

# Psychological First Aid Practices Applied By Humanitarian Responders during Disasters in Kakamega County, Kenya

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## Abstract

The need for Psychological first aid (PFA) is very significant during a disaster impact or any other traumatic event. Globally it was used in the United States of America following September 11<sup>th</sup> 2001 bombing, regionally in Liberia during Ebola outbreak in 2014-2015 and locally in Kenya during Westgate mall terror attack in September 24<sup>th</sup> 2013. The study objective was to examine PFA practices applied by humanitarian responders during disasters because of a literature gap in PFA effectiveness. There is additional academic literature as existing research only explains PFA elements and its delivery process, however, there lacks evidence on effectiveness but this study has filled that gap. In terms of policy front, there existed a gap in Kakamega County disaster policy as it partially addresses PFA during disaster recovery. A conceptual framework consisting of self-efficacy theory, coping theory, disaster cross cultural counseling model and Community-based mental health and psychosocial support model was used to analyze PFA effectiveness. A descriptive research design was used, descriptive and inferential statistics were obtained by using SPSS software version 28 and excel spreadsheets respectively for data analysis. The study findings revealed that the most applied element is social connectedness at 92.2% and the least is hope at 56.2%. The study concludes that all PFA elements are not incorporated well enough therefore a detailed approach is required. The study recommends Kakamega County to maintain an effective system linking County Disaster committee, humanitarian organizations and local responders for improved disaster response and recovery.

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**Key Concepts:** *Traumatic Event, Psychological First Aid, Post-Traumatic Stress Disorder, PFA Effectiveness, Psychological recovery, Humanitarian response*

## 1. Introduction

Globally, successful disaster response and recovery has been linked to the incorporation of PFA and physical FA in disaster management. According to literature review psychological first aid (PFA) has not been widely practiced in African countries therefore a gap existed in addressing influence of its practice during disaster management in Kakamega County, Kenya. According to James and David (2013) PFA is discussed as being those sensible activities that are humane and considered dignified when assisting someone in need. They also established the five essentials of PFA that would bring psychological healing to the affected which include safety, connectivity, self-efficacy in terms of oneself, state of calmness and hope.

Conferences held by disaster specialists who are mental health practitioners governed by the national institute on mental health in Australia since the year 2001 have proved that PFA is most effective during humanitarian response. An example was after the twin towers bombing and it favours most disaster survivors in attaining a psychological well-being. This is because it is guided by initial impression of not doing any harm when providing assistance to the affected.

Different opinions had been raised in different meetings and discussions on a better term to be used for psychological well-being therefore before settling on psychological first aid. Other terms which were used included Community Based Psychosocial Support, Disaster Behavioural Health First Aid, Mental Health First Aid and even Stress First Aid. The central term PFA was finally embraced to avoid confusion and make it easy for understanding by providers of psychological well-being. PFA essentials are not defined for or limited to be provided by psychological experts therefore any person who can provide to the affected care, security, food, shelter or even clothing can fulfil the goals of PFA (James and David, 2014).

In Sweden, PFA training is very essential to all emergency responders and social workers because they deal with different casualties who require help at times of traumatic events. It is encouraged that all organizations involved in humanitarian services be trained on PFA so as to ensure a common standard of competence when intervening during traumatic events (Leslie Snide, 2016). This coordination insists that those who are affected directly should be moved to safe places accompanied by trained social workers so as to receive PFA which is aimed at reducing depression related to a particular traumatic event. In hospitals PFA is highly encouraged and it involves carefully listening to the affected, understanding their problems and finally getting the appropriate help for them so as to ensure their human dignity is respected which in turn facilitates reduction of depression.

According to Leslie Snide (2016), psychological first aid was once applied in Liberia in Africa following an Ebola outbreak. The response teams and psychosocial workers who intervened had been initially trained in PFA skills and it worked quite well when dealing with the affected and their depressed families. This author articulates that it is essential to deliver PFA immediately after the physical first so as to reduce depression within the affected because it worked well with the Ebola responders who successfully helped the directly and indirectly affected individuals.

Psychologists from Kenya Psychology Association articulated that hundreds of terror victims following the Westgate mall attack benefited from Psychological first aid despite undergoing treatment for their physical injuries. This is because the affected get a lot of depression due to the trauma and horrifying experiences which they encounter (Hambrick *et al*, 2014). Red Cross personnel provided PFA as the situation continued to unfold and they had a team of social workers on site who continued to deliver psychosocial support to the affected including friends and families. Tracking and linking the lost back to their families with the effort Red Cross volunteers who were coordinated from various branches within Nairobi County was also made effective.

When offering PFA, gender and age are always a consideration because disaster impact will affect people of different gender and age in different magnitudes. The aged, small children, girls and women who are vulnerable always suffer most as they are unable to quickly escape due to their physical incapability therefore most of them get physically injured and overwhelmed emotionally. A close attention is need to young children when offering PFA as they have very less or no exposure to stressful situations therefore they will be more stressed by a disaster impact. Those who get separated from their parents and guardians need to be re-united back as quickly as possible to ensure a quick recovery as this reduces the level of depression and state of helplessness (George, 2002).

In summary, PFA includes addressing basic needs, giving medical care to the injured and ensuring there is no further harm, needs assessment of the affected population, active listening so as to understand what the affected have to say but careful not to pressure them into explanations of what happened and also assisting them to get in touch with available social support. In consideration of the aforementioned activities, a good progression is made towards achieving an effective PFA.

## 1.2 Statement of the problem

Kakamega County receives high amounts of rainfall hence frequent occurrences of disasters such as landslides and floods and thunder and lightning. Vulnerable communities are adversely affected negatively both physically and psychologically.

Landslides and mudslides have been experienced in Malava and Shinyalu sub-counties (Allan and Cyrus, 2007; Hilton, 2016) and floods in Matungu and Butere sub-counties (Muriuki, 2019). This led to injury and death of people, disruption of normal activities of the society and adverse effects of sustainable livelihood assets such as human, natural, physical, social and financial capitals which are very important for human survival. When people are deprived these livelihood assets, they become unable to obtain basic requirements like food, water, shelter and clothing and this leads to depression which require psychological first aid (Quinn *et al*,2011).

In addition, the need for an effective PFA practices require incorporation of all the five essentials which include calmness, safety, connectedness, self-efficacy and hope and also putting into consideration the physical first aid for the physically injured. There has been a scarce evidence of the practice of safety and provision of sustainable basic needs during disasters in Kakamega County (Kakamega county platform, 2017). This creates a gap in disaster response and recovery that requires attention so as to enhance disaster management in the county. Humanitarian intervention in terms of PFA provision is required so as to alleviate human suffering and ensure disaster survivors recover from the disaster impacts.

### **1.3 Objective of the study**

This study sought to examine the psychological first aid practices applied by humanitarian responders during disasters in Kakamega County, Kenya.

### **1.4 Research question**

What are the psychological first aid practices applied by humanitarian responders during disasters in Kakamega County, Kenya?

### **1.5 Justification of the Study**

#### **1.5.1 Policy Justification**

It is a reference in making disaster response policies by ensuring that all the key elements of PFA are factored in towards a better humanitarian response. Weak areas in policies have been identified for rectification. Findings in relation with the study recommendations have added knowledge to stake holders of different disaster management committees to improve their response personnel both at the local community and disaster experts.

#### **1.5.2 Academic Justification**

This study has added academic literature by the fact that it has evaluated recipients of PFA and determined how PFA has been offered to them by humanitarian responders during disaster response. Dieltjens *et al* (2014) supports lack of such evidence. There is increased search of evidence of PFA effectiveness (Shultz and Forbes, 2014) therefore the study has provided academic justification on how such effectiveness has been in Kakamega County, Kenya. It has provided knowledge to other researchers who will be interested in the search of similar evidence across Kenya and other countries across the world.

## **2. First aid practices applied by humanitarian responders during disasters**

First aid is the initial help or assistance given to someone who has fallen sick or who has been injured following a traumatic event, using locally available materials and following acceptable principles before being taken to the hospital. Early and appropriate first aid preserves life, ensures the condition of the casualty does not get worse and also reassures the casualty in promotion of recovery. The most important principle states that the responders should first do no harm to the casualty so as to prevent the condition from getting worse. Other principles require the responder to ensure their safety, that of onlookers and of the casualty, staying calm when offering help and this should be in accordance to the responders level of training, observing time so as to quickly save life and ensuring appropriate help is provided by following critical procedures when dealing with life threatening cases (Austin *et al*, 2016).

First aid can either be physical or psychological. Physical first aid addresses the apparent injuries and medical conditions that are associated with disaster or other traumatic survivors and this include;

unconscious breathing casualties, non-breathing casualties, fractures, bleeding, cases of shock, head injuries and fainting among many other casualty problems. Several categories of physical first aid include battle first aid which deals with the injured during war, oxygen related first aid which deals with casualties experiencing breathing problems and wilderness first aid which is given to casualties in places where medical assistance may delay due to nature of the terrain or lack of proper transportation equipment (Morgan *et al*, 2019).

Psychological first aid is a set of humane and dignified actions and procedures aimed at lessening initial distress in people who have been affected by disaster or any other traumatic event and it includes provision of basic human needs and delivering key essentials of psychological first aid (Ruzek *et al*, 2007). First aid practices can either be physical or psychological. Physical FA is more practiced in Kakamega county during emergency incidents which are life threatening and require quick attention. This has gained popularity as most of the volunteers and first responders are well versed with physical first aid in regard to trainings offered by St John ambulance and Red Cross. During disasters, responders offer this kind of first aid practice before referring casualties to hospitals for advanced care. In other terms, this practice of FA can be referred to as 'wilderness first aid' as it renders help to casualties who are physically injured so as to save life and promote recovery before advanced equipment is availed (Morgan *et al*, 2019). These physical first aid practices include; basic life support which can save life and promote recovery depending on the kind of injury or medical condition, handling breathing and non-breathing casualties whereby cardio-pulmonary resuscitation is applied if necessary, controlling bleeding which is highly experienced by the physically injured so as to prevent infection and excessive blood loss which result to death, stabilizing fractures so as to prevent further injury during transportation of casualties to hospitals and dealing with trauma casualties who experience fatal internal injuries which require special stabilization before emergency medical services arrive to the scene (Margaret *et al*, 2016).

PFA is also practiced but there is scanty evidence of the same. Emergency responders basically provide basic needs and help the affected to relocate to safer places after disaster strikes. Practices like connectedness, calming, hope and self-efficacy are given little or no concern as there is no evidence to support such. After occurrence of landslides Shinyalu sub-county, there is evidence that people were moved to safer places and provided with basic needs for adaptation of the new environment (Kakamega County platform, 2017). This evidence is limited to safety as a PFA practice without integration of all the five essentials of PFA. The issue of safety and other elements of PFA have been discussed so as to emphasis on their importance towards recovery.

### **2.1 Safety of the affected people**

During disasters or other traumatic events that are life threatening, disaster survivors need to be moved to safety and security provided. Safety plays a big role in psychological well-being of the affected casualties and it is determined by how effective first aid services will be. Moving the affected survivors away from the danger zone to a safer place should be considered by all means possible putting into consideration that not everyone is able to relocate to a safer zone on their own. People require sense of safety after a disaster or any other traumatic event because they encounter and react to occasions and events that jeopardize their own life, that of their family members not forgetting their valued possession (Hobfoll *et al*, 2007).

Survivors of traumatic events will always suffer from post-traumatic disorders, fear related to past life-threatening events and even depression. These health issues need to be handled by the emergency responders so as to bring out the essence of safety to the lives of the affected individuals. Unless there is a quick intervention to bring out a psychological feeling of safety, the affected with experience persistent threat and fear. Making members of the affected population aware of how secure they are creates a feeling of safety both physically and psychologically which reduces distress and enhances PFA (Cross, 2020).

### **2.2 Connectedness of the affected and their community**

This entails social support from close friends, family members and different groups in the society so as to lessen psychological stress associated with trauma (Quinn *et al*, 2021). It initiates an opportunity for accepting the affected, helping them to solve different problems, making the to feel emotionally supported

and finally creating an environment for sharing different experiences which helps in coping with traumatic reactions. Connectedness prevents loneliness which initiates emotional distress that initiates development of Post-Traumatic Stress Disorder (Hobfoll *et al*, 2007).

During traumatic events and disasters, linking the survivors with their families pays a big role in promoting connectedness as it brings them closer to their loved ones. Connecting the affected with the society is also important for them so to get available social support making them feel appreciated by their fellow human beings. This reduces the level of hopelessness and stress. The level of family and social connectedness requires to be maintained continually so as to enhance psychological first aid. Social connectedness aims at promoting emotional connection, feeling of self-worth, physical assistance with materials and advice.

Connectedness assist the affected to deal with short term problems associated with the traumatic event and also if well established, it gives disaster survivors a positive mentality of the future. High level of connectedness increases desire for a better tomorrow and this optimistic believe enable affected individuals to quickly recover from disaster impacts and plan for their future.

Social support networks enhance recovery from depression and this may include worship areas and also entertainment activities. Places of worship makes the affected feel connected to God and prayers give them hope for the future as they believe God will end their miserable life hence promoting PFA. Cultural activities bring people together and make them feel appreciated and with such social connectedness, it becomes easier to encounter depression and this mostly occurs in places like refugee camps where people from different origins converge.

Affected individuals lacking social support are likely to feel isolated due to lack of connectedness and this interferes with an individual's psychology increasing the level of depression. It is crucial to ensure that all the affected individuals are attached to the social support networks and advised on how to access help from such networks. Connections between the affected and their loved ones and friends should be re-established as soon as possible after the disaster so as to increase the rate of recovery. Keeping families together and ensuring children are under the care of their parents reduces stress hence a quicker recovery process (Cross, 2020).

Emergency responders should establish contact with all relevant social support groups. This ensures that the affected have a reliable source of social connectedness. This is a good stage to offer immediate needs and directing or taking individuals to where they can get more support. It is of emphasis that the cultural norms are considered. The affected people are more comfortable to blend with people whom they have similar beliefs and religion hence higher chances of psychological recovery.

### **2.3 Hope enhancement of the affected people**

In offering PFA, hope entails giving the affected assurance which makes them optimistic for a better future despite the trauma they have encountered and this increases a believe that things will work out. With hope, chances are high that the affected recovery quickly from psychological problems and it reduces the development of post-traumatic stress disorder. It makes the affected optimistic in that, there is the possibility of achieving future goals in regard to recovery and rehabilitation following the aftermath of disasters (Hobfoll *et al*, 2007).

Hope promotes a healthy development in one's brain activity and increases a positive growth towards attainment of psychological well-being which is very essential in PFA (Valle *et al*, 2006). Hope is developed by creating a positive strength within the affected and a good example is addressing stressful events which might interfere with optimism level of the affected. There are components that play a very essential role towards development of hope and they include goals, a pathway on how to fulfil set objectives (Snyder, 2000).

Setting positive goals to achieve different activities is very important to the affected as it indicates the need to keep moving forward and recover from stressing situations. When goals are set effectively, it is important to come up with procedures that will aid in the achievement of the related goals. There is also a requirement

of agency, in that; the individual should understand the need of commencing the set goals and following up the set procedures for a better tomorrow. It is important to let the affected know that their emotions and feelings are just normal because they are reacting to an unfortunate event (Cross, 2020).

#### **2.4 Self-efficacy for improving positive thinking**

According to Gosselin and Maddux (2003) self-efficacy is a state of feeling that one's actions will have good outcomes. This is attained through regulation of one's thoughts, conduct and emotions in the aftermath of disasters or traumatic events. Lack of efficacy makes individuals unable to deal with various issues which they face in their day to day activities therefore it is a crucial factor to be observed during PFA. The traumatic event overwhelms affected individuals to the extent of possessing mentality of incapability hence the need for PFA to ensure self-efficacy is obtained for effective recovery. People should be encouraged to view themselves in a positive manner in terms of what they can do towards the recovery from traumatic events.

Self-efficacy calls for regulation of emotions related to trauma and the capability solving trauma associated problems such as property restoration and relocation to new places (Hobfoll *et al*, 2007). The community can be involved in promoting self-efficacy by providing materials for rebuilding so as to bring order of reality to the affected. People who suffer great losses economically and socially are adversely affected by distress therefore they require more attention in terms of self-efficacy.

Lack of resources to motivate them towards recovery, it is demoralizing and that is why personal resources need to be availed for an effective helping process when providing PFA. Disaster survivors with positive perception about their progression and what they experience during humanitarian intervention are likely to have a high degree of self-efficacy. Providing basic needs including other recovery resources and options encourages the affected to become optimistic despite the chaotic situation there are experiencing. This enhances a self-belief that there is a better tomorrow and it greatly promotes development of self-efficacy.

Self-efficacy of the affected individuals also is determined by how they observe the progression and behavior changes of their colleagues in relation to final result whether positive or negative. They use such examples to predict their own expectations and this is not a good thing to be embraced by those suffering high levels of distress especially if they believe a possibility of negative outcomes (Gosselin & Maddux, 2003). Disaster survivors need to be encouraged to become optimistic and not to talk of negative outcomes because this results many individuals to becoming less efficacy especially where there are many people affected by a complex disaster. A positive belief results to dealing with new problems and stresses rationally and this will be dependent on one's state emotionally and psychologically. Learning new coping skills promotes self-efficacy as the affected become prepared for new problems encountered during the helping process unlike when they are caught unaware which demoralizes their positive progression.

#### **2.5 Calmness of the affected individuals**

The state of calming ensures that the affected individuals get a psychological stability which discourages problems like downheartedness, sleeplessness, inability to make effective decisions, fright attacks, inability to conduct daily tasks and even disassociation from other people (Hobfoll *et al*, 2007).

The following remedies can be practiced to ensure a state of calmness; people with anxiety require deep breathing activities, relaxation techniques which include relaxation of deep muscles, music incorporated with imagery can help people with sleeping disturbances (Hobfoll *et al*, 2007). Those suffering from stress can be exposed to self-inoculation training which includes stopping certain thoughts and initiating positive thinking.

Relaxing provides self-calming after traumatic events as it prevents escalation of health effects associated with stress (Henry, 2016). Calmness prevents worries as it reduces blood pumping rate which in turn lowers blood pressure and also makes muscles feel relaxed. In this state of calmness, the individual's mind thinks less about stressing events and prevents advancement of stress. Calmness helps to promote the level of alertness and concentration making the individual to make correct decisions when dealing with upcoming challenges. Continued relaxation at regular intervals creates a higher degree of calmness and it increases the

ability to cope with stress. Rumours should be avoided as much as possible to avoid restlessness within the affected because they increase insecurity and interfere with recovery from psychological trauma.

### 3. Conceptual Framework

Wasike and Odhiambo (2016) discuss the role of theories in guiding the thrust of academic studies. They emphasise the importance of theories in offering compelling and incisive causal explanations with calculated precision. They buttress their argument by quoting Smith (1986) who asserts that theories play the role of predicting, prescribing and evaluating socio-political phenomena hence they cannot be ignored.

This study used two theories and two models to analyze the effectiveness of psychological first aid and they include the self-efficacy theory, coping theory, disaster cross cultural counselling model and Community-based mental health and psychosocial support model. These theories and models supplemented each other towards attainment of the study objectives. A conceptual model is given to depict relationship among independent, dependent and intervening variables.

#### 3.1 Self-efficacy theory

This theory was first advocated by Virginia *et al* (1990) and its key themes are to mobilize motivation, cognitive resources and courses of action required to meet situational demands. Self-efficacy is always concerned with one's ability to make judgments in relation to their skill level and it does not include a particular special skill. It should be noted that learned helplessness affects the effectiveness of PFA because when actions of the affected fail to bear fruits, they believe that they are incapable of managing their lives. This theory will therefore help the research in interrogating the self-efficacy of disaster survivors so as to come up with PFA effectiveness.

The strategies as posited by this theory will aid the researcher to interrogate mastering of coping skills within the affected which includes attaining the set goals, behavior change of the affected through observations from similar individuals who had such difficulties and had a break through and lastly persuasion which involves getting survivors to believe that they can make it and they have the ability of attaining their goals.

As articulated by Bandura (1998), disaster affected individuals with a high self-efficacy are able to solve complex problems. This is a good indication that it will be easy for them to recover quickly and resume to normalcy. Persistence is what brings an effective performance towards psychological well-being. Self-efficacy also helps the affected to blend easily with community members and based on communal hope and encouragement, the affected have a higher chance of quick recovery.

#### 3.2 Coping theory

Lazarus and Folkman (1984), defines coping as how people who are affected by traumatic events manage their internal and external demands using behavior and cognitive struggles after their resources have been overwhelmed. These internal and external demands may include dealing with depression and interaction with the physical environment for survival respectively.

This theory helped the researcher to interrogate the essentials of an effective PFA when dealing with disaster affected individuals. Affected individuals act and reason differently therefore there is a difference in level of self-efficacy, calmness, safety, hope and even social connectedness. Due to different interpretation people will react differently to the same situation and this is what determines the length of recovery from depression.

The researcher was able to find out the following within the affected population; self-control and creating interest to work towards recovery, acceptance of social support which is created through social connectedness, positive thinking which initiates an effective self-efficacy and finally prayer which increases hope for a better tomorrow (Lazarus and Folkman, 1984). Being able to adapt to the existing difficulties requires calmness and a good connection to the society. Social connectedness beefs up courage and hope hence one can learn new mechanisms to cope with existing and new challenges. People who have suffered stressful moments earlier have a higher chance of coping faster and vice versa.

### **3.3 Disaster cross cultural counselling model**

Disaster Cross-Cultural Counselling is an intervention that combines different approaches of counselling techniques within people from different cultures using professional knowledge which is culturally acceptable so as to help disaster survivors recover from stress after exposure to disaster impacts (Bemark & Chung, 2011). This Model assisted the researcher with a framework to interrogate disaster responders who assist survivors to gain a sense of personal control and coping towards finding a psychological stability. The model outlines how responders and care givers provide post-disaster counselling while being sensitive to survivors' cultural beliefs and values and also incorporating a sense of safety and trust which provide PFA in an empathetic approach. The affected individuals from different cultural backgrounds were handled with delicacy so as to ensure their morals were respected.

It enriches the process of PFA in that it promotes safety and social connectedness of the affected population, reduces depression and introduces new strategies to cope with stress which will be interrogated during this study. This makes the affected understand how stress affects their lives hence able to manage it and make good decisions during difficult situations that they come across. This model also provides a good guide in preventing the development of post-traumatic stress disorder, therefore very essential when offering PFA.

An effective follow up of the steps involved in DCCC model leads to determination of the effectiveness of PFA and level of stressfulness of a particular disaster. To start with, there should be societal strategies put in place so as to cope with disaster impacts and this is the first journey to psychological safety as the affected will feel appreciated by their own society (George, 2002). The existing social capital is used in assisting the affected before any external intervention and this is a great commencement towards attainment of an effective PFA. Embracing new skills to cope with stress comes in later so as to back up the existing strategies and keep the helping process to progress on effectively (Bemark & Chung, 2011). This will help interrogate whether the affected individuals are engaged in pleasurable activities like exercises so as to reduce tension and be able to focus on recovery process. Maintaining relationships in a supportive approach helps cohesion between disaster survivors hence making them to move together and help one another in recovery (George, 2002).

In addition, helping people to acknowledge and understand their feelings and dealing with them in a composed way helps to reduce depression. Reminding one-self about past stressors they encountered and how they overcame them assists in giving hope bearing in mind problems never last forever and things always go back to normalcy. New coping skills helped to determine the promotion of calmness within the affected individuals.

Substitution of existing skills and the new skills increases the level of hope which is an essential element of PFA and also ensure the affected master how to cope with stress of different dimensions. Individuals are made able to plan for future goals whether long term or short term because at this time of disaster recovery, they already have a purpose of a better future.

Practice of clinical supervision for people with advanced mental problems help in determination of PFA effectiveness because they need to be dealt with in a delicate manner for recovery. Through this close supervision and monitoring, self-efficacy is enhanced within the affected individuals creating an opportunity for growth therefore this will help the researcher to determine whether social well-being is attained for an effective PFA.

### **3.4 Community-based mental health and psychosocial support model**

This model guided the study as it focuses on the most important factors to be considered when dealing disaster survivors well-being and safety. The degree of available psychosocial support will determine the level of disaster stressfulness to the affected individuals. An effective psychosocial support will lead to reduced level of stressfulness as it fulfils most of the key principles of PFA.

Well established basic needs and security provides a psychological wellbeing of the affected people and this prevents the development of post-traumatic stress disorder as a result of the associated traumatic experiences (Leslie, 2016). It also bases its argument on safety which is a core element of psychological first aid. Basic



needs provision and safety works hand in hand to promote growth in the helping process and this is a key factor in reducing the level of depression.

Support from family members and community after re-unification promotes psychological healing as this greatly provides comfort due to presence of the loved ones. Normal stress is also encountered with as it cannot be avoided because individuals are exposed to stressful conditions which jeopardize their well-being. The affected feel comfortable with a close care from their relatives and community members as they feel appreciated by their own.

This model helped the researcher to interrogate the assistance offered by community workers to affected individuals with the aim of improving their self-efficacy hence promoting attainment of an effective PFA. It will also assist in interrogation of specialized services offered to people with severe mental problems by provision of treatment from psychologists. Long term supervision is essential in the helping process of the victims with severe mental disorders and it is concerned with a small number of victims; however it may differ in accordance to the extent of the disaster (Landoy *et al*, 2015). This plays an important role to incorporate both hope and self-efficacy within the affected so as to promote psychological first aid.

This model was relevant when finding out effectiveness of PFA provision as it gave emphasis on the essentials required in PFA that is basic needs, safety and security of the affected individuals (Leslie, 2016).

### 3.4 Conceptual Model

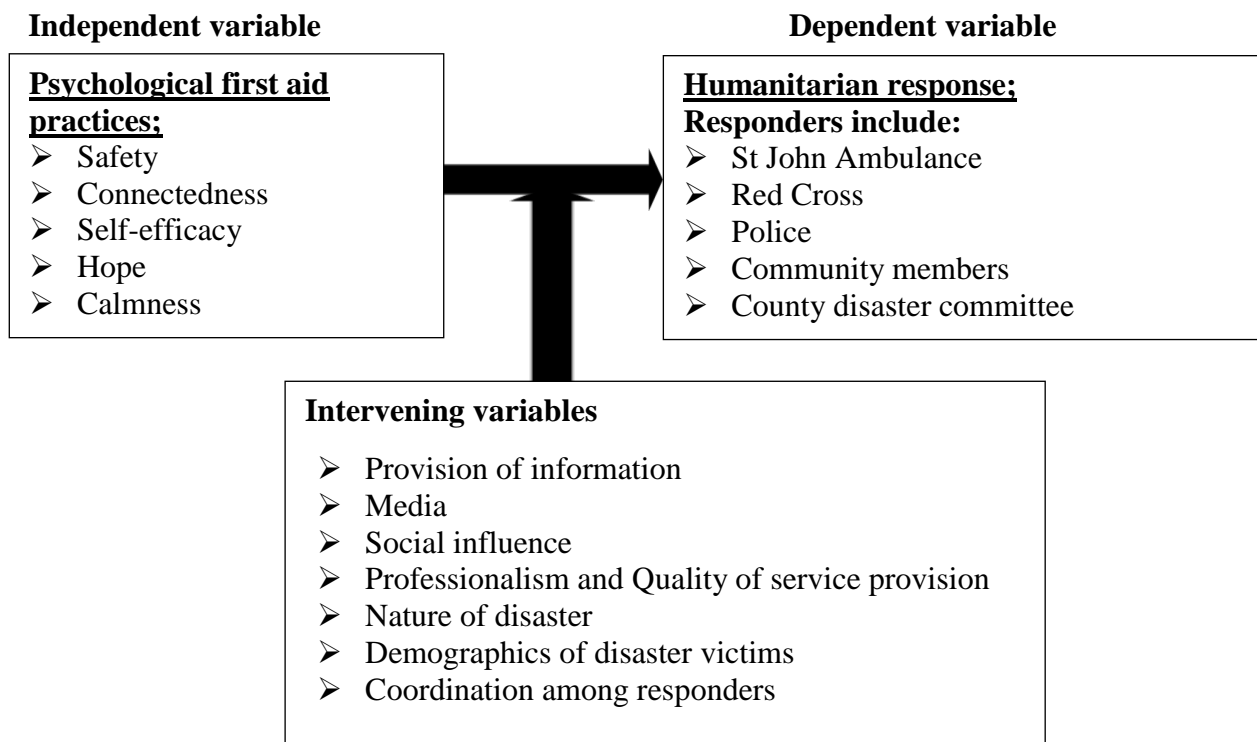


Figure 1: Conceptual model  
Source: (Researchers, 2021)

## 4. Research Methodology

### 4.1 Research Design

In order to ensure an effective evaluation of PFA effectiveness in the humanitarian sector, the researcher used a descriptive survey design and interrogated the study population both qualitatively and quantitatively. According to Creswell (2003) this type of research design provided accurate description of characteristics in terms of opinion, the ability of individuals, circumstances and the state of activities at a particular time. The research design assisted the researcher in answering questions of what, who, when, where or how in relation

to this research problem (Kothari, 2004). More information was gained because presence or absence of characteristics in relation to the variables under study were presented naturally as they occurred.

The research design assisted the researcher to interrogate how the essentials of psychological first aid were provided to disaster survivors. It also evaluated how the humanitarian sector has been providing emergency response and recovery as facts were gathered and no variables were changed during the study as articulated by Weirisma (1985).

#### 4.2 The Study Area

The study was conducted in Malava, Shinyalu, Butere and Matungu sub-counties of Kakamega County. In accordance to KNBS (2019) and Kakamega CIDP (2018-2022) Malava sub-county covers a total area of 427.20 square kilometers at latitude  $00^{\circ} 30' 00''$  N and longitude  $34^{\circ} 51' 00''$  E, Shinyalu sub-county covers a total area of 445.50 square kilometers at latitude  $00^{\circ} 14' 00''$  N and longitude  $34^{\circ} 49' 00''$  E, Butere sub-county covers a total area of 210.40 square kilometers at latitude  $00^{\circ} 12' 22.90''$  N and longitude  $34^{\circ} 29' 36.53''$  E and finally Matungu sub-county covers a total area of 275.80 square kilometers at latitude  $00^{\circ} 23' 00''$  N and longitude  $34^{\circ} 29' 00''$  E.

There are two ecological zones within Kakamega county that's the upper and lower medium zones. Malava and Shinyalu sub-counties are within the upper medium zone whereby people practice tea, beans, maize and horticultural farming usually on small scale. Matungu and Butere sub-counties are within the upper medium zone whereby people mainly practice sugarcane production with few farmers producing tea, cassava, ground nuts and sweet potatoes.

The amount of rainfall in Matungu, Butere and Malava sub-counties range from 1,800 mm to 2,000 mm per annum and that of Shinyalu sub-county from 2,000 mm to 2,200 mm per annum. Heavy rains are experienced between March and July and light rains between December and February. The range of temperature is from  $18^{\circ}\text{C}$  to  $29^{\circ}\text{C}$  with hottest months ranging from January to March. This high rainfall has made these four sub-counties vulnerable to meteorological and geophysical disasters especially floods and landslides (Kakamega CIDP, 2018-2022).

The choice of Kakamega County was based on the idea that, it experiences meteorological and geophysical disasters due to the high amounts of rainfall received in this geographical location. Secondly, it has been rated as one of the most populated counties in Kenya therefore the higher the number of vulnerable people, more effects of disasters are expected.

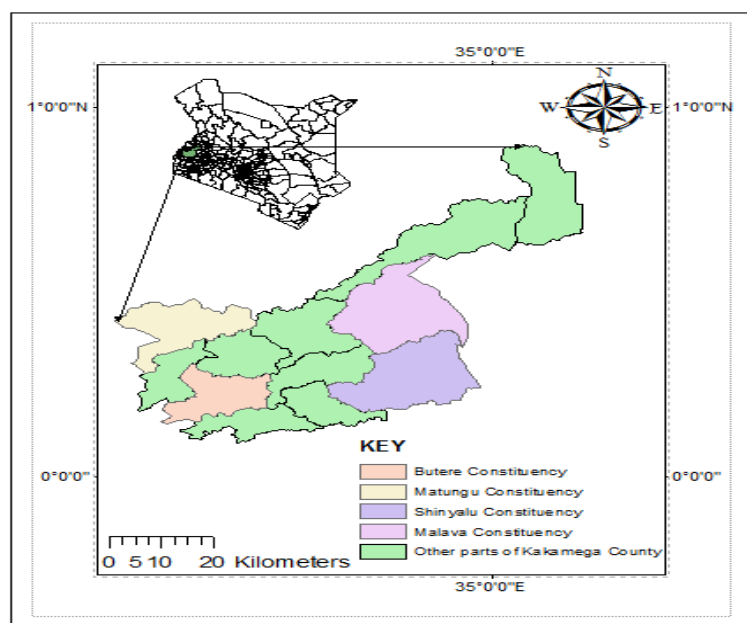


Figure 2: Map of study area  
Source: Researchers, 2021

#### **4.3 Sampling strategy and sample size determination**

Kakamega County has a total of twelve sub-counties and based on 30% sampling units as argued by Mugenda and Mugenda (2003) this study included only four out of the twelve sub-counties which were selected by convenience sampling. Malava and shinyalu sub-counties were hit by landslides in the year 2007 and 2016 (Allan and Cyrus, 2007; Hilton, 2016), Butere and matungu sub-counties were affected by floods in the year 2019 (Muriuki, 2019).

Malava sub-county has seven county assembly wards, Shinyalu sub-county five county assembly wards, Butere sub-county five county assembly wards and Matungu sub-county with county five assembly wards. Based on 30% sampling units of the study population as stated by Mugenda and Mugenda (2003) two county assembly wards were selected from each sub-county giving a total of eight county assembly wards which were selected by simple random sampling. The county assembly wards were Namamali and Koyonzo in Matungu sub-county, East Kabras and Chemuche in Malava sub-county, Isukha North and Isukha East in Shinyalu Sub-county and Marenyo shianda and Marama south in Butere sub-county. The number of sub-locations where the research was carried out were sampled from the eight county assembly wards also using 30% sampling units (Mugenda and Mugenda 2003).

Simple random sampling was used to come up with 12 of the 40 sub-locations. The sample in each sub-location in relation to the household units was determined using stratified proportionate sampling because all the twelve sub-locations have different number of households. According to Smith (1983) and Isaac and Michael (1981) when sampling a population of 10,000 using 95% level of precision, the required sample size is 385. Simple random sampling was used to select household heads from all the sub-locations as per the number of households units sampled in each sub-location.

#### **4.4 Data collection instruments**

Primary and secondary data played a vital role as it was used in this study. Questionnaires, focus group discussions, observation checklist and interviews were be used to collect primary data. According to Rasmussen & Erik (2002) and Kawulich (2012), these methods give a better and deeper understanding of what is being investigated. In addition, these methods collect data quickly, they are inexpensive, accurate and accurate (Dalati & Marx, 2018).

#### **4.5 Data analysis and presentation**

Version 23 of Statistical Package for Social Scientists (SPSS) software was used in the analysis of quantitative data and it has been representable in charts, tables and bar graphs by use of descriptive statistics which include frequencies, means, standard deviation and percentages. Analysis of qualitative data involved narrative report analysis with the use of thematic techniques so as to support the data in quantitative form. Inferential analysis which determines the level of correlational significance between variables of the study involved the use of chi square test.

### **5. First aid practices applied by humanitarian responders during disasters in Kakamega, County**

The findings indicated that casualties were carried to a safe area using different methods. Blanket and stretcher carry was applied as witnessed by 39 (9.9%) and 114 (35.4%) of the respondents respectively. This was applied by the emergency responders with rescue equipment and some first responders with physical first aid skills. To the contrary, a large number of the respondents that is 169 (52.5%) witness unorganized methods used to carry disaster victims. This is an indication that there is a need to train more people on physical first aid skills in Kakamega County. An interview with St John Ambulance and Red Cross officers indicated that:

There are many volunteers across Kakamega County and during such traumatic events, they are activated using the volunteer management system so as to assist where necessary during times of traumatic events. Together with community members, volunteers offer physical and psychological first aid before ambulances and other responders arrive to the scene. They

normally use locally available materials to save lives (Interview with St John Ambulance and Red Cross officers, 16th June, 2021).

In reference to Austin et al (2016), proper lifting and moving of casualties is very essential so as to prevent further injuries. Most people die due to actions of lay people who always arrive at accident scenes first. With proper lifting techniques and making use of appropriate equipment, life is saved which is always a good move to embrace during emergency response. Unorganized casualty handling aggravates injuries and according to the findings, most people in the villages are not conversant with skills needed to promote casualty recovery. This has identified a gap in regard to safety awareness to hazard prone areas within Kakamega County.

In contrary to the stated findings, Horn et al (2019) found out that some trainings given to non-specialists are diluted hence poor outcome towards emergency response. A good example is when the responders give affected people false hope and fail to fulfil the given promises. This affects the overall effectiveness of PFA.

**Table 1. Methods used to carry the injured**

| Method of carrying                     | Frequency | Percent | Valid Percent | Cumulative Percent |
|--|-----------|---------|---------------|--------------------|
| By use of blankets                     | 39        | 12.1    | 12.1          | 12.1               |
| Use of stretchers                      | 114       | 35.4    | 35.4          | 47.5               |
| Unorganized grabbing of hands and legs | 169       | 52.5    | 52.5          | 100.0              |
| Total                                  | 322       | 100.0   |               |                    |

Source: Researchers, 2021

### 5.1 Psychological first aid practices applied during disaster response

Findings indicated that 68.6 % of the respondents witnessed the principal of safety being applied during disaster interventions and were very satisfied. FGDs participants indicated that people were evacuated to safe grounds so as to prevent increased number of casualties Police officers took a role so as to ensure security for everyone and avoid creation of chaos which can make rescue operations difficult. Community members took a role of helping survivors carry their belongings and some offered accommodation for safety purposes. Safety protects affected individuals from further psychological and physical harm (Brymer *et al*, 2006). One of the FGD participants indicated that:

During the heavy rains, landslides buried people alive in kuvasali and this caused a lot of fear to the survivors. They were advised to move to a safe area away from the impact zone and this created a sense of safety. Being around the scene was so traumatic even during rescue operations because of continued heavy downpour (FGD with community members, 10<sup>th</sup> June, 2021).

When affected individuals remain in the danger zone, the state of insecurity will increase which in turn slows down psychological recovery. Ongoing threats confront the affected regularly, therefore, the essence of a quicker response towards security provision. The FGD feedback is a good indication of how humanitarian responders try to help the affected. Other members of the society also show concern as it is morally right to help someone who is experiencing difficulties. An interview with a police officer indicated that:

After a disaster impact, there is a lot of confusion and state of unrest from community members. This usually causes a chaotic scene hence interfering with response activities of humanitarian organizations. Police officers are deployed so as to ensure a smooth running of

operations like supply of food and non-food items to the affected. They communicate to everyone that security will be provided so as to ensure calmness. All the rescue activities are governed by an effective incident command system (Interview with a police officer, 25<sup>th</sup> June 2021).

The police are very essential during disaster rescue operations in provision of law and order. In conjunction with other response organizations, they make sure that the incident command operations are executed effectively without interference from some members from the community. With proper coordination, PFA provision becomes effective and it as positive move towards psychological well-being of the affected.

In regard to displacement, 92.2 % of the total respondents indicated that displaced survivors were referred to their family members and relatives so as to recover from the psychological trauma and they were extremely satisfied. FGDs participants confirmed that, the affected were received warmly and helped by the society after the traumatic event. In reference to Hobfoll *et al*, 2007, connectedness eradicates loneliness and in turn reduce chances of casualties developing PTSD.

In terms of relaying information, 59% of the respondents confirmed that rumours and false information was minimal but they were slightly satisfied. There was a slight indication of attaining a sense of calmness, however, it promotes recovery as survivors feel somehow relaxed (Henry, 2016). Negative statements after a disaster deteriorates hope of the affected towards recovery, therefore, it is of high essence to maintain a good communication with the affected for a quick mental healing.

The element of hope prevailed and 56.2 % of the respondents confirmed not to be satisfied at all by the process. There was the presence of reassurance, however, this was supported by few respondents quantitatively and it is an indication of a low reach out to the affected individuals. A member of the FGD indicated that:

Reassurance was given to the affected by church members and other people were ready to help the affected families recovery. Despite the unfortunate event, they were told to hold on their faith to God and things will return to normalcy. (FGD with a community members, 11<sup>th</sup> June, 2021).

In regard to lifestyle adaptation, 64.9% of the total house hold head respondents indicated to be moderately satisfied by the fact that disaster victims were able to adapt to the new lifestyle after the traumatic event, which is a good indication of self-efficacy. Through continued counselling and encouragement the disaster survivors had hope of a better tomorrow. As supported by Gosselin and Maddux (2003) they had faith that whatever they do will have a positive out which will change their lives even after the traumatic event.

It is evident social connectedness is more effective as it was rated at 92.2% and it indicates that, affected individuals feel more appreciated when there is more cohesion in the society. An improvement is required in terms of calmness provision by ensuring correct information is relayed to the affected individuals and their families. In addition, a positive attitude is needed so as to give hope to the affected people so as to enhance recovery. The following is an illustration of the effectiveness of PFA elements in terms of satisfactory levels and their percentages in figure 3.

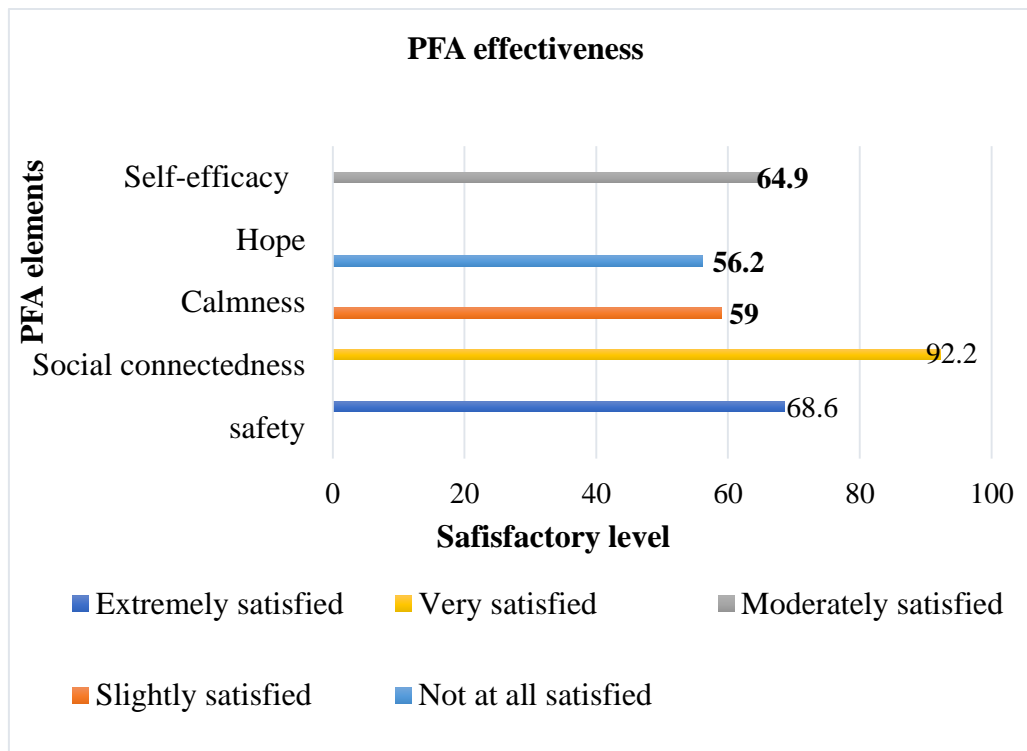


Figure 3: PFA effectiveness  
(Source: Field data, 2021)

The county also plays a big role to help the affected survivors recover after disaster response. Food and non-food items are offered in time so as to take care of the basic needs of the affected individuals. For an effective self-efficacy, the affected are connected to counselling services so as to get psychological support.

After physical first aid, the victims are rushed to hospital for further treatment. This is usually accompanied by reassurance so as to promote recovery. Some patients are send back home for recovery once stable but they are not left alone as they are connected to available community health workers. A good connection between the hospital and the outpatients is always maintained so as to offer any medical support on needs basis until fully recovery. Volunteers from St John Ambulance and Red Cross also play an important role in offering follow up services for critical victims, however, there lacks an effective system for such follow ups. As supported by McFarlane and Richard Williams (2012), it is essential to ensure that intervention from the public health takes place immediately after disasters so as to offer physical and psychological help to the survivors.

## 6. Summary and Conclusion

The study objective was to determine the psychological first aid practices applied by humanitarian responders during disasters in Kakamega County, Kenya. The study findings from 322 respondents reveals that, the most applied element of PFA is social connectedness which was at 92.2% (297), followed by safety at 68.6% (221), self-efficacy at 64.9% (209), calmness at 59% (190) and lastly hope at 56.2% (181). In addition, findings of moving injured people to a safe location which is a key determinant of PFA because it forms the initial contact with casualties reveals 52.5% (169) to the use of unorganized methods to carry the injured, followed by use of stretchers at 35.4% ( 114) and lastly use of blankets at 9.9% (39).

According to the objective, this study concludes that emergency responders in Kakamega County apply different psychological first aid practices which include safety, social connectedness, hope, self-efficacy and hope to the disaster victims. The most applied is the social connectedness at 92.2% of 322 respondents and the least is hope at 56.2%. Most of these practices are applied by local people within the affected areas. The study reveals there is gap between professional emergency responders and the local people living in vulnerable locations.

## 7. Recommendation

According to the first specific objective, the County Government should ensure that there is more coherence between the local people in vulnerable areas and disaster responders so as to ensure physical and PFA practices are given a standard scope of provision in terms of equality and equity. This will bridge the response gap and ensure the less effective measures are beefed up.

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