



**TRUST, POWER DYNAMICS AND COLLABORATIVE DISASTER MANAGEMENT IN NAIROBI CITY COUNTY,
KENYA**

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ABSTRACT

Achieving effective collaborations during emergency and disaster management remains a challenge due to trust and power asymmetries among the participating agencies, therefore there is need to understand how trust and power dynamics influences effectiveness of collaborative disaster management. The study assessed the influence of trust and power dynamics on the effectiveness of interagency collaboration during disaster management in Nairobi City County (NCC), Kenya. The study was anchored on social capital theory, it employed both cross sectional survey and phenomenological research designs. Target population was 3045 persons working with disaster management agencies in NCC and a sample size of 317 purposively and stratified randomly picked from the various strata of target population. Data collection instruments used in the study were questionnaires and key informant interview guide. Quantitative data was analyzed using descriptive statistical procedures and inferential analysis specifically linear regression. Qualitative data was analyzed thematically. Findings of the study revealed that there is a significant positive relationship between trust, power dynamics and interagency collaboration where a correlation coefficient (R) of =0.288; P= 0.001 was established, this implies that trust and power relations contribute 28.8% of the outcome of IAC. Coefficient of determination (R^2) was $R^2= 0.235$; P= 0.00, this implies that 23.5% of variability in IAC during disaster management is explained by trust and power dynamics. Further, the study revealed that lack of trust and power equalization makes collaboration almost unattainable by resulting to increased conflicts, lack of synergy, unhealthy competition, exclusion of low power actors, reluctance by agencies to share resources. To achieve power equalization and trust during IAC, the study concluded that there is need for inclusion in decision making, agencies valuing each other's contribution, encouraging symbiotic working relations and agencies striving to complement each other instead of competing each other. The study recommended creation of opportunities for agencies from different backgrounds to interact regularly as this would help agencies to develop an understanding of each other's capabilities and weaknesses, cultivate trust amongst themselves, change and improve their attitudes and perception towards each other, bridge power differences, helps to develop individual experiences in collaborations and above all provide opportunities for discussing challenges. This can be achieved through holding joint training and drills, workshops and meetings

Key words: *Interagency Collaboration (IAC), Disaster Management (DM), Disaster Management Agency (DMA) Collaborative Disaster Management (CDM) and Interagency (IA)*

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INTRODUCTION

Disaster management according to UNISDR (2012) involves coordinating and integrating all activities necessary in building, sustaining and improving the capabilities for preparing, protecting, responding and recovering from disasters. Recent global events have highlighted that countries previously deemed not disaster prone are now experiencing an increased intensity and frequency of disasters (Yassin, 2015; Sulaiman, Teo, Fernando, Shiau, Roslan & Abdul, 2019). The global rise in disasters is shocking and alarming and calls for effective management strategies (Sapir, 2019a), hence the adoption of Interagency collaborative approach since it engages all sectors of the society in a decentralized manner rather than the traditional disaster management tools (WHO, 2017). Traditional disaster management tools have proved to be ineffective in managing disasters (Kapucu & Garayev, 2011), in this regard, collaborative decentralized systems of disaster management are increasingly being instituted to manage disasters (Hileman & Bodin, 2019). Global disaster frameworks like Hyogo framework for action (UNISDR 2005) and its successor the Sendai Framework support disasters to be managed in a networked collaborative manner.

IAC improves collective actions, sharing of resources (Christensen & Ma, 2020), promotes innovation (Hartley & Rashman, 2018), and provides opportunities for organizations to learn (Provan, Kenis and Human, 2015). Despite the increase in the development of IAC tools to manage disaster, various studies and practitioners of the concept have noted that interagency collaborative process is highly dynamic and complex, thereby difficult to achieve (Tang, Shao, Zhou & Hu, 2021). The complexities in achieving effective interagency collaborations during emergency and disaster management are as a result of integrating different agencies from diverse backgrounds and with different interests and goals. This presents human, relational and practical dynamics which influences effectiveness of CDM. According to Nowel, Steelman, Velezo & Yang (2018) there is lack of

understanding of the impact of relational and human dynamics on the outcomes of IAC, hence need to examine how trust and power asymmetries influence effectiveness of IAC during DM.

Trust and power asymmetries are interactional dynamics that occur at all levels of interagency collaboration and are relational in nature, according to Fodor, Alina, Iulian & Petru (2018) these relational dynamics are key in maintaining and sustaining collaborations. This implies that there should be proper understanding of how individuals during CDM interact and how such interaction influences CDM effectiveness. Other relational dynamics includes communication, interaction of individual personalities, past experiences, as well as individual perception of others and their attitudes towards the collaboration process. Trust levels and power dynamics during CDM determines how individuals will share resources during CDM and the attitude and perception individuals places on others. According to Halvorsen, Almklor & Gjosund (2017) trust among stakeholders' during CDM process is a key human and relational dynamic that influences the effectiveness of collaborations. Despite Halvorsen et al., (2017) noting trust to be key in influencing success of interagency collaborations during disaster management, how the lack of trust can be mitigated by the stakeholders was not addressed and the reason for lack of it was also not given. Therefore this study sought to examine how lack of trust and power equalization among participating agencies influences effectiveness of CDM in NCC, Kenya, and how such can be mitigated to achieve effective interagency collaborations for disaster. A study carried out in Sweden on professionals' perception on IAC by Olena (2015) concluded that human dynamics, specifically trust and power asymmetries were the main factors seen to influence effectiveness of IAC in service delivery. However, the direction of the influence of the dynamics was not addressed by the study, that is, how specifically each of the dynamics influences IAC was not explained. Also, how to attain trust and achieve

power was not addressed by Olena (2015). Therefore, the study sought to examine specifically the influence of trust and power dynamics on IAC and how the dynamics are attained to ensure success of CDM. Disasters in Nairobi City County are managed collaboratively where various disaster management agencies including the police, the Kenya defence forces, the national youth service, national and county disaster coordinative agencies and various nongovernmental organizations work collaboratively with each other. However, management of past disaster scenarios in the county have demonstrated difficulties in achieving effective collaborations. For instance, the collaborative response to the Westgate mall attack triggered many questions and concerns about Kenya's security community and first responders' ability to collaboratively respond to and manage disaster (Murphy and Dayle, 2013). The collaborative response collaborative response failure was attributed to relational dynamics including trust and power asymmetries among the agencies involved.

Statement of the Problem

Despite the increasing development and adoption of interagency collaborative approach in management of disaster in Nairobi City County, Kenya, past experiences in management of various disaster scenarios including the Westgate gate mall attack have shown that there are complexities and difficulties in how such agencies involved work collaboratively. The difficulties in achieving effective collaborative response to disasters can be largely attributed to human and relational dynamics, that is how individuals from the various agencies involved relate, interact, their levels of trust, their attitudes and perception towards others and also power imbalance. Failing to achieve power equalization among disaster agencies and also lack of trust during collaborative response has dire consequences on the effectiveness of IAC arrangements. However, Previous studies have looked at the concept of collaborations in general, emphasizing on benefits with very scarce literature on how the various relational and human dynamics

specifically trust and power interact with other dynamics and how they influence interagency collaborative management during disasters. Examining how these aspects of human and relational dynamics influences interagency collaborative disaster management is key in understanding IAC networks and can help to achieve and sustain successful IAC in management of disasters in the city.

LITERATURE REVIEW

Theoretical Framework

Social Capital Theory

The SCT was first proposed by French social theorist Pierre Bourdieu (1930-2002) and later American social scientist James Coleman and American political scientist David Putnam (1986-2000). The concept of SCT is defined in multiple ways across different disciplines, as observed by Ostrom (2009) who noted that two assumptions are often emphasized by most of these definitions. The first assumption is that social capital is one of the resources which are only accessible by social network members while the other assumption is that there is a unique capital in a given social structure which the social network members can exploit to advance their interests. Therefore, social capital can be considered as a combination of resources which are derived from, accessed through, and embedded within a network of relationships among organizations and individuals (Nahapiet & Ghoshal, 1998). According to Ostrom (2009) and Helliwell, Akin, Shiplett and Wang (2018), social capital enables a network of individuals to share common values, norms and shared understanding in a formal or informal association, this facilitates cooperation, collective actions and problem solving among the members.

According to Lin (1999) SCT contains the following elements; resources embedded in a network, resources in a purposive action and resource mobilization. The greatest strength of SCT is seen as lying in its ability to ensure that other actors within the social network access the shared resources and

also help organizations in a collaboration to exert influence as opposed to single actors while helping to spread innovation in a social network. According to Meinen, DiGregorio & McCarthy (2004), SCT entails groups, networks, sanctions, norms, common rules, exchanges, reciprocity, and trust relations which allow generation of social capital assets. According to Meinen-Dick et al (2004) SCT is a source of a critical framework upon which social relationships and connections can be explained for generation of collective actions to benefit members of a given group. Theoretically, SCT is applicable at various units and levels to analyze interactions among communities, organizations, and individuals. Nahapiet (2009) explained that SCT is also useful in studying the interrelationships among organizations at various analysis levels. The objective of the study aims at examining how trust and power asymmetries influence CDM and was anchored in the SCT since human and relational dynamics revolves around issues of trust, interaction of individual personalities, and social norms. According to Ramos-Pinto (2006) social capital facilitate collectively made actions where social capital elements are potentially capable of making collective actions.

Review of Related Literature

Trust and Interagency Collaborative Disaster Management

Trust as a relational and human dynamic interacts highly with other dynamics to influence effectiveness of interorganizational collaboration (Berasategi, Arrana & Castellano, 2011). Where according to Grant & Hoover (2002), trust comes from a history of joint collaborations in exercises and management of previous disasters. However, not all forms of trust are as a result of past history of collaborations. This is because there are situations where DMA meet for the first time and trust each other. The view by Grant & Hoover (2002) was supported by Cook (2009) who perceived trust as a lubricating ingredient in any relationship and it take time to be built among entities. The implication of this observation is that

collaboration agencies should understand that they all have a role to play to built trust. To DeOlivera & Rabechini (2019), trust serves as glue where legal rules are absence, this implied that a trustworthy environment during CDM is necessary than even binding agencies through rules. Trust according to Lewickis (2014) is confident positive expectations regarding another person's conduct while according to Strahorn, Gajendran & Brewer (2015) trust can be inherent to a relationship due to personal features or learned by interpersonal contacts. Trust as result of personal features manifests in personal characteristics of individuals who pose friendly and trustworthy attitude towards each other.

According to Strahorn et al (2015), trust that develops as a result of contact between individuals, also referred to as learned trust is more conducive for collaborations since it is built up as a result of proven record of positive outcomes. However, it is important to take into account that negative experiences can also be a basis for future trust during corroborations. According to a study by Opolski, Modzelewski & Kocia (2019) on interorganizational trust in Poland involving local government institutions and nonprofit organizations, trust was noted to be correlated with perceived IAC effectiveness. This implied the need to investigate the influence of trust on effectiveness of CDM in NCC, Kenya, since the study by Opolski, Modzelewski & Kocia (2019) didn't conclusively show the correlation between trust and effectiveness of complex and difficult scenarios like disasters. A study by Gether-Talyor, Grayer, Kempf & O'Leary (2019) in USA on trust during collaborations noted that trust in collaboration is both an element of success and an outcome of interest in collaborations. This implies that CDM effectiveness is dependent upon trust amongst participating agencies during the collaborative arrangements and at the same time collaborations between agencies can result to trust.

According to Gether-Talyor et al (2019) individual perceptions as a result of one's assessment, experience and dispositions in which one believes in

and willing to act on constitute trust, and it includes reliance on principles, rules, norms and procedures that articulate collective expectations. This implies that the trust individuals have on others during interorganizational collaborations is partly dependent upon their organizational rules, norms, principles and procedures. Trust being a human dynamic in this case is seen to interact with organizational dynamics, where organizational norms, procedures, rules and principles contribute to a great extent to determining individuals trust. Hence the need by the study to examine whether norms, principles, procedures and rules held by DMA in NCC, Kenya influenced trust held by individuals during CDM. Even though high levels of trust was noted by Gether-Taylor et al (2019) and Opolski et al (2019) as influencing effectiveness of IAC, how trust between stakeholders from different agencies established and maintained trust was not articulated, hence the study sought to examine how interorganizational trust amongst collaborating agencies can be established and maintained to achieve success during collaborations in NCC, Kenya. Pishdad-Bozorgi and Beliveau (2016) claimed that trust amongst all other dynamics in collaborations work was the cornerstone of collaboration, this is because it was observed to influence collaborative work highly by creating an enabling environment for collaborations or lack of it hindering how disaster management agencies were collaborating during disaster management operations. This implied the need for this study to investigate the influence of trust during CDM in NCC, Kenya and explore ways through which high levels of trust amongst participating agencies can be achieved during CDM in NCC, Kenya.

Green et al 2008 emphasized on the role of participating agencies understanding each other's goals, values and perspectives, as failure of this can fuel mistrust among them, in turn inhibiting their collaborative agenda. A study conducted in Poland by Kucharska (2017) on the relationship between trust and collaborations indicated that there was a strong correlation between trust and

collaborations. however, the study by didn't indicate specifically how lack or presence of trusted relationships during collaborative process influence on effectiveness of collaborations CDM. Mwangi (2018) noted that prior to Westgate Mall attack in Nairobi, agencies failed to share intelligence, a factor the study attributed to distrust and suspicion among and within agencies responsible, this further escalated the poor collaborative response to the attack. However, how distrust and suspicion amongst agencies comes about and how it can be mitigated was not articulated by Mwangi (2018) Hence, this study investigated how presence and lack of trust during influences CDM effectiveness in NCC, Kenya and further what causes distrust and suspicion amongst agencies during emergency and disaster management. In understanding building of trust during collaborative processes, Emerson and Nabatchi (2015) emphasized on structure or relationships between individuals, groups or organizations. This clearly demonstrate the interaction of process or implementation dynamics, Organizational and human or relational dynamics, where trust which is a human dynamic is being influenced partly by structure of the organizations involved in the collaboration and at the same time by the relationships between individuals involved in the collaboration. This implied that to achieve successful CDM in NCC, Kenya, there is need to understand how the various interagency dynamics interact to influence the effectiveness of CDM in NCC, Kenya.

Power Dynamics and Collaborative Disaster Management

According to a study by Dewulf and Elbers (2018) in Netherlands, power asymmetry among participating agencies during collaboration was observed by the study to influence collaborative effectiveness by causing a wide range of undesirable consequences. The study indicated that as a result of power asymmetries, low-power actors or agencies in a collaborative process may be ignored, over-ruled or even excluded by dominant agencies. The exclusion, ignoring and overruling of

less powerful agencies by powerful agencies during collaborative process leads to lack of commitment, lack of knowledge and information sharing, lack of common understanding to problems. The resulting effect is failure in interorganizational collaboration. The same observation was noted by Arai, Oktoriana, Maswadi, Suharyani & Inoue (2021) in their study in Indonesia where power asymmetry was observed to undermine effectiveness of collaborative processes where powerful actors represented by government tended to control the processes and thereby producing benefits for dominant groups and less empowered stakeholders ignored. Studies by Dewulf & Elbers (2018) and Arai et al (2021) noted power asymmetry as negatively influencing effectiveness of collaborative processes, however, the studies did not articulate the mitigation measures for power imbalances during CDM. Therefore, the study investigated whether there existed power imbalances among DMA during CDM in NCC, Kenya. Also, mitigation measures for power imbalances were recommended for by the study.

According to Purdy (2012) failing to manage power asymmetries leads to failures in collaborative arrangements due to lack of synergy, trust, innovation and creativity in such collaborations. The exclusion of less powerful agencies from decision making tables by those agencies with greater resources as a result of power struggles impedes information sharing and results to decisions biased towards such powerful agencies. The observation by Purdy (2012) characterized the collaborative response to the Westgate mall attack where some responding agencies felt devalued by being replaced with other personnels from different agencies. There were claims by some agencies that, the process of replacement was not procedurally undertaken, for instance lack of handing over situation brief from the agencies impeded the success of the collaborative response according to the agencies replaced.

According to a study by Mwangi (2018), failures in collaborations among security agencies involved in such operation is due to power asymmetry and IA

rivalry, where the study further noted that, the IA rivalry during the West gate mall attack in 2013 revealed that the country's security agencies pursued their agency specified interest that are aimed at maintaining supremacy over collaboration efforts. For instance during the Garissa University attack, there were reports that it took a certain special response team very long hours to arrive at the scene by having them travel by road from Nairobi to Garissa instead of them being flown there, yet time is a factor while responding to disasters especially terror attacks. This can be attributed to lack of coordination in collaborative disaster management in the country and also the rigid organizational structures, policies and procedures alongside agency rivalry and power asymmetry. The slow and failed IA response to Westgate mall attack, Mpeketoni attack and Garissa university attacks according to Mwangi (2018) were as a result power asymmetries. According to Harris & Allen (2011), competing power relations among various agencies and team members top the list of regular sources of tension in collaborations work. Despite the knowledge that power relations is a source of tensions and a cause of failure in collaborative processes, study by Mwangi however did not articulate how such asymmetry can be mitigated. Therefore, this study investigated whether IA rivalry amongst DMA existed during CDM in NCC, Kenya, and recommended mitigation measures for IA rivalry and conflicts.

METHODOLOGY

This research employed both cross sectional survey and phenomenological research designs to enable investigations into the subject under study. Phenomenological research design was useful in finding out human experiences of the people involved (Maypole & Davies 2001), i.e., lived experiences of disaster management personnel who had been involved in IAC. Cross sectional survey design was employed since the study comprised of different agencies involved in management of disaster. The study site for this research was Nairobi City County. NCC was a

suitable study site because the county had in the past experienced some of the most devastating disasters in the country. Also, the site is highly populated and also the capital of Kenya and majority of disaster management agencies have their headquarters here. Target population was 3045 persons working with disaster management agencies in NCC including the National Police Service officers, the Kenya defence forces (Disaster Response Battalion), The National Youth Service, National Disaster Management Unit, National Disaster Operations Center, The Kenya Red Cross Nairobi Branch and The Nairobi City County Fire and Rescue Service. Sample size for the study was 317 officers purposively and stratified randomly picked from the various strata of target population. Data collection instruments used in the study were questionnaires and key informant interview guide. Quantitative data was analyzed using descriptive statistical procedures and inferential analysis

specifically linear regression. Qualitative data was analyzed thematically.

FINDINGS AND DISCUSSION

The objective of the study was to assess how trust and power dynamics interacts with other interagency dynamics to influence the effectiveness of collaborative disaster management arrangement in Nairobi City County, Kenya. Therefore, analysis of how presence and absence of trust during interagency collaborations and power asymmetries influences on CDM was the focus. Respondents using a 5-point Likert scale of responses ranging from SA-Strongly Agree, A-Agree, U-undecided, D-Disagree and SD-Strongly Disagree were asked to assess this influence based on the indicators contained in the questionnaires administered to them. The table below provides a summary of descriptive statics results for organizational dynamics influence on IAC disaster management.

Table 1: Descriptive Results Summary for HD effects on CDM

Statement	SA %	A %	U %	D %	SD %	Mean	Std. Dev.
Trust influences CDM	29.7	67.3	1.5	1.10	0.40	4.64	0.62
For agencies to deliver during CDM trust is needed	44	43	3.8	5.8	3.8	4.18	1.00
Power asymmetries during CDM Influences its effectiveness	60.9	26	6	4	2.3	4.63	0.55
Power struggles during CDM result to unhealthy competition	74.7	20	3.5	1.4	0.4	4.73	0.50
How individuals perceive others influence CDM	17.7	72.9	4.85	3.45	1.1	4.03	0.68
Individual perception of others during CDM determines level of trust on others	28.2	65	3	3	0.8	4.16	0.71

Source: Field Data (2021).

Trust and power assymetries

The researcher examined whether trust and power dynamics impact on the implementation of CDM. Respondents were asked whether trust influences CDM implementation, and from the study findings, majority (69.5%) of the respondents strongly agreed that trust influences CDM. 27.8 percent of the respondents agreed that trust influences

implementation of CDM, those who disagreed on trust having influence during implementation of CDM are 1.5 percent of the respondents with 0.4 percent strongly disagree. By having majority (69.5%) of respondents strongly agreeing that trust influences CDM implementation, this implied the need for having trust both at individual and at agency level during collaborative arrangements.

Trust in this study is conceptualized to mean a person's confidence in the reliability of another person to produce specific outcomes, where shared confidence held by members of a collaborative team constitutes inter-organizational trust. Presence of trust among participating individuals or agencies during CDM means lowered transactional costs, partners are able to predict others, there is knowledge and information exchange among members and also informal and interpersonal relationships among participants are developing. These imply development of a collaborative culture and building of social capital leading to successful collaborations.

The study finding strongly indicates that trust influence the implementation of CDM and is supported by Roud (2021) whose study noted that trust is a requisite and mediating variable that influence positively CDM, and is also consistent with a study finding by Kucharska (2017) who noted that there is a strong correlation between trust and collaboration, while according to a study by Kinnear, Patison, Mann, Malone and Ross (2014), sharing resources and information during collaborative processes was observed to be associated with trust. However, this finding is inconsistent with the study finding by Tang, Shao, Zhou and Hu (2021) in their study on understanding collaborative process and its effect on perceived outcomes during emergency response in China where it was noted that trust building does not affect perceived outcomes significantly. Collaborative arrangements constituting of government sectors only are characterized by hierarchical and horizontal governance mechanisms which provides for mandated interactions. In such scenarios, enhancing trust level among participating agencies may not lead to significant collaborative outcomes. The study finding by Tang et al (2021) did not rule out that trust influences CDM, but the influence according to their study was not that significant. During interaction with key informant KIR7 on trust, it came out that;

Lack of trust during collaborations is mainly because of lack of knowledge or understanding of others capabilities. This greatly influences how we interact, share information and also many conflicts arise making CDM very difficult. If we meet with agencies whom we have knowledge of their strengths, then trusting them is easier and this makes CDM more effective (Respondent KIR 7).

The implication of this is that, having opportunities for agencies to learn each other's capabilities in handling matters related to DM will help in developing trust among the agencies. If agencies meet with prior knowledge of how each others are in managing situations, then this will determine whether to trust them or not. Agencies trusting each other during CDM mean increased interaction, sharing of information and minimal conflicts, this will lead to successful collaborations.

Another key informant KIR15 had this to say concerning trust and CDM

It was very bad that during the Huruma building collapse, we struggled to get so many properties out of the disaster scene, but it was so bad that most of them got lost in the hands of those who were protecting and taking care of them, this greatly led to mistrust between us and the agency that was protecting the assets. The lack of trust led to almost no sharing of information and less interaction for the remaining days of the operation (Respondent KIR15).

Key informant KIR9 had this to say;

During the JKIA fire incident in 2013, we were working with so many agencies to put of the fire and also ensure that property seized from the building was well kept. It later emerged that some personnel from some of the responding agencies were captured on camera by the media stealing those properties and

even breaking into the duty-free shops to steal. This affected those of us who worked tirelessly during that incident and tainted the images of all agencies involved, and at the end of it all we were all blamed. This affected future interactions during subsequent fire incidents (Respondent KIR9).

The implication of the qualitative data obtained from KIR15 and KIR9 this is that, trust is also dependent upon previous performance of collaborations, that is, trust is an outcome of CDM. Where how collaborative arrangements perform determines trust in the subsequent collaborative arrangement. Mistrust comes as a result of bad past experience of working together between the agencies. Success in a CDM arrangement would mean that individuals will leave the scene satisfied, the satisfaction among the various participating individuals from different agencies positively influences their trust and perceptions on each other, during the subsequent CDM, such agencies would approach CDM with high levels of trust and positive perception about each other. The respondents were asked whether for personnel from different agencies to deliver during CDM trust is needed and the findings show 44 percent of the respondents strongly agree, 43 percent agree while 3.8 percent were undecided, 5.8 percent of respondents disagree while 3.8 percent strongly disagree that personnel do not need to trust each so as to deliver. Trust as an indicator of delivery during CDM had a mean of 4.18 and SD of 1. Individuals trusting each other during CDM means that they will develop the right working attitudes, perceive teammates positively, engage and consult widely, this will improve decision making.

Information flow will also be enhanced if individuals trust each and increased interaction with minimal conflicts. All, these will enable them to deliver during CDM. However, having individuals from different agencies sharing same expertise during CDM who do not trust each other does not mean that they would not deliver, but it will affect on the

quality of the final product or even difficulties in delivering, since in the event such individuals get stuck during CDM operations, they will find it difficult to consult from their team mates who they don't trust. The study finding is consistent with the findings by Curnin & O'Hara (2019) that trust is a critical component for individuals to deliver during response activities. During interview, key informant KIR2 explained the following concerning trust;

If the participating agencies during the Westgate mall attack had trusted each other, then this would have ensured that they complement each other well and delivered. Failing to trust one another compromised the whole Westgate operation. In operations where we trust one another, it becomes easier to complement each other and integrate to work as a team. (Respondent KIR2)

The implication of the qualitative data above is that, by individuals trusting each other during CDM, they will be able to integrate easily, complement one another and share information, thus deliver during the collaborative process

Power asymmetries influence on the implementation of CDM was sought and the finding indicated that majority (60.9%) of the respondents strongly agree that power asymmetry indeed influences CDM. Respondent who agree were 26.8 percent, 4 percent of the respondents disagree, .6 percent were undecided and 2.3 strongly disagreed. The reason for having majority of respondents (60.9%) indicating to agree that power asymmetries influences CDM is that, as a result of power imbalances, powerful agencies have got tendency to take control of collaborative arrangements. In taking control of the arrangements, less powerful agencies are likely to be excluded in decision making, exclusion means that their ideas and knowledge will not be utilized. This results to lack of morale, denies the collaborative arrangement an opportunity to use the rich knowledge base and wide perspective of approaching issues. Also, power asymmetries results to less stakeholder

engagement where participating individuals do not engage with each other properly or the engagement is skewed with the powerful or dominant agencies only directing others but not sharing. The finding corroborate study findings by Arai et al (2021) which noted that power asymmetries tend to undermine the effectiveness of collaborative processes, where the study noted that powerful actors tend to control the collaborative process and produce benefits for dominant groups with the less empowered stakeholders often ignored and deprived off opportunities to contribute meaningfully.

Further, the study finding is consistent with findings by Ran & Qi (2018) which concluded that imbalanced power asymmetries between stakeholders negatively influences collaborative process with strong parties taking up the initiative and excluding the weaker ones. This is against the principle of inclusivity which according to Rajala, Laihonon and Hapaala (2018) helps to create an opportunity for participants to identify and discuss actions needed to manage collaborations for successful outcomes. Therefore the exclusion of weaker stakeholders as a result of imbalanced power asymmetries during collaborations denies them opportunities for discussing actions needed, thereby disadvantaging collaborations. The respondents were asked whether struggle for power and superiority during CDM results to unhealthy competition, and the study finding indicated majority (76.7%) strongly agreed and 22.2 percent of respondents agreed that power struggles and superiority complexes amongst disaster management agencies results to unhealthy competition which greatly influences on its effectiveness. Only 1.4 percent of the respondents disagree, where to them struggle for power during CDM does not have any influence on the performance of CDM arrangements. Struggle for power and superiority was noted by majority of respondents (76.7%) to result to unhealthy competition because whenever agencies during CDM start competing for power, this result to

conflicts, lack of information sharing as agencies would want to use the information they have at their disposal to outshine others, agency goal directed behaviours take precedent in place of collaborative goals.

The finding on whether power struggles lead to unhealthy competition between agencies is consistent with study finding by Dewulf and Elbers (2018) who noted that power asymmetries cause a wide range of undesirable consequences, including competition, low power actors being over ruled or even excluded by domain agencies in decision making process. Also, the finding is corroborated by Purdy (2021) who noted that power asymmetries result to lack of synergy, trust and creativity, greatly influencing the effectiveness of collaborative arrangements. Levesque et al., (2017) noted that power equalization during collaborative process can be achieved through inclusion and valuing of ideas generated by other actors during decision making process. From the study finding, power asymmetries during collaborations influences greatly on the effectiveness of CDM negatively and that such power imbalances can be avoided if agencies learn to value each other's contribution and CDM leadership ensures that there is inclusion of agency representatives during decision making.

One of the key informant KIR2 narrated the following on power asymmetries;

To me Westgate attack was a learning lesson and a great experience that whenever we meet as security agencies to work together in such scenarios, agencies need not to fight as to who will take control or be the in charge of the operation, since we all know our roles and responsibilities well, we should have symbiotic working relations and strive to complement each other. But what did we do during the attack? Competition as to who is highly trained, who is mandated by the Constitution to do what, failed to share information or even communicate amongst ourselves,

top agencies leadership at the scene also did what? all because of supremacy, eventually we lost to the attackers (Respondent KIR2).

From the qualitative data, it is clear that whenever agencies during CDM start competing for power and control over the collaborative arrangements, this results to failure since such agencies will not share the much needed information and knowledge or even communicate among themselves as they will be working towards outshining others. Also, collaborative leadership should ensure that there is harmony between participating agencies and that role clarity is clear and proper procedures of complementing each others are there. From the study finding, power asymmetries almost make CDM unattainable, hence there is need for agencies responding to disasters to value each other's contribution and appreciate that no agency has all what it takes to manage disasters alone. The respondents were further asked to indicate their level of agreement with the statement that individual perception of others during CDM determines the level of trust individuals place on others. Findings showed that majority (65%) of the respondents agreed that level of trust is determined by how individuals perceive others and 28.2 percent strongly agree. Approximately 3 percent of the respondents disagreed that how individuals perceive others does not determine or influence the level of trust. Individual perception as an indicator of trust level was noted by majority (65%), this is because if individuals during CDM perceive others as capable, then this means they will have confidence in their reliability to producing the desired outcomes, hence they will place high levels of trust on them.

The study finding is consistent with the findings by Grant & Hoover (2002) who noted that the level of trust is influenced by perception an individual has over others. Even though findings of the study and

corroborating literature indicates strongly that the way an individual perceive others determines the level of trust they place on them, it is important to note that there are other factors that determines trust during CDM. During interview interaction with one of the key informant KIR14 on individual perception and trust level, the following came out;

During the Njambini plane crash, majority of uniformed personnel had no trust in us being civilians that we have crucial experience to help them in the mountain, yet our group comprised of first aiders and GIS specialist who could be of help, so all throughout the operations, they could only consult among themselves, until we reached a point when some of them developed mountain sickness and others experienced difficulties in breathing, that's when they started engaging with us (Respondent KIR 14).

From the above observation, the initial perception one has over other determines the level of trust to be placed. However, this may change as the individuals continue interacting. This study finding demonstrate that the perception an individual has over others, go a long way to determine the level of trust they put on them, and this greatly influence the CDM effectiveness by impeding on many factors like sharing of information, and having on board such individuals on the decision-making table. It also important to note that it is not always that an individual will perceive others negatively, there are instances where individuals will have a positive perception about others, and this greatly improves on the many factors that determine CDM success. For instance, an individual with past history of relating well will perceive others positively and this may lead to the same good work relations being extended over to the new assignment, thereby influencing positively CDM.

Inferential Analysis

Table 2: Correlations Summary Table

			HD
CDM	Bivariate Correlation	1	.288**
	Sig. (2-tailed)		.000
	N	266	266
H_Dynamics	Bivariate Correlation	.288**	1
	Sig. (2-tailed)	.000	
	N	266	266

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Data (2021).

Table 3: Regression Analysis Model for OD on IAC DM

Model		Unstandardized Coefficients		Std Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.533	.371		6.820	.000
	H_Dynamics1	.235	.069	.219	3.410	.000

a. Dependent Variable: CDM1

Source: Field Data, 2021).

From the correlations summary above, the correlation coefficient ($r = 0.288$, p value 0.001), meaning that there is a significant relationship between trust, power dynamics and IAC, with a strength level of 23.3 percent. From the linear regression model above, it is clear that trust and power dynamics influence on CDM is significant where the coefficient of determination ($R^2 = 0.235$, $\beta = 0.107$, $P = 0.001$) meaning that contribution of trust and power dynamics to the overall influence of IAC is 23.5 percent. The implication is that there are other dynamics other than trust and power dynamics which also influences interagency collaboration effectiveness like organizational and process or implementation dynamics. The relationship between trust, power dynamics and IAC can also be concluded to be significant, since P -value was 0.000 which is less than 0.05 , also for every 1 standard deviation unit increase in trust and power equalization would result to 0.235 standard deviation unit increase on CDM, therefore, trust and power are significant variables of CDM.

CONCLUSION AND RECOMMENDATIONS

An understanding of how trust and power dynamics interacts with other dynamics and the influence of

such interaction on interagency collaborations during emergency and disaster management is key to help in improving the establishment, sustenance and management of effective IAC disaster management arrangements. From research question, how do trust and power dynamics influence performance of IAC arrangement within NCC, Kenya, the study concluded that trust and power dynamics mutually work together to influence CDM effectiveness and that there are other dynamics other than trust and power dynamics that influences IAC effectiveness. It was concluded that creating opportunities for the various disaster management agencies to interact regularly will ensure that the agencies develop an understanding of each other's capabilities and weaknesses, cultivate trust amongst themselves, change and improve their attitudes and perception towards each other, bridge power differences learn to appreciate each other's contribution during collaboration process, create opportunities and platforms for sharing and above all opportunities for discussing challenges and help to develop individual experiences in CDM. Establishing and maintaining trust and power equalization during CDM is very critical, to achieve this, the study

recommended that the various agencies be holding regularly joint training and disaster response drills, workshops and meetings, in addition inclusion of agencies representatives during collaborative

decision making. This can be achieved through holding joint training and drills, workshops and meetings.

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