducting literature review.

Literatures included in the review, were assessed if they were be able to demonstrate how ethical considerations were taken into account, based on the ethical principles. After generating a pool of data for the review, the process of analyzing, commenced, with a view of obtaining answers to the review questions and research objectives.

At this stage, the principal of neutrality in making decisions on which data sources to include in the review and reporting the various perspectives or views that the data generates without taking sides, was observed. Creswell (2011), explains that, for the review to be seen as critical and ethically sound, the synthesis process should be able to present both the positive and negative findings and leaves the reader with the position to make the judgment.

Reporting the findings in literature review, should followed the strict ethical rules of observing confidentiality and non- plagiarism or data falsifying, and there were no conflict of interest. Wagger & Wiffen (2011, 130-132), states that ,when reporting results from data search and analysis, the reviewer should avoid at all cost, falsifying the findings, evidence, by including literature from the review sources, without referencing and presenting them as their own, or providing results which does not accrue from the review data collected. Thus, while reporting review results, the research needs to sincerely quote their

sources of data used and differentiate them from those of the reviewer. This principal was observed throughout the process.

Secondly, was the focus on validity and reliability of the review? According to Aveyard (2010, 104), validity is the measure by which the review findings portray what it is intended to, while the reliability is the ability of the findings to yield the same results (reproducible).

The review considered several bias that are related to the review process. One of the bias considered in the review was that of the publication bias, where by unpublished. This was dealt with through the inclusion of critically appraised grey literature, to eliminate the publication bias and increase the credibility of the review findings.

The inclusion of grey material in the review was based on the need to include all relevant literature that described the phenomenon of leadership skills in manmade disaster (Graham et al.2014, 67).Thus, an evidence based triangulation method was employed.

Salkind (2010, 1537-1540), describes triangulation as a method of combining several data types, that have been generated by different research methods, with the goal of improving the validity and reliability. This is achieved by putting together several viewpoints to deepen the understanding of the research question. He further states that, critiques, view this method as time consuming, and require skills to be able to converge the data.

Evidence triangulation was used in literature search to enhance credibility of sources searched and eliminate publication bias (Aveyard 2010, 73). This was achieved by using several evidence sources that includes both published and unpublished references, which compensate the weakness of each source. The evidence literature used, were both from secondary sources (literature reviews) and primary sources (quantitative and qualitative).This created a pool of literature that was suited, for a descriptive based review, where the goal was to

identify and describe the leadership skills needed by leaders in manmade disaster response scenarios.

The other form of bias that can affect the reliability of the review, is that of reporting bias. Reporting bias, has been generated by the inclusion of only English based language studies and articles. This has excluded the non-English literature, thus displaying a single sided reporting that can be construed as a bias. This would have been rectified by including literature from all languages that focused of the research question.

Thirdly, the review focused on the limitations of the research. One of the limitation of review, was the inclusion of only, the English language based data sources and the exclusion of non-English data. Hence, there is a possibility that, the review might have missed out on potential literature that exists in other languages other than English. These literatures, would have incorporated a much richer and broader view on essential leadership skills needed in the aftermath of manmade or technological disaster. While conducting data search and collecting relevant literature from the various electronic database, Lack of clear terminology that described manmade disasters, hindered the search process since most of the databased identified manmade disasters with terms search as technological disasters. (Aveyard 2010, 90-139.)

The other limitation in the review, was based on the timeline. The search was conducted for a duration of six months, in order to obtain more data to be considered for the review, a wider search could have yielded more literature for review, considering the fact that database, manual and referencing search was conducted in this duration. In addition to that, the time limits for the studies to be included in the review according to the inclusion and exclusion criteria that was set between 2010 and 2015, might have excluded studies that will be published later in 2015. This was further expounded by the fact that the search was concluded in august of 2015. (Aveyard 2010, 90-139.)

7. CONCLUSIONS AND IMPLICATIONS

The outcomes of this descriptive review, demonstrated the importance of leadership skill, for leaders whom are responding in the aftermath of manmade disasters. The success of the disaster response phase, are greatly tied to the leaders having the right skills and putting them into practice when needed.

The result of the review, was based on a descriptive review of 15 articles. Half of these articles were empirical studies by nature and were either inform of a qualitative or quantitative study, or both, while the other half were discussion papers that consisted of reports and inquiry papers. This had a greater bearing to the generalizability of the findings.

Thus, weighing on this, it can be reported that the review reached its goal of providing answers to the review question, by identifying the leadership skills and challenges the leaders phase. However, generalizability of the results achieved in this review, may be limited, due to the number of studies included in the final review and their limitations, and also the shortcoming of this review process. Thus, the need for a wider review that will incorporate more skills needed to respond effectively. The result of this review, should therefore be treated as a step forward in identifying skills needed by leaders.

While dynamics of manmade disaster leadership continue to shift, the future focus will no longer be only on leadership skills that the leaders have, but on organizational structures and cultures, that affects to a greater extent, the bearing and quality of leadership performance in disaster response phase. While assessing the leaders' performance in the aftermath of manmade disasters, the goal should not be about achieving an excellent results from the response phase, or developing leaders who have all the six identified results, but that leaders who are able to apply the appropriate skill at appropriate time.

On the balance of the results obtained in the review, it is therefore categorical to suggest that, leadership skills required to effectively respond in the event of manmade disasters, may vary depending on the prevailing environment that surround the disaster, the response plan and the stakeholders involved.

This literature review, therefore is keen to contribute to the development of literature in manmade disaster response leadership, with a view of highlighting the various leadership skills that are key and essential for leaders at all response levels need to be able to deal with myriad of challenges they face in the contemporary disaster response field.

Even though the review provided insights to the leadership skills needed to respond to manmade disaster by leaders, additional research and further review on specific leadership skills needed in specific disaster scenarios such as leadership skills needed to deal with terrorist attacks or industrial disasters or traffic accidents.

This is because every disaster have different context and focus. A further research also needs to be carried out on the various leadership skills needed throughout the other phases of disaster management, such as the preparedness and recovery, in order to paint a complete picture of leadership skills needed in disaster management.

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APPENDICES

APPENDIX 1. Databases selected and search result

Databases	Key Search Words	References obtained
EbscoHost	*Leadership skills AND disaster response*, *Leadership AND Technological disaster OR Manmade disaster*, *Leadership skills AND Manmade disaster NOT Natural disaster*	156
ProQuest	*Leadership skills AND disaster response*, *Leadership AND Technological disaster OR Manmade disaster*, *Leadership skills AND Manmade disaster NOT Natural disaster*	132
PubMed	("leadership"[MeSH Terms] OR "leadership"[All Fields]) AND skills[All Fields]) AND (("disasters"[MeSH Terms] response	45
ScienceDirect	*Leadership skills AND disaster response*, *Leadership AND Technological disaster OR Manmade disaster NOT Natural disaster *	113

APPENDIX 2. Search Results

Search Method	Database/ location	Number generated/ Hits	Articles Based on Title	Articles Based on Abstract	Articles Based on full text	Articles included in the review
Database Search	➤ EbscoHost	156	51	35	8	2
	➤ ProQuest	132	46	27	12	3
	➤ PubMed	45	25	13	7	2
	➤ ScienceDirect	113	60	28	20	4
Grey Literature	Disaster and Humanitarian Organizations	6	4	4	3	3
Hand search	Library	10	7	4	2	1

APPENDIX 3. Description of the studies used in the review

Author/ Publication	Research Question/ Aim of the study	Sample / Population	Methodology	Findings/ Conclusion	Strengths / Weakness
1. Boin et al, 2013. Leadership in times of Crisis: a framework for assessment	<p>Q. How to gauge leadership performance during crisis and disaster</p> <p>Aim: Demonstrate the strategic roles that leaders are required to accomplish or execute when crisis or disaster strikes, in a wider spectrum</p>	Political leaders and administrators.	Symposium Article	<ul style="list-style-type: none"> • Key leadership roles identified includes, decision making, sense making, accountability, coordination, communication and learning. • Leadership performance in should be gauged in a broader manner not only focusing on media and political dimensions or symbolic role, but the whole process 	<p>L – A potential reporting bias of positive findings in published articles in the review.</p> <p>S – Development of a framework for assessing leadership performance.</p>

<p>2. Christensen et al. 2013. After a Terrorist Attack: Challenges for Political and Administrative Leadership in Norway</p>	<p>Q: How did the Norwegian government and the political and police leaders react to the crisis?</p> <p>Aim: Identify challenges leaders faced in reaction to the terrorist attacks</p>	<p>Political and Police leadership.</p> <p>150 articles included in the review</p>	<p>Literature review- Qualitative content analysis of policy documents, legislative and mass media proceedings.</p>	<ul style="list-style-type: none"> • Leader responding to the terrorist attack affirmed a privation of readiness and capacity to respond effectively. • Reputable organizational principles of traditionalism, liability and delegation are hard to practice in disaster response • Response to terrorist attacks is a sum of complex interfaces between equally influential factors such as culture, organizational and symbolic. 	<p>L – Potential of reporting bias and publication bias, by including unpublished literature sources.</p> <p>S – Systematic data , collection of quantitative literature, and Positively Identifying challenges leaders face in reaction to the terrorist attacks</p>
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<p>3. Knox 2013. Who's in charge here? A literature review on approaches to leadership in humanitarian operations.</p>	<p>Aim- to go beyond analysis of individual skills and abilities, to the role of the organisation and of the group in ensuring effective leadership.</p>	<p>Humanitarian leaders</p>	<p>Literature review – Comprehensive review of fields, such as civil defence, the military, and emergency medicine</p> <p>70 literature reviewed</p>	<ul style="list-style-type: none"> • Leadership in disaster response should considered individual abilities approach, shared leadership between organizations and standard operation procedures. • Individual leadership skills include, communication, decision making, coordination 	<p>S- Comprehensive review methodology</p> <p>L-Reliability of data included in the review</p>
<p>4. Demiroz and Kapucu 2012. The Role of Leadership in Managing Emergencies and Disasters</p>	<p>Q-What are the leadership skills needed to manage catastrophic disasters?</p> <p>Aim.-Explore the leadership skills and traits that are needed in disaster management.</p>	<p>Leaders responding to catastrophic disasters</p>	<p>Qualitative analysis</p>	<ul style="list-style-type: none"> • The analysis identified several skills needed in responding to catastrophic disasters such as, decision making, creativity, innovation, strategic, organization, flexibility, team building, sense making, networking, among others. 	<p>S- The review Identified the leadership skills needed in disaster management, and the challenges leaders face.</p>

				<ul style="list-style-type: none"> Leaders need to be able to flexible in judgement and actions, acclimatize to disaster conditions, and communicate effectively in disaster response 	L- Context focused on catastrophic disasters, restraining generalizability of findings
5. Trainor and Velotti, 2013. Leadership in crisis , disaster and catastrophes	Aim - Examine the role and activities of leaders and leadership in the context of previous leadership and disaster management studies	Leaders in all spheres	Symposium Article	<ul style="list-style-type: none"> Leaders need to build on roles such as team building, accountability, planning, and communication, and flexibility, sense making and learning, to be able to manage disasters effectively. 	<p>S- Identified key roles of leaders based on the literature</p> <p>L- Small and convenient sample of expert involved in the discussions.</p>

<p>6. Norman and Binka 2015. Leadership abilities, skills and knowledge in building disaster resilience and response</p>	<p>Aim- To assess the abilities, skills and knowledge of leadership in 28 critical national institutions in Ghana in relation to disaster resilience modalities and emergency response.</p>	<p>Leaders in state organizations in Ghana</p>	<p>Mixed method- quantitative and qualitative.</p>	<ul style="list-style-type: none"> • Leadership roles identified includes – Foresight, knowledgeability, delegation, proactive. • Leadership skills Identified includes, communication, inspiration ,dynamism, inspirational, mentor, strategic among others • leadership capabilities needs to be reinforced through persistent professional growth and education 	<p>S - Mixed method used to identify leadership abilities and skills.</p> <p>L - variation of methods, samples, may limit the consolidation of results</p>
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<p>7. Marcus et al. 2014. Crisis meta-leadership lesson from the Boston marathon Bombing. The ingenuity of swarm intelligence.</p>	<p>Aim – to analyse how leaders effectively responded in the disaster(the Boston Bombing)</p>	<p>Public and private leaders who responded in the wake of the bombing.</p>	<p>Inquiry report</p>	<ul style="list-style-type: none"> • Leadership skills Identified includes, communication, connectivity, decisiveness, proactive, dynamism, inspirational, mentor, strategic among others • Disaster response rules for leaders include: 1) common goal all stakeholders. 2) Big-heartedness 3) respect for the responsibility and authority; 4) refraining from taking credit or launching blame; 5) mutual trust and confidence. 	<p>S- The review Identified the leadership skills needed to respond to disasters.</p> <p>L - generalisability of findings limited findings based on one scene</p>
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<p>8. Wheeler et al, 2013. Disaster Response Leadership: Perception of American Red Cross workers</p>	<p>Q- 1. How do views or implicit theories of leadership vary among Red Cross workers?</p> <p>2. How do the patterns of Red Cross workers' perceptions of their leaders' actual behaviour differ according to their ideal expectations of their leaders?</p> <p>Aim- To describe the perceptions and implicit theories of Red Cross workers toward their leaders in the context of disaster emergency response.</p>	<p>26 - Red cross workers</p>	<p>Q-methodology</p>	<ul style="list-style-type: none"> • Leaders lead by direction, no time to delegate and seek views • Leadership in crisis and disaster need to deal with field, context and social challenges in response. • workers will evaluate their leader based on what they specifically want rather than a more general concept of a leader, 	<p>L- Results cannot be generalised, results and conclusions of this exploratory study provide a starting point for future research related to leadership in extreme contexts</p> <p>S- Identified worker perception towards leaders in disaster response.</p>
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<p>9. Useem et al. 2011.: How to Lead During a Crisis: Lessons from the Rescue of the Chilean Miners</p>	<p>Q- Effective way for a leader to deal an unprecedented crisis?</p>	<p>Leaders at all levels</p>	<p>Qualitative analysis – base on interviews and media coverage</p>	<ul style="list-style-type: none"> • Leadership skills identified include, Decision making, team building and delegation, accountability. • Leaders should take control of the operations, Make a team of experts, Delegate duties but run the show 	<p>S- Study explored ways and skills of leaders in disaster and crisis.</p> <p>L- Generalizability of the findings</p>
<p>10. Sjoberg et al, (2011). Leadership in complex, stressful rescue operations</p>	<p>Aim- to explore the universality of leadership grounded theory to developed model of leadership in complex and/or stressful rescue operations.</p>	<p>First responders- 385 participants from three different organisations</p>	<p>A quantitative analysis using questionnaire - Crossectional study-</p>	<ul style="list-style-type: none"> • Determinants of performance in rescue operations are, prevailing organization environment, positive stress reaction, knowledge of existing networks. • Leadership skills. Includes delegation, networking and cooperation 	<p>L - Non-responded bias from the responders in the questionnaire, can be considered a challenge to validity of the results</p>

<p>11 Boin and Renaud, (2013), Orchestrating Joint Sense making Across Government Levels: Challenges and requirements for all crisis leadership</p>	<p>Aim- Bridging the gap between strategic and operational level leadership in crisis and disaster response, in relation to sense making</p>	<p>Disaster response leaders</p>	<p>Symposium Article</p>	<ul style="list-style-type: none"> • Effective leadership method includes, communicating learning, accountability, sense making • Leader who operate at the executive level and provide strategic response, will have a different scope of the disaster as compared to those operational at the site, due to difference in time, information and politicization. 	<p>S- The review Identified the leadership skills needed to respond to disasters.</p> <p>L - generalisability of findings is limited</p>
<p>12. Thach 2012. Managerial Perceptions of Crisis Leadership in Public and Private Organizations: An Interview Study in the United States</p>	<p>Aim – to study was to determine how senior managers in both private and public agencies in California viewed the challenges and opportunities resulting from the economic crisis of 2007-</p>	<p>Public and private leaders during the economic crisis</p>	<p>Qualitative study- conducted using interviews - Interviews with 263 participants.</p>	<ul style="list-style-type: none"> • Private leadership while responding to disasters concentrate on how to maintain competitiveness, while public leaders responds to the disaster in question. • Skills identified includes, decision making, team 	<p>S- Identified the leadership perceptions and challenges during crisis and disaster.</p> <p>L – Analysis method not elaborated</p>

	2010, as well as their viewpoints on the importance of leadership in achieving results in 'challenging times'.			building, motivation, visionary.	
13. Özerdem & Kapucu. 2013. Managing emergencies and crises. (Chapter 8. Leadership in managing emergency and Crisis)	Aim - Identify leadership characteristics in in managing emergencies and crisis, and discuss how weak leadership make matters work	Public and government officials	Book Chapter review,	<ul style="list-style-type: none"> • Leadership characteristics identified includes, trustworthy, partnership that create relationship at all levels. • Personal qualities .persuasive • Decision making • Honesty, accountability, integrity and caring 	<p>S- Characteristics identified and explored.</p> <p>L- Generalizability</p>

<p>14. Van Wart et al. 2011 Crisis Management Competencies', Public Management Review,</p>	<p>Q- What are the expected Leadership competencies in managing catastrophic disasters or extreme events?</p> <p>- Where do the competencies vary most between catastrophic disaster or collective crisis management on one hand, and emergency management, change management, and transformational management on the other?</p>	<p>Senior emergency managers</p>	<p>Mixed method-survey, questionnaire , phone interviews</p>	<ul style="list-style-type: none"> • Leadership skills identified are related to transformational leadership and includes, Self-confidence and decisiveness, communication, strategic, coordinate, decision making. • Skills vary depending on the type of emergency and should be applied effectively. 	<p>S – Bi-data collection method</p> <p>L – Internal consistency of survey not explored hence internal validity may be compromised</p>
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<p>15. Buchanan-Smith and Scriven, K. 2011. Leadership in Action: Leading Effectively in Humanitarian Operations.</p>	<p>Aim- to contribute to improved humanitarian leadership by considering the factors that make humanitarian leadership successful, and identifying actions that actors within the humanitarian system can take to improve the quality of leadership in humanitarian responses.</p>	<p>Humanitarian response leaders, 11 case studies of effective leadership, in different crises, different countries and at different levels</p>	<p>Mixed method- Case studies , Literature review and interviews</p>	<ul style="list-style-type: none"> • Effective leadership involves, networking, communication and team-building that brings out the leadership potential of others. • Leaders need judgement, courage, skills and be comfortable with dissent. • Humanitarian leadership flourishes when the leader is given space to operate, and is willing to step into that space with a clear goal and a preparedness to innovate and to take risks. 	<p>S- Multiple data collection methods</p> <p>L- Evidence triangulation</p>
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