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Availability of Disaster Preventive, Response and Recovery measures for Disaster preparedness in academic libraries: An appraisal of some selected academic libraries in Gusau metropolis, Nigeria

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Abstract

The aim of this study was to examine the availability of disaster equipment and measures for disaster prevention, response and recovery in some selected academic libraries in Gusau metropolis, Zamfara State, Nigeria. Survey research method was adopted for the study using questionnaire as the research instrument. 86 copies of the questionnaires were systematically distributed across the four selected academic libraries in the city and out of which 82 copies (95.34%) were filled, returned and found suitable for use. Thus, the data collected using the questionnaire were analysed using tables, frequency and percentage. The results of the analyzed data shows that thunder arrestor is the disaster prevention equipment with highest rate in the libraries 25 (30.4). this was closely followed by smoke detectors 24 (29.2) for detecting early sign of fire disaster; warning alarm systems 22 (26.8) for alerting any impending situation. Building inspection measures and other equipment such as photocopy machines and antiviruses software recorded 5(6.09) and 6(7.31) respectively. Close circuit television and disaster plan were absent in the libraries as they recorded no responses. the results also revealed that fire extinguishers and clearly marked exit doors are the equipment and measures available in all the libraries for disasters response as the items recorded maximum responses 82 (100%) each. However, there is uncertainty surrounding the availability of communication gadgets for effective communication during disaster as 34 (41.46%) respondents recorded that they are not aware of the existence of the gadgets. Evacuation team 2 (2.43%), water hose 9 (10.97%) and disaster fighting team 20 (24.39%) are equipment and measures with least availability in the libraries. Moreover, the results show that mops 82 (100%) and segregation technique 70(85.36%) are the two dominant measures of disaster recovery. Other measures and equipment were conspicuously absent in the libraries as all the respondents 82 (100%) indicated. Finally, majority of respondents 40 (48.78%) strongly agreed that inadequate funding constitute a major constraint to disaster preparedness in the libraries. Other impediments as indicated by the respondents were lack of interest on the part of staff 46 (56.09%); lack of interest on the part of librarian 42 (51.21%). However, majority of respondents 46 (56.09%) and 42 (51.21%) and strongly disagree that environmental condition and poor library condition affect their disaster preparedness in the libraries. It was therefore recommended among other that the libraries should sensitize their staff and users on the roles they could play in disaster preparedness in addition to need for training the staff on regular basis on handling disaster equipment. Modern equipment for disaster prevention, response and recovery should be provided by the libraries.

The libraries should also plan for other sources of funding to enable them acquire and maintain best equipment for disaster prevention, response and recovery.

Key words: Disaster preparedness, Disaster prevention, response and recovery, academic Libraries

Introduction

Libraries are not immune to the devastation caused by natural or man-made disasters. The phenomena pose a tremendous threat to libraries and their collections, as it frequently occurs without warning and catches libraries off guard, resulting in serious consequences. According to Mitra (2015), a disaster is a major disruption of a community's or society's functioning that results in widespread human, material, economic, or environmental losses that exceed the afflicted community's or society's ability to cope using its own resources. Mathew & Eden (1996) defined disaster in the context of libraries as "any incident that threatens human safety and damages, or threatens to damage, a library's building, collections, contents, facilities, or services." Disasters were once thought to be unavoidable events which are beyond human control. In recent times however, disasters are being looked at as outcome of interactions between hazards and vulnerability. They are no longer perceived as sudden eruptions that are to be handled by emergency response and rescue services but as incidents that can be predicted, prevented or significantly reduced through effective disaster preparedness

Disaster preparedness entails predicting where a disaster may strike or the susceptible population in order to develop a complete strategy that includes efforts to avoid the unpleasant event. Libraries must provide relevant disaster equipment to address potential threats in order to meaningfully engage in disaster preparedness activities. Fire extinguishers, plastic sheet coverings, alarm systems, water hoses, freezers, CCTV, smoke detectors, and fire suppression

systems are all critical components of readiness. (Ilo et al, 2018). While preparedness comprises identifying a threat and putting in place proper procedures and equipment, responds are more concerned with taking a pragmatic approach to the issue. It necessitates a direct confrontation with the catastrophe, as well as the supply of disaster-fighting and evacuation equipment.

Research objectives

1. To find out the preventive measures and equipment available in the selected academic libraries in Gusau metropolis, Zamfara State for disaster preparedness
2. To identify equipment and measures available in the libraries for disaster response
3. To find out the availability of disaster recovery measures in the selected libraries
4. To uncover challenges bedeviling effective disaster preparedness in the selected libraries

Review of related literature

Disaster preparedness entails taking steps to prevent, respond to, and recover from disasters. Catastrophe preparedness in libraries, like any other organization, entails providing proper security, developing an emergency plan, providing adequate employee training, and, most critically, developing a thorough disaster plan. Disaster preparedness entails predicting where a disaster might strike, as well as the most vulnerable collections or sections. (Nikhbarksh & Farahami 2011, Ilo et al, 2018, and Oluwatola et al 2017)

In a study conducted by issa et al (2015) on the state of disaster preparedness of Kwara state public library reported rather mix result of the success recorded. While building of the library

was done in compliance with the all local fire, electrical, plumbing, and heating and construction code, the library has no disaster plan in place or disaster committee to steer the work of disaster preparedness in the library. This was in tandem with Suleman (2009) earlier findings on disaster preparedness in Nasarawa state academic libraries where he reported absent of comprehensive disaster plan that supposed to guide the libraries to fully prepare for the unwanted event.

In another vein, several studies were conducted on level of staff training on disaster preparedness in libraries. For instance, Marfo & Borteye, (2010), Panle & Samuel (2017), Abareh (2014) all lamented poor and inadequate training among staff with regard to disaster preparedness in libraries. In their case, Marfo & Borteye, (2010) reported poor and inadequate training for disaster preparedness in Kwameh Nkrumah University of technology, Library, Ghana. This is evident by strong response recorded by the researchers on the level of staff training on handling disaster related issues. This finding however, was not dissimilar to that of Abareh (2014) discovery when surveying twenty-one academic libraries in North Eastern Nigeria on their disaster preparedness. According to the finding, all twenty- one surveyed libraries 100% had no any structured programme for training staff on handling disaster related scenario. The result could not be un connected with the overall deterioration of the libraries as observed by the researcher. On similar note, Uwake (2019) cries similar result when he reported absence of any disaster training program at Michael Okpara University of Agriculture library. Staff or library management do not deem it necessary to train staff on what to do when there is disaster or even after the catastrophe. This lack of training often escalates   the situation beyond redemption as staffs are left stranded. Supporting this assertion, Panle & Samuel (2014), opined that lack of training on how to handle certain electrical appliance and fire extinguisher complicate the two separate fire disaster witnessed by University of Jos

Disaster response centers on responding to a disaster at the time of its concurrence that requires physical, pragmatic and responsive approach. According to Bansal (2015), Oluwatola, et al (2017). Ilo, et al (2018), Sayed & kidatunga, (2017) and Tukur (2021) response phase in libraries and information centers involves evacuation of library materials; cutting down the sources of water in the event of water disaster or switching off or cutting all electrical appliances; raising alarm for possible assistance elsewhere, activation of emergency operation plans; performing search and rescue operation and ensuring the security of the affected areas. As a necessary measure of preventing the escalation of the situation, disaster should be fought back. The sole aim of response is to minimize or mitigate the threat of the disaster thereby preventing its escalation to the other sections or departments in the building.

The main purpose behind disaster recovery is to restore the areas affected by disaster to their previous state. Recovery cycle in libraries and information centers goes beyond restoring the affected site to its previous state; it however, involves series of actions and activities for preventing materials less affected by the disaster from having contact with the seriously affected materials. (Nikbash, & Farahani 2011, Suleiman, 2009, Ilo, et al 2018). The phase involves segregation of an information material, drying of information materials rather that the costly approach of discarding it.

Disaster preparedness in libraries could be hampered by number of obstacle that could be partly responsible for poor preparedness of the unfortunate event by the libraries. Lack of fund to the disaster team for extensive training and purchase of adequate equipment for disaster preparedness is one factor that can seriously affect effective disaster preparedness and response plan of library. Nonchalant attitudes and poor leadership on the part of staff or disaster team could also spell a doom for any disaster planning in libraries. (Akor,2013, Ugwu, & Ezema

2015). In a study conducted by Issa et al (2012) on disaster preparedness of Kwara state public library discovered lack of prevention equipment and measures in the library. Disaster preparedness is achieved with adequate provision of equipment and measures aim at prevention of disaster of whatever nature. Corroborating with Issa et al (2012) Uwakwe (2019) reported lack of modern disaster preventive equipment at Micheal Okpara University of Agriculture. Similarly, Samuel and Panle (2014) lamented absence of modern firefighting equipment in the university of Jos library. This could be the reason for the occurrence and reoccurrence of fire disaster in the library.

Abareh (2014) in his wisdom, shifted the blame of poor disaster preparedness in libraries on lack of awareness and sensitization of staff on disaster preparedness. Akor (2013), Chezona and Eziola (2016) later added poor and inadequate budgetary allocation to libraries as the major obstacle to disaster preparedness in libraries.

Section A

Table 1: Distribution of respondents based on Gender, Age, working experience and Institution affiliation

variable	frequency	Percentage (%)
Gender		
Male	58	70.7
female	24	29.3
Total	**82**	**100**
Age		
20-25	7	8.5
26-30	11	13.4
30-35	18	22.0
36-40	23	28.0
41 above	23	28.0
Total	**82**	**100**
Working		

experience		
Less than 1 year	7	8.5
1-2	12	14.6
3-5	16	19.5
6-10	22	30.5
11 above	25	26.8
Total	**82**	100
Academic libraries		
Federal university Gusau Library	36	43.9
Federal college of education (tech) Library	20	24.4
Zamfara college of art and science Library	13	15.9
School of Nursing and midwifery Gusau Library	13	15.9
Total	82	100

The analysis in table 1 shows that 58 (70.7%) male and 24 (29.3) female responded to the research. This implies that library profession in the city is male dominated profession. Based on age, 36-40 and   41 above have the highest respondents with 23 (28.0%) each. This could not be un connected with the fact that majority of the respondents 25 (26.8%) have 11 years above working experiences in library. Based on institution affiliation, 36 (43.9%) are from federal University, Gusau, 20 (24.4%) from Federal college of education (tech), Gusau, while both Zamfara college of art and science and School of nursing and midwifery have 13 (15.9%) each of respondents. This implies that majority 36 (43.9%) of the research participants are from the University Library.

Section B
Table 2: **Availability of prevention measures and equipment for disaster preparedness**

Academic	Disaster	warning	Smoke	CCTV	Building	Thunder	Disaster	others

libraries	plan	alarm	detector		inspection	arrestor	training	
Federal university, Gusau	-	8	7	-	2	7	-	1
Federal college of Education (Tech) Gusau	-	7	3	-	1	5	-	2
Zamafara college of art and science	-	3	6	-	1	6	-	1
School of Nursing and midwifery	-	4	8	-	1	7	-	2
Percentage (%)	-	22 (26.8)	24 (29.2)	-	5 (6.09)	25 (30.4)	-	6 (7.31)

Table 2 contained analysis rate on the availability of disaster prevention equipment and measures for disaster preparedness on institutional basis. The result shows that thunder arrestor is the equipment with highest rate in the libraries 25 (30.4%). this was in cognizance with Ilo et al (2018) study that found the availability of thunder arrestors and other equipment in universities library in Nigeria. similarly, the result reveals that all the libraries had and installed smoke detectors 24 (29.2%) for detecting early sign of fire disaster. This was followed closely by warning alarm systems 22 (26.8) for alerting any impending situation. Building inspection measures and other equipment such photocopy machines and antiviruses software recorded 5(6.09) and 6(7.31%) respectively. Close circuit television and disaster plan were absent in the libraries as they recorded no responses. This was in tandem with Issa et al (2015) and Suleman (2009) works that reported absent of disaster plan in academic libraries in Nasarawa and public library in Kwara state.

Table 3: availability of equipment/measures in the libraries for disaster response?

Disaster response equipment/measures	available	Not available	I don't know	Total of Percentage%
Fire extinguisher	82 (100%)	-----	----------	(100%)
Evacuation team	2 (2.43%)	75 (91.5%)	5 (6.09%)	(100%)
Water hose	9 (10.97%)	51 (62.2%)	22 (26.82%)	(100%)
Disaster fighting team	10 (12.19%)	60 (73.17%)	12 (14.63%)	(100%)
Communication gadget	20 (24.39%)	20 (24.39%)	34 (41.46%)	(100%)
Marked exit door	82 (100%)	-------	------------	(100%)
other	18 (21.95%)	47 (57.31)%	17 (20.73)	(100%)

Table 3 reveals responses rate on the availability of disaster response equipment result and measures for disaster preparedness in the libraries studied. The result shows that fire extinguishers and clearly marked exit doors are the equipment and measures available in all the libraries for disasters response as the items recorded maximum responses 82 (100%) each. In similar studies, Borteye and marfo (2010) Panle and Samuel (2014) reported the availability of the items in the libraries they studied. However, there is uncertainty surrounding the availability of communication gadgets for effective communication during disaster as 34 (41.46%) respondents recorded that they are not aware of the existence of the gadgets. Evacuation team 2 (2.43), water hose 9 (10.97%) and disaster fighting team 20 (24.39%) are the responses equipment and measure with least availability in the libraries.

Table 4: Availability Disaster recovery measures/equipment for disaster preparedness

items	available	Not available	I don't know	total
Dryers	4 (4.87%)	76 (92.68%)	2 (2.43%)	82 (100%)
Segregation technique	70 (85.36%)	9 (10.97%)	3 (3.65%)	82(100%)
mops	82 (100%)	----------	----------------	82(100%)
insurance	-----------	80 (97.56%)	2 (2.43%)	82(100%)

| chambers | ------------- | 76 (92.68%) | 6 (7.31%) | 82(100%) |
| other | 56 (68.29%) | 22 (26.82%) | 4(4.87%) | 82(100%) |

Table 4 shows responses rate on the availability of disaster recovery equipment and measures for disaster preparedness. The result shows that all the libraries have mops in their stock with all the respondents 82 (100%) responded in affirmative. This was followed by segregation techniques with 70 (85.36%) of the respondents indicated the availability of the measures in their libraries. However, insurance policy and chamber were indicated to be not available in the libraries as the items score no response of their ability. Dryer raked only 4 (4.87%) of positive responses. Furthermore, majority of respondents 56 (68.29%) indicated the availability of other measures and equipment for disaster recovery such as binding services, provision of external hard disk and other storage device for back up.

Table 5: challenges associated with disaster preparedness in academic libraries

items	Strongly disagree	Disagree	Agree	Strongly agree	Total
Inadequate funding	3 (3.65%)	4 (4.87%)	35 (42.68%)	40 (48.78%)	100 (100%)
Poor library building	27 (32.92%)	42 (51.21)	3 (3.65%)	10 (12.19%)	100 (100%)
Environmental condition	46 (56.09%)	23 (28.o4)	6 (7.31)	7 (8.53%)	100 (100%)
Lack of interest on the part of staff	4 (4.87%)	6 (7.31%)	26 (31.70%)	46 (56.09%)	100 (100%)
Lack of interest on the part of librarians	8 (9.75%)	12 (14.63%)	42 (51.21%)	20 (24.39%)	100 (100%)

Results from table 5 indicated that majority of respondents 40 (48.78%) strongly agree that inadequate funding constitute a problem for disaster preparedness in their libraries. similarly,

majority of respondents 46 (56.09%) strongly agree that lack of interest on the part of staff further contribute significantly to poor disaster preparedness in the libraries. furthermore, the study reveals that, majority of respondents 42 (51.21%)n agree that also lack of interest on the part of librarians affect disaster preparedness in the libraries.

However, majority of respondents 46 (56.09%) strongly disagree that environmental condition affect their disaster preparedness in the libraries. Furthermore, the study also reveals that majority of respondents 42 (51.21%) disagree that poor library building affect their disaster preparedness in the libraries.

Summary of findings

The study sought out the availability of disaster equipment and measures for disaster preparedness before, during and aftermath of disaster in four academic libraries located in the city of Gusau, the capital of Zamafara state, Nigeria. A lot of findings were revealed from the study.

The study reveals that library profession in the city is male dominated profession with nearly (70.7%) reported to be male with majority of them above 41 years and worked in the libraries at least 11yeaabove. Therefore, the respondents have the necessary knowledge about the libraries under study

The study also reveals that thunder arrestor is the equipment with highest rate in the libraries 25 (30.4%). This corroborated with Ilo et al (2018) study that found the availability of thunder arrestors and other equipment in universities library in Nigeria. similarly, the result reveals that

all the libraries had and installed smoke detectors 24 (29.2%) for detecting early sign of fire disaster

It emerged from the study that fire extinguishers and clearly marked exit doors are the equipment and measures available in all the libraries for disasters response as the items recorded maximum responses 82 (100%) each. This corroborated with Borteye and marfo (2010) Panle and Samuel (2014) reported the availability of the items in the libraries they studied. However, the study reveals that there is uncertainty surrounding the availability of communication gadgets for effective communication during disaster as 34 (41.46%) respondents recorded that they are not aware of the existence of the gadget

It was also established from the study that all the libraries have mops in their stock as measure of restoring site affected by water spillage with all the respondents 82 (100%) responded in affirmative. This was followed by segregation techniques with 70 (85.36) of the respondents indicated the availability of the measures in their libraries. However, insurance policy and chamber were indicated to be not available in the libraries as the items score no response of their ability.

The study also reveals that inadequate funding constitute a major problem to effective disaster preparedness as majority of respondents 40 (48.78%) strongly agree that the phenomenon affects their disaster preparedness. Similarly, lack of interest on the part of both librarians and staff contribute significantly to challenge affecting effective disaster preparedness in libraries as larger portions of respondents 46 (56.09%) and 42 (51.21%) either strongly agree or simply agree. Finally, hindrances to effective disaster preparedness in the libraries were identified by the study.

Conclusion

The study seeks to examine the availability of disaster equipment and measures for disaster prevention, response and recovery in some selected academic libraries in Gusau metropolis, Zamfara State. From the analysis of the result obtained through questionnaire it is evidently clear that while all the libraries have acquired and installed equipment for disaster prevention and response, the libraries are still lacking enough equipment and measures necessary for disaster management and preparedness. Furthermore, majority of the equipment and measures are largely for disaster prevention with little emphasis to disaster response and recovery measures and equipments. This could however not be un connected with constraints the libraries and staff are encountering in disaster preparedness in the libraries as revealed by the study.

Recommendation

1. There is need for the libraries to acquire modern disaster equipment not only for disaster prevention but also for response and recovery to supplement the work of the existing equipment.

2. The staff or disaster team in the libraries need to be trained on regular basis on the safety of the equipment as well as technique of handling the equipment foe efficiency

3. There is need for general awareness to both staff and users on the importance of disaster preparedness and management in libraries and the roles they could play to ensure its success in their libraries

4. The security at the entrance and exits points of the libraries generally need to be improved or trained on regular basis on security survelleince

5. The libraries should envisage method or way of obataining more fund for the libraries to enable them prepare effectively for disaster.

References

Akor, P.U (2013) security management for prevention of book theft in university libraries; a case study of Benue state University Library, Nigeria. *library philosophy and practices* (e-journal) https//digitalcommons.unl.edu./libphilprac/995

Abareh, H.M (2014) survey of Disaster preparedness by head of academic Libraries in North eastern Nigeria. *Global journal of academic librarianship*. 3 (1) 45-57

Chezona, R & Eziola, R. E (2016) Disaster Management in University Libraries: Perception, problem, and strategie*s*. Injury prevention. DOI:101136/IP.2010.029215.129

Oluwatola, K.; Ogbuiyi, U.; Oriogu, D. & Ogbuiyi, C. (2015). Disaster management practices in five public libraries in south- west Nigeria. *IOSR Journal of Humanities and Social Science(IOSR- JHSS)* .20(11). 78-83.Retrieved July 4, 2017 from: www.oisrjournals.org

Marfo, M. & Borteye, E.(2010). Disaster preparedness in academic libraries. The case of the Kwame Nkrumah university of science and technology library,Kumasi, Ghana. *Library and archival security* 23 (2). 117-136. Retrieved April 30, 2022 from:http://fileiiic:users/HP/Desktop/disas/233050962

Mitra, S. (2015) *Disater management in the area of library and information Center*. Advance research publication sciences journal 3 (1) 45-54

Nikhbash, R., Farahami, R. Z. (2018) Disaster management and logistic operation: Disaster manement cycles. New-Delhi: mushdra publishers

Ilo, P. I., Izuagbe, R., Mole, J.C.A & Ekwueme, L. (2018) measuring Disaster preparedness and response practices in University libraries in Nigeria: the role of Disaster equipment. *International journal of disaster risk reduction*. https/doi.org/10.1016/j.idrr.2018.04.007

Issa, A.; Aliyu, M.;Adedeji, A. & Akangbe, R. (2012). Disaster preparedness at the state public library Illorin, Kwara State Nigeria. *Library Philosophy and Practice*. Retrieved April 19, 2022 from: http://unllib.unl.edu/LPP/issa-aliyu.htm

Eden, P. & Mathew, G. (1996). Disaster management in libraries. *Library management*. 17 (3): 5-12. Retrieved November 4, 2016 from: www.emeraldinsight.com

Panle, P.P., & Samuel, N. (2014) Disaster management and preparedness: a case study of University of Jos Library. *Library philosophy practices (e-journal)*

Sayed, P. S., & Kalaunga, U. (2017) the importance of disaster management and impact of Natural disaster on hospital. Columbus. High pub.

Suleiman, M (2009) Disaster control measures in academic libraries in Nasarawa State.

Tukur, B (2021) strategic roles for library and information centres in Nigeria: before, during and aftermath of Disaster. International journal of applied technologies in library & information management

Ugwuanyi, R.C., Ugwu, M.E., & Ezema K.C. (2015) Managing disaster in university libraries in south east Nigeria: preventive technological and coping measures. Library philosophy and practices 11 (20) 98-108

Uwakwe, B.S (2019) Disaster awareness and preparedness in academic libraries: the case of study of Michela okpara University of Aagriculture library,Umudike, Nigeria. Library and information perspective and research 1(1)