



UTS
ePRESS

Construction
Economics and
Building

Vol. 18, No. 1
March 2018



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Citation: Olushola Afolabi, A., Oluwatayo, A., Oyeyipo, O., Ojelabi, R., Fagbenle O. 2018. Assessment of Designers' Perception of Post Conflict Housing Schemes for Internally Displaced Persons. *Construction Economics and Building*, 18:1, 27-47. <http://dx.doi.org/10.5130/AJCEB.v18i1.5780>

ISSN 2204-9029 | Published by
UTS ePRESS | ajceb.epress.lib.uts.edu.au

RESEARCH ARTICLE

Assessment of Designers' Perception of Post Conflict Housing Schemes for Internally Displaced Persons

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DOI: <http://dx.doi.org/10.5130/AJCEB.v18i1.5780>

Article History: Received 10/06/2017; Revised 06/02/2018 & 25/02/2018; Accepted 25/02/2018; Published 28/03/2018

Abstract

With millions of internally displaced persons (IDPs) around the world, there is need to implement durable housing solutions post-conflict, that involves sustainable integration and sustainable reintegration using long term shelter programmes in the rural and urban areas. The study aims to assess designers' assessment of post conflict housing schemes (PCHS) for internally displaced persons. Using a cross-sectional survey, the study utilized a questionnaire instrument distributed to one hundred (100) design professionals that have cognate field experience in the design, construction and management of post-conflict housing schemes. Statistical tools of bar chart, principal component analysis, categorical regression and one-way analysis of variance by SPSS v.21 was utilized. The study revealed that designers considered features such as external design and services, socio-cultural and space and maintenance features in the design of PCHS. Generalized factors considered in the selection of these features include demands of the household, choice/selection of building materials and population of IDPs. The study revealed that the failure of PCHS could be because of politics/partisanship, lack of international assistance/aid, need to make profit and non-involvement of IDPs in the rebuilding process, while the success of the scheme could be engendered by adequate participation of IDPs, effective monitoring mechanisms and increased government and non-governmental organizations' (NGOs) participation. In conclusion, the study

DECLARATION OF CONFLICTING INTEREST The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. **FUNDING** The author(s) received no financial support for the research, authorship, and/or publication of this article.

developed a framework for the design of PCHS for IDPs. The study recommended that professional designers should objectively consider the contributions and characteristics of IDPs in the design of PCHS. In addition, international bodies should increase pressure on government to increase commitment in re-settling IDPs. NGOs should not relent in their efforts.

Keywords

Conflict, construction, design, housing, internally displaced persons.

Introduction

The annual Global trends report prepared by the United Nations High Commissioner for Refugees, UNHCR (2017) showed that 65.6 million people have been uprooted from their homes by conflict and persecution as at the end of 2016. The report found that, measured against the world's population of 7.4 billion people, one in every 113 people globally is now either an asylum-seeker, internally displaced or a refugee – putting them at a high level of risk. Nigeria has had its own fair share, contributing a total of over 2 million internally displaced persons (IDPs) as at June 2016 (International Organization for Migration, 2016).

The large proportion of persons internally displaced in Nigeria is due to violence (Salkida, 2012; Oduwoye and Fadeyi, 2013). Nigeria has witnessed unprecedented high levels of violence since its independence. This violence can be mainly attributed to three themes: ethnicity, religion and politics (Salkida, 2012; Abdulrahman and Zuwaira, 2016). This has led to conflict induced displacement creating large numbers of internally displaced persons. Nevertheless, there are other reasons for internal displacement of people resulting from various government decisions, natural and man-made disasters, economic and boundary conflicts among others. Lately, the North-East of the country seems to be experiencing a large mass of this life-changing event called internal displacement.

The region has ceased to know civil status quo, resulting in the dire humanitarian situation as evident in the human casualties ranging between 13,000 – 17,500 deaths (Amnesty International, 2014; Human Right Watch, 2014), human right abuses, population displacement, refugee debacle, loss of means of livelihood, food insecurity, limited medical facilities and other social amenities (Adesote and Peters, 2015; Imasuen, 2015). Olajide (2006) reported that after a forty-year history of communal conflict and a major civil war, it is inexcusable that a country the size of Nigeria does not have a blueprint for internal displacement. Although, a national policy document on IDPs was released in 2012, it has not satisfied the priority needs of IDPs as related to food security, housing, health care, education, income-generating sources, and security.

In terms of housing, the primary needs are immediate temporary shelter for the newly displaced and long-term shelter for the growing IDP population in urban areas, since IDPs are subject to being evicted from the camps and settlements at any time (Women's Commission for Refugee Women and Children, 1999). Despite the numerous mass housing schemes that have been deployed over the years in several parts of Nigeria, the North-East has remained under-developed in housing and infrastructure due to bad governance, socio-economic imbalances, injustice and inequalities, as well as insensitivity to the plight of their citizens. The relocation of the Defence Command Centre from Abuja to Maiduguri by President Muhammadu Buhari on the 29th May 2015 and the new commitment from the Nigerian

Army and international community is bringing back some sigh of relief to the region. Post-conflict or post-disaster, there is need to rethink durable housing solutions to the long-term shelter needs of the sizeable IDPs willing to return or staying in the urban centres. Ferris and Winthrop (2010) observed that not meeting the needs of the returnees can generate tensions between groups. As noted in the research by Khomeriki, Kapanadze and Tskhadaia (2014) a high percentage of IDPs believed that not owning a house related to a high sense of insecurity about the future. It is high time displaced persons are considered in the government mass housing policies that have predominantly eluded the North-East populace. This research follows the line of Mojtahedi and Oo (2014), in that, the attributes or perception of stakeholders are essential in managing the risk of rebuilding, post-conflict or post-disaster. The study intends to assess designers' perception of post-conflict housing schemes (PCHS) for internally displaced persons (IDPs) which is crucial to support a peaceful transition from conflict by asking the following pertinent research questions;

- What features do designers consider critical in design of post conflict housing scheme (PCHS) for internally displaced persons and what factors influence these designs?
- Do designers differ on the threats and enablers to the actualization of post conflict housing schemes (PCHS) for internally displaced persons?

Post-conflict/Post-disaster Housing Schemes

Internally displaced persons (IDPs) have been defined as “persons or groups of persons who have been forced to flee their homes or places of habitual residence suddenly or unexpectedly as a result of armed conflict, internal strife, systematic violations of human rights or natural or man-made disasters, who have not crossed an internationally recognized state border” (Office for the Coordination of Humanitarian Affairs, OCHA, 1999; United Nations, 2004). The latter part of the statement differentiates this set of people from refugees. Oduwoye and Fadeyi (2013) observed that the definition highlights the involuntary character of the movement; and the fact that such movement takes place within national borders. Most IDPs in Nigeria having been deprived of their homes or place of origin usually take refuge in temporary shelter such as schools, army or police barracks, hospitals, abandoned or uncompleted buildings, public building and places of worship, camps and settlements among others while some flee to neighbouring countries that are safe depending on their proximity (Kabiru and Jinti, 2016). Moreover, Oduwoye and Fadeyi (2013) reported that there are no official IDPs camps of long lasting nature in Nigeria. Internally displaced persons who find their ways to the urban centres live with relatives and friends, others rent homes in communities populated by other migrants or build homes in shantytowns on the margins of large cities. Due to the IDP population there is an over-stretch of facilities both in the IDP camps and the urban areas leading to poor living conditions and increase in rise of diseases (Imasuen, 2015; IOM, 2016).

According to the guiding principles, the responsibility for protecting and assisting IDPs lies with national authorities while international humanitarian and development actors have complementary roles (Ferris and Winthrop, 2010). Specifically, the final section of the guiding principles emphasizes the importance of providing IDPs with long-term options, namely voluntary return in safety and dignity or resettlement in another part of the country. It also emphasizes the importance of ensuring durable solutions, including the need to provide IDPs with integration assistance, whether they return or resettle, and to ensure they have equal access to public services (Oduwoye and Fadeyi, 2013). In all these cases, the focus on land and property issues must be much broader and integrated within the overall humanitarian and recovery response (Alden-Wily, 2009). For example, in the period of 2007-2011, durable housing

solutions of 732 residential buildings were built for 23,344 families in Georgia while 5,517 were given a one-off financial assistance amounting to USD10,000 (Ministry of Internally Displaced, 2012). The latter describes alternative durable housing solutions whereby government of national authorities can decide to repair houses, give monetary assistance or loans etc. Table 1 revealed some selected studies on post-disaster housing schemes across the globe.

Table 1 Some studies on Post Disaster Housing

S/N	Authors	Country	Scope	Description
1.	Quarantelli (1995)	USA	Sheltering Systems	Disaster planning using different sheltering systems.
2.	Rakes <i>et al.</i> (2014)	USA	Decision Model	A planning and decision model for families in a temporary PDHU.
3.	Zhang, Setunge and Elmpt (2014)	Australia	Social Consideration	Social consideration for the use of shipping containers in a temporary PDHU.
4.	Bilau, Witt and Lill (2015)	Japan, Indonesia, Sri Lanka, India and Iran	Construction Management Issues	Framework for effective organization and management of post disaster housing reconstruction
5.	Atmaca and Atmaca (2016)	Turkey	Life Cycle Energy and Cost Assessment	Assessment of energy and cost efficiencies of prefabricated temporary PDHU.
6.	Dikmen and Elias-Ozkan (2016)	Turkey	Post Occupancy Evaluation	Influence of typical and custom designs on occupants' needs in a permanent PDHU.
7.	Hosseini, Fuente and Pons (2016)	Iran	Sustainability Issues	Sustainability model for optimizing the use of temporary PDHU.
8.	Rahmayati (2016)	Indonesia	Design Requirements	Socio-cultural factors affecting PDHU designs
9.	Roosli and Collins (2016)	Malaysia	Rebuilding Guidelines	Guidelines in rebuilding resilient PDHU in flood prone areas
10.	Song, Mithraratne and Zhang (2016)	China	Life Cycle Performance	Environmental impact of energy consumptions and GHG emissions of temporary PDHU.

* PDHU – Post Disaster Housing Unit

In resettling the IDPs, there is need to investigate several factors affecting their housing needs and design. Adedayo (2012) affirmed the great similarities in the mass housing structures in Nigeria, regardless of the region, with modifications only shown in terms of aesthetics value. Varying degree of factors such as demand of the households and need of space (Alao, 2009), cultures and beliefs (Adedayo, 2012) are usually not considered during the design process.

There is usually no communication with clients or end users. Studies from Yu, Shen and Chan (2005) and Shen (2011) stated the need to consider the client's viewpoint and obtain adequate feedback from the client. As articulated in principle 28 of the Guiding Principles on Internal Displacement, IDPs have a right to a durable solution and often need assistance in their efforts (Brookings Institute, 2010). Governments in developing countries are often tempted to embrace ecologically unsafe development strategies to achieve short term economic growth, this results in mass housing developments which in no time become slums (Alao, 2009).

In a natural disaster scenario, the immediate concern is to save life and property while the long-term agenda focuses on returning affected people to their normal lives (Von Meding, Oyedele and Cleland, 2009). A vital part of this mandate relates to the reconstruction of the affected built environment. Unfortunately, in many cases, NGOs that have tried to help in the reconstruction of the built environment, have operated well outside their field of expertise and the quality of such reconstruction projects has been called into question (Telford and Cosgrave, 2007). Von Meding, Oyedele and Cleland (2009) stated that reconstruction is part of the long-term recovery process. If implemented correctly, a successful reconstruction project can be the catalyst for sustainable community development: psychologically, physically and economically, while significantly reducing vulnerability to future hazards (Paton, Smith and Violanti, 2000; Paton, 2003). With peace and security gradually returning to places where there have been conflict induced displacement and increasing foreign assistance/aid, the North-Eastern part of Nigeria is in a state of transition. This stage engenders reconciliation, rehabilitation, rebuilding and restoration.

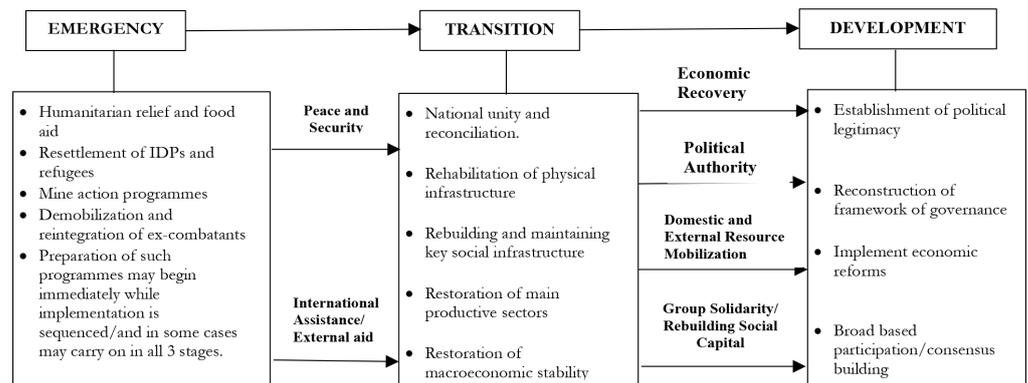


Figure 1 Phases and activities of post-conflict reconstruction. Source: NEPAD Secretariat Governance (2005)

Research Method

For the conduct of this study, a combination of desktop review of literature and administering of questionnaires was employed. Through a detailed literature review, variables were generated. The study, being a quantitative survey, employed the use of a descriptive survey research design through the questionnaire instrument for data collection. The questionnaire was a closed-ended questionnaire which had five (5) sections. The questionnaire elucidated information such as in Section 1 which described the participants information, Section 2 highlighted critical design considerations of a post-conflict housing scheme, Section 3 emphasized the factors that influence the critical features that are considered in the design of post-conflict housing schemes, while Section 4 and 5 laid out the threats and enablers to the actualization of post conflict housing schemes. Section 2 – 5 was measured using a

5-Likert scale of 5 = Very Significant, 4 = Significant, 3 = Moderately significant, 2 = of Little significance, 1 = Insignificant. The questionnaires were administered and limited to design professionals involved in the built environment with major design firms in Lagos and Abuja (FCT); the commercial and administrative centres of Nigeria respectively. These design professionals were selected due to their cognate field experience in the design, construction and management of PCHS and other mass housing projects. However, the researcher did not get the perspective of the IDPs as the study is limited to the perspective of design professionals such as Architects and Engineers (Structural, Electrical and Mechanical Engineers). The Architects were specialists trained in the production of architectural drawings for mass housing and post-conflict housing schemes while the Engineers were structural, mechanical and electrical engineers involved in the production of structural, or building engineering services (i.e., electrical, mechanical – water supply, disposal and HVAC, etc.) designs. The designers were selected randomly using a convenience sampling technique in two (2) major states in Nigeria; Lagos and Abuja (FCT). Lagos and Abuja (FCT) have high concentrations of registered design professionals with adequate work experience on various mass housing projects ongoing within the state. The convenience sampling technique was utilized due to the inability to obtain a comprehensive list of design firms within the study area. A total of 100 questionnaires were sent out through emails, by hand and using research assistants. A total of fifty-four (54) questionnaires were returned and scrutinized to be free of error; representing a 54 percent response rate and considered adequate for this study. The collected questionnaires were decoded and analysed using SPSS v.21. Statistical tools of Bar Chart, Principal Component Analysis (PCA), Categorical Regression (CATREG) and One-way Analysis of Variance (ANOVA) tests were conducted on the obtained data. By using CATREG, the significant factors influencing the critical features in the design of post conflict housing schemes were identified including their effect size using the beta factor. ANOVA was used to identify the significant threats and enablers that affect the actualization of post conflict housing schemes (PCHS) for internally displaced persons.

Findings and Discussion

This section presented the background information of the design professionals, the critical features considered in post conflict housing designs and the factors influencing them. This section is concluded with the threats and enablers to the actualization of post conflict housing schemes for internally displaced persons.

PARTICIPANTS' INFORMATION

To determine the adequacy academic and professional qualification including the cognate experience of the participants, information regarding the characteristics of each designer was explained. The participants' information of the designers is summarized and presented in Figure 2. The result revealed that 19 (35%) Engineers and 35 (64.8%) Architects participated in the study. Figure 2 revealed that the designers had highest educational qualification distributed in the proportion of 32 (59.3%), 15 (27.8%), 4 (7.4%) and 3 (5.6%) for M.Sc./MBA/M.Tech./M.Eng., B.Sc./B.Tech./B.Eng., OND/HND and Ph.D. respectively. The professional qualification showed that 34 (63%) belong to the Nigerian Institute of Architects, 19 (35.2%) belong to the Nigeria Society of Engineers while 1 (1.9%) did not have a professional qualification. The working experience of the designers revealed that 31 (57.4%) had 1 - 10 years working experience as a designer, 19 (35.2%) had 11 – 20 years working

experience while 4 (7.4%) had 21- 30 years working experience as a designer. Figure 2 showed that 31 (57.4%) worked in consulting firms, 12 (22.2%) worked in contracting firms, 10 (18.5%) worked in government affiliated institutions while only 1 (1.9%).

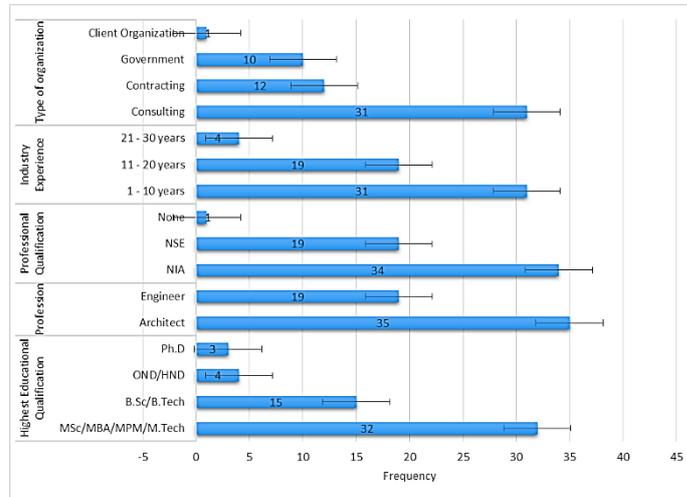


Figure 2 Participants' Information. Source: Field Survey (2017)

Critical Features of Post Conflict Housing Designs

This section showed critical features that designers consider in their designs of post conflict housing for internally displaced persons (IDPs). The critical features were classified using the statistical tool of Principal Component Analysis (PCA). From the PCA test, Figure 3 showed the object points for the critical features in the design of post conflict housing schemes (PCHS). The object point showed that the critical features can be categorized into three (3) groups. Furthermore, Table 2 showed the component breakdown of the critical features of PCHS.

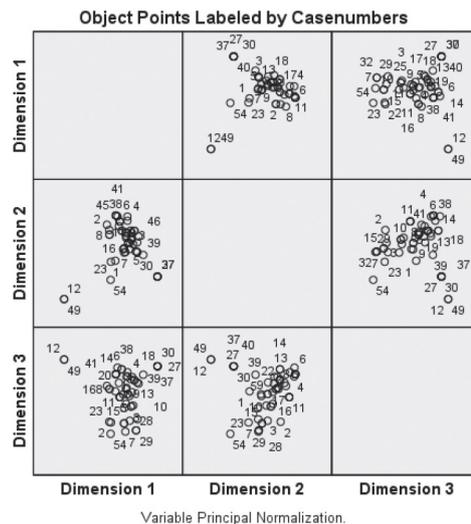


Figure 3 Object points for critical features in PCHS. Source: Field Survey (2017)

From Table 2, Component 1 showed critical features such as adequate external space, vibration/noise control, proximity to other public services, use of sustainable building materials

such as bamboo, compressed earth blocks, recycled materials etc., safety and security of occupiers, aesthetics to IDP taste, waste disposal systems, interior acoustics, ventilation, flexible and adaptable accommodation and affordability. These components have been titled – External Design and Services features in the design of post conflict housing schemes for internally displaced persons. The external features in this component include the adequacy of the external space, proximity to other public services, consideration for safety and security of occupiers and aesthetics to IDP taste. On the other hand, the service features include vibration/noise control, use of sustainable building materials such as bamboo, compressed earth blocks, recycled materials etc., waste disposal systems, interior acoustics, ventilation, flexible and adaptable accommodation. These components have external features and building services in this category. Component 2 showed the critical features of landscaping features and socio-cultural design needs. These components have been titled the socio-cultural features in the design of post conflict housing schemes for internally displaced persons. Component 3 had critical features of provision of WASH/Sanitary areas, considerations for future maintenance and adequate space consideration. These components have been titled – Space and Maintenance features in the design of post conflict housing schemes for internally displaced persons.

Table 2 PCA for critical features of post conflict housing designs

	Critical features in Design	Component 1	Component 2	Component 3
Component 1	Adequate external space	0.776	-	-
	Vibration/noise control	0.770	-	-
	Proximity to other public services	0.759	-	-
	Use of sustainable building materials	0.754	-	-
	Safety and security of occupiers	0.730	-	-
	Aesthetics to IDP taste	0.639	-	-
	Waste disposal systems	0.614	-	-
	Interior acoustics	0.613	-	-
	Ventilation	0.578	-	-
	Flexible and adaptable accommodation	-0.578	-	-
	Affordability	0.560	-	-
Component 2	Landscaping features	-	0.700	-
	Socio-cultural design needs	-	0.551	-
Component 3	Provision of WASH/ Sanitary areas	-	-	0.793
	Considerations for future maintenance	-	-	0.652
	Adequate space consideration	-	-	0.552

Source: Field Survey (2017).

In some developing countries, critical features in post disaster housing designs are controlled at the federal level (Hosseini, Fuente and Pons, 2016). Other agencies including

NGOs and state agencies may contribute in some cases in selecting designs to be constructed during such scenarios. Roosli and Collins (2016) argued that, generally, the federal public works department depends on only one design for reconstruction. According to Hosseini, Fuente and Pons (2016), based on a global model for previous temporary housing programs in Iran, Turkey, USA and Japan, critical features considered include economic requirements (construction and maintenance/reuse), social requirements (health, convenience/comfort and local capacity) and environmental requirement (consumption, land use and solid waste). This is in conformity with some part of this study in that Component 1 and Component 3 are readily provided for in designs for post conflict/disaster housing schemes. However, Component 2- Socio-cultural features are critical features that designers often overlook. Rahmayati (2016) advised that designs for post conflict housing schemes should go beyond providing shelter, to restoring socio-cultural values to its inhabitants. It is essential that designers must create spaces that carry meaning to the IDPs. In the study by Dikmen and Elias-Ozkan (2016), it was observed that beneficiaries were dissatisfied with the permanent post-disaster houses provided by the government in Cankiri, Turkey. According to their analyses, the houses provided by government were considerably different from the traditional houses the beneficiaries used to live in before the earthquake. The reason for a marked lack of satisfaction with the typical designs of the post disaster housing in the Cankiri region was that they had been prepared by architects who were not familiar with the needs or lifestyle of the project beneficiaries. The designers had also never visited the region, nor met the target population to discuss their requirements; hence, they were not aware of the types of activities and spaces they should provide for in their house designs. They simply prepared three design alternatives of different sizes based on the number of bed-rooms and similar configurations; while the main concern seemed to be the covered area of the house and its resultant cost. This lack of acceptance and satisfaction with the housing design led to modifications at additional costs which can be considered an indicator of an unsuccessful reconstruction project.

Factors Influencing Post Conflict Housing Schemes Designs

The study posits that the critical features designed for in post conflict housing schemes have certain factors that influence their contribution to the scheme. The statistical tool of categorical regression (CATREG) was used to test the influence of the factors on the critical features in the design of post conflict housing schemes for internally displaced persons (IDPs). The highlighted critical features include – External Design and Services features, Socio-cultural features and Space and Maintenance features. Table 3 showed the categorical regression of the factors influencing post conflict housing scheme designs. In Table 3, the factors influence the critical features with the R square values at 92%, 97% and 78% in the three (3) critical features respectively. In Component 1 - External Design and Services features, the significant factors influencing it includes – demands of the household, choice or selection of building materials and population of IDPs. This revealed that choice or selection of building materials (76%) asserted the most influence on the External Design and Services. In Component 2 - Socio-cultural features, the influencing factors include size of the family, demands of the household, choice or selection of building materials, time of completion, affordability of housing scheme, construction method, population of IDPs and number of units envisaged. This critical feature is mostly influenced by the size of the family (72%). Component 3 - Space and Maintenance features were influenced by factors such as demands of the household, choice or selection of building materials, construction method and population of IDPs.

Table 3 Factors influencing post conflict housing schemes designs

	Beta Component 1	Sig.	Beta Component 2	Sig.	Beta Component 3	Sig.
R square	0.917		0.967		.781	
F	7.822	0.000	17.87	0.000	2.614	0.036
Size of the family	-.421	0.212	-0.724	0.000	-0.474	0.267
Socio-cultural needs	0.063	0.974	0.276	0.355	-0.669	0.276
Design	0.360	0.116	0.059	0.963	0.099	0.818
Demands of the household	0.198	0.000	0.264	0.000	0.265	0.000
Cost of building materials	0.097	0.948	-0.186	0.668	-0.115	0.821
Choice or Selection of building materials	0.760	0.003	0.270	0.000	0.509	0.004
Location of housing scheme	-0.096	0.759	0.159	0.624	-0.206	0.829
Time of completion of project	0.281	0.398	0.698	0.028	0.300	0.712
Sustainability issues	-0.185	0.784	-0.619	0.062	-0.545	0.581
Affordability of housing scheme	0.723	0.122	-0.399	0.042	-0.402	0.694
Construction method	-0.148	0.668	0.535	0.038	0.951	0.012
Population of IDPs	0.229	0.000	0.264	0.000	0.271	0.000
Number of units envisaged	0.283	0.349	0.302	0.002	0.608	0.084

Source: Field Survey (2017).

Generalized factors considered in the selection of these features include demands of the household, choice/selection of building materials and population of IDPs as shown in Figure 4. Zetter and Boano (2010) stated that important factors such as daily practices and social internal and external interactions of inhabitants of post conflict housing schemes are socio-cultural factors of household patterns which influence the layout, function and facilities of the rooms in the scheme. In international standards, Da Silva (2010) stated that PCHS must be culturally and climatically appropriate, durable and easy to maintain, allow for future living and be developed in partnership with the intended occupants. Ghaffarianhoseini et al. (2014) opined that there must be a correlation between the spatial demands of the inhabitants and the offered accommodation. When this is not achieved it can lead to high levels of dissatisfaction whereby occupants may suffer from stress, poor health, delinquency, maladjustment and pathological conditions. Ozdemir and Gencosmanoglu (2007) stated that the spatial organization of a dwelling depends largely upon the family structure, life style of the inhabitants, their customs, traditions, habits and religion. The emphasis of this study is that designers must ensure to factor the characteristics of the IDP population in deciding the

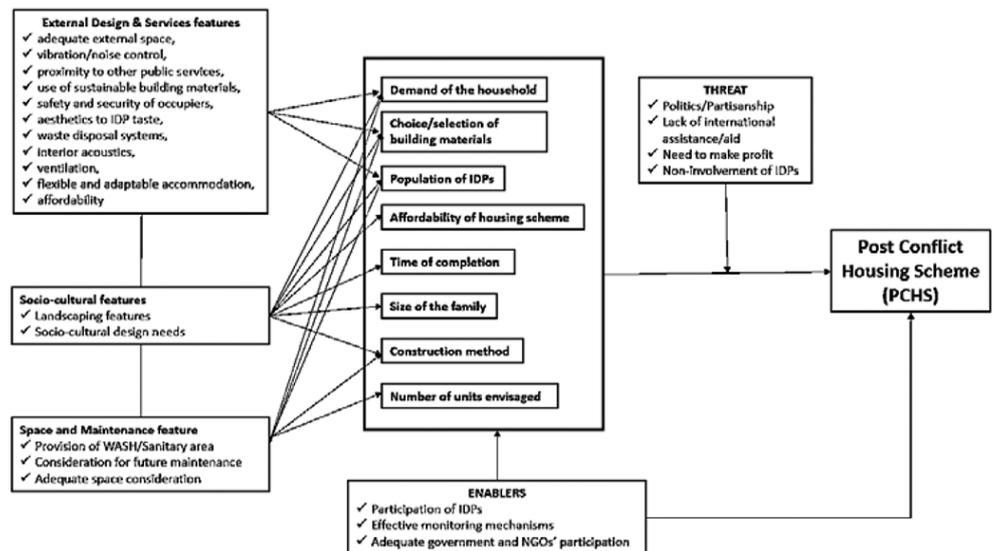


Figure 4 Framework for design of post conflict housing scheme for IDPs. Source: Author's Design (2017)

critical features of PCHS. Government, NGOs and other agencies should be able to supply sufficient IDP data and the contribution of IDP perspectives in the design of PCHS.

As shown in Figure 1, a conflict region in a state of reconstruction at the transition stage calls for rehabilitation of physical infrastructure, rebuilding and maintaining of key social infrastructures. This can be achieved through the empowerment of various key stakeholders in the rebuilding process. In the study by Mojtahedi and Oo (2016), proactive engagement seems to be the solution in averting disaster in post-conflict scenarios. This should be achieved at the early stage of the disaster risk management phase to create a resilient society, post-conflict. As such, this research focused on the influence of designers in creating a sustainable post-conflict housing scheme (PCHS). The framework in Figure 4 showed that it is essential that internal and external space, building services, socio-cultural features and future maintenance are considered in the design of sustainable PCHS. Designers' perceive that these features are mostly influenced by the demand of the IDP household, the choice of building materials to be used and the population of the IDPs. Essentially, building PCHS can be hindered when politics is at play and when participation of IDPs is limited or non-existent. This means that there should full and adequate involvement of IDPs from the design to reconstruction. This can be achieved through effective monitoring mechanisms and the unrelenting efforts of NGOs.

Threats to Post Conflict Housing Schemes

In this section, the study examined threats that post conflict housing schemes could encounter and would hamper its implementation in the region where it may be needed. Threats in this context are negative events or activities that increase the risk of failure. To answer the research question: Do designers differ on the threats to the actualization of post conflict housing schemes (PCHS) for internally displaced persons? A hypothesis was postulated, where H_1 represented the null hypothesis and H_{01} represented the alternate hypothesis.

H_1 : Designers do not differ on the threats to the actualization of post conflict housing schemes (PCHS) for internally displaced persons.

H_{01} : Designers differ on the threats to the actualization of post conflict housing schemes (PCHS) for internally displaced persons.

There are instances in which threats have impacted on the post-disaster housing reconstruction process. In Sri Lanka in 2004 after the tsunami, Grewal (2006) reported that threats such as no pre-existing policy or institutional framework on PDHS hampered the process of recovery. Barenstein (2006) recorded threats in the PDHS for Gujarat such as non-involvement of locals, poor selection of building materials or technology, insensitivity to the socio-cultural needs of the displaced persons. In Bam, threats such as poor selection of materials and inadequate plans for future maintenance were recorded (Gharaati and Davidson, 2008). In Aceh, poor strategic and operational management planning, insufficient time, material sourcing, land issues and unavailability of skilled labour were significant threats highlighted during the post-disaster rebuilding process (Ophiyandri, Amaratunga and Pathirage, 2010). The study further identified threats from literatures (Barenstein, 2006; Bilau, Witt and Lill, 2015; Dikmen and Elias-Ozkan, 2016) such as high spate of insecurity, emphasis on ethnicity, politics/partisanship, inadequate funds, poor access to funds, ineffective government policies, inadequate planning, monitoring and supervision, poor government decisions, unending sight of conflict, high bureaucracy, lack of international assistance/aid, high level of risk, need to make profit, corruption/diversion of funds, non-involvement of IDPs in building process, poor assessment of IDP needs, inadequate documentation of IDPs, poor land allocation and high cost of building materials. These variables were tested using the statistical tool of one-way Analysis of Variance (ANOVA) to test the difference in the perception of designers to the threats to post conflict housing schemes for internally displaced persons (IDPs). Table 4 revealed that politics/partisanship, lack of international assistance/aid, need to make profit and non-involvement of IDPs in building process were significant threats to post conflict housing schemes for internally displaced persons (IDPs). This is inferred from their p-value which is less than 0.05 (5% level of significance); signifying they are significant i.e. alternate hypothesis accepted on four (4) variables.

Table 4 Threats to post conflict housing schemes

Threats		Sum of Squares	df	Mean Square	F	Sig.
High spate of insecurity	Between Groups	.401	1	.401	2.334	.133
	Within Groups	8.932	52	.172		
	Total	9.333	53			
Emphasis on ethnicity	Between Groups	.356	1	.356	.476	.493
	Within Groups	38.848	52	.747		
	Total	39.204	53			
Politics/Partisanship	Between Groups	7.646	1	7.646	6.822	.012
	Within Groups	58.280	52	1.121		
	Total	65.926	53			
Inadequate funds	Between Groups	.157	1	.157	.488	.488
	Within Groups	16.677	52	.321		
	Total	16.833	53			
Poor access to funds	Between Groups	.107	1	.107	.157	.693
	Within Groups	35.374	52	.680		
	Total	35.481	53			

Table 4 continued

Ineffective government policies	Between Groups	.933	1	.933	3.050	.087
	Within Groups	15.901	52	.306		
	Total	16.833	53			
Inadequate planning, monitoring and supervision	Between Groups	.118	1	.118	.287	.594
	Within Groups	21.308	52	.410		
	Total	21.426	53			
Poor government decisions	Between Groups	1.591	1	1.591	1.956	.168
	Within Groups	42.280	52	.813		
	Total	43.870	53			
Unending sight of conflict	Between Groups	.331	1	.331	.438	.511
	Within Groups	39.317	52	.756		
	Total	39.648	53			
High bureaucracy	Between Groups	.435	1	.435	.631	.431
	Within Groups	35.880	52	.690		
	Total	36.315	53			
Lack of international assistance/aid	Between Groups	3.569	1	3.569	5.200	.027
	Within Groups	35.690	52	.686		
	Total	39.259	53			
High level of risk	Between Groups	.257	1	.257	.212	.647
	Within Groups	63.077	52	1.213		
	Total	63.333	53			
Need to make profit	Between Groups	6.550	1	6.550	4.306	.043
	Within Groups	79.098	52	1.521		
	Total	85.648	53			
Corruption/ Diversion of funds	Between Groups	1.397	1	1.397	2.265	.138
	Within Groups	32.084	52	.617		
	Total	33.481	53			
Non-involvement of IDPs in building process	Between Groups	3.895	1	3.895	3.142	.042
	Within Groups	64.475	52	1.240		
	Total	68.370	53			
Poor assessment of IDP needs	Between Groups	.740	1	.740	.897	.348
	Within Groups	42.908	52	.825		
	Total	43.648	53			
Inadequate documentation of IDPs	Between Groups	.313	1	.313	.504	.481
	Within Groups	32.280	52	.621		
	Total	32.593	53			
Poor land allocation	Between Groups	.618	1	.618	.848	.361
	Within Groups	37.919	52	.729		
	Total	38.537	53			
High cost of building materials	Between Groups	.100	1	.100	.167	.685
	Within Groups	31.233	52	.601		
	Total	31.333	53			

Source: Field Survey (2017)

In the study by Adedayo (2012), it was noted that the Nigeria mass housing provision was driven by two major factors namely profit and politics as exemplified by the location of the houses and the overall cost the clients pay. These two factors are ways by which politicians in power empower their followers through the award of contracts for the construction of these houses at high costs using state funds. The allocation of the housing units is also based on political patronage. These two factors are fuelled by the level of corruption obtainable within the Nigerian system. Abdulrahman and Zuwaira (2016) stated that the problem of inequality and unfairness on the side of Nigeria's leaders due to politics/partisanship has raised the anger of many people in the North of the country, thereby making government development policies and programs in the region a source of disaffection and resentment among the citizens. Barenstein (2006) noted that reconstruction efforts may be hampered through institutional bureaucracy and corruption.

Eweka and Olusegun (2016) disclosed that although IDP management agencies get funds mainly through revenue, international aids, and donations, the funds they get are often insufficient to meet the increasing needs of IDPs in the country. Lack or insufficiency of funds results in deficiency in manpower, commodities, infrastructure, equipment and mobility. Issues of inadequate community participation in the rebuilding process for IDPs have been identified in studies by Delany and Shrader (2000) and Barakat (2003) as a major challenge affecting reconstruction projects. These consequently led to failure of the projects, abandonment or outright rejection or vandalism of completed housing units allocated to the affected communities. Roosli and Collins (2016) stated that empowering affected communities is much more effective than transplanting outside organizations to deal with the problems of housing. This would help build capacity in the long-term rehabilitation of the affected community. Davis (2011) noted that the principles of integrating local culture is usually disregarded by reconstruction agencies. Oliver-Smith (1996) opined that most PCHS focus on policies, strategies, approaches, processes, technologies and costs involved. Rahmayati (2016) explained that designers of PCHS need to understand how individual communities build their houses and arrange the spaces within them. This can be achieved through the collaboration of designers and local communities in integrating local experiences in the design. By this, IDPs play an important active role in the development of their own future (Lyons, 2009), which helps to re-establish confidence and pride after their traumatic experience as IDPs due to conflict or disaster. The Guiding Principles, Section 28 noted that IDPs must be consulted and encouraged to participate extensively in the planning and management of the processes supporting a durable solution such as permanent housing schemes. The document noted that all parts of IDP population including women, children (according to their age and maturity), persons with special needs and persons who are potentially marginalized, must be fully included.

Enablers to Post Conflict Housing Schemes

For post conflict housing schemes to succeed, there is the need to engender enablers in the process of implementation. Enablers are defined as capabilities, forces and resources that contribute to the success of an entity, program or project. To answer the research question: Do designers differ on the enablers of a successful post conflict housing schemes (PCHS) for internally displaced persons? A hypothesis was postulated, where H_1 represented the null hypothesis and H_{01} represented the alternate hypothesis.

H_1 : Designers do not differ on the enablers of a successful post conflict housing schemes (PCHS) for internally displaced persons.

H_{01} : Designers differ on the enablers of a successful post conflict housing schemes (PCHS) for internally displaced persons.

It is worthy to note some success schemes of the post-disaster housing projects. For example, in Japan, the stakeholders involved in the rebuilding process ensured that there was adequate community participation, there was specific budgetary provisions and clear construction schedules (Ranghieri and Ishiwatari, 2014). In Bam, enablers of the PDHS include adequate monitoring and control systems were put in place and there were different design choices that the displaced persons could choose (Gharaati and Davidson, 2008). Enablers identified in the Gujarat PDH scheme include provision of different construction approaches, new building code, training programmes for the displaced persons (Barenstein, 2006). The study identified enablers (Lizarralde and Boucher, 2004; Von Meding, Oyedele and Cleland, 2009; Shaw and Ahmed, 2010; Rahmayati, 2016) such as timely completion of housing projects, quality designs, safety and security of environs, adequate international aid, participation of IDPs, availability of construction resources, communication between IDPs and development actors, effective monitoring mechanisms, participation of construction professionals, community based approach, efficient technical know-how, adequate funding for scheme, adequate government participation, effective post conflict housing policies, participation of NGOs, use of appropriate local building materials and high standard of workmanship. The test of difference between designers were tested using one-way analysis of variance (ANOVA). Table 5 showed the ANOVA test of the enablers to post conflict housing schemes.

The result revealed that participation of IDPs, effective monitoring mechanisms, adequate government participation and participation of non-governmental organizations (NGOs) were significant enablers to post conflict housing scheme's success. This is inferred from their p-value which is less than 0.05 (5% level of significance); signifying they are significant i.e. alternate hypothesis accepted on four (4) variables. Post-disaster housing reconstruction projects typically involve the collaboration of numerous entities at different levels with differing perspectives and backgrounds and with possibly overlapping responsibilities for different but interconnected tasks. This makes it challenging for coordinating agencies to cope. As shown in this study, organisations managing reconstruction programmes must therefore have an efficient communication plan with appropriate feedback mechanisms and established communication channels for efficient information sharing and coordination (Le Masurier, Rotimi and Wilkinson, 2006; Shaw and Ahmed, 2010; Patel and Hastak, 2013). Apart from the vital role of providing immediate aid to vulnerable populations during disaster scenarios by NGOs, Von Meding, Oyedele and Cleland (2016) noted that NGOs are part of the long-term recovery process. Von Meding, Oyedele and Cleland (2016) opined that NGOs are highly aware of the needs to maintain standard in construction delivery process of the permanent reconstruction for affected communities. In addition, NGOs should effectively pressurize governments to be actively involved and not politicize the needs of IDPs. The insistence should be on using durable solutions such as permanent housing provision in areas where conflicts have been allayed. Using durable solutions in these regions is a tool for long lasting peace and tranquillity.

Table 5 Enablers to post conflict housing schemes

Enablers		Sum of Squares	df	Mean Square	F	Sig.
Timely completion of housing projects	Between Groups	.009	1	.009	.021	.884
	Within Groups	21.991	52	.423		
	Total	22.000	53			
Quality designs	Between Groups	.301	1	.301	.372	.544
	Within Groups	42.069	52	.809		
	Total	42.370	53			
Safety and security of environs	Between Groups	.562	1	.562	1.411	.240
	Within Groups	20.698	52	.398		
	Total	21.259	53			
Adequate international aid	Between Groups	2.816	1	2.816	3.802	.057
	Within Groups	38.517	52	.741		
	Total	41.333	53			
Participation of IDPs	Between Groups	4.819	1	4.819	5.813	.019
	Within Groups	43.107	52	.829		
	Total	47.926	53			
Availability of construction resources	Between Groups	.226	1	.226	.347	.558
	Within Groups	33.774	52	.650		
	Total	34.000	53			
Communication between IDPs and development actors	Between Groups	1.182	1	1.182	1.550	.219
	Within Groups	39.633	52	.762		
	Total	40.815	53			
Effective monitoring mechanisms	Between Groups	5.294	1	5.294	6.701	.012
	Within Groups	41.077	52	.790		
	Total	46.370	53			
Participation of construction professionals	Between Groups	.530	1	.530	1.209	.277
	Within Groups	22.803	52	.439		
	Total	23.333	53			
Community based approach	Between Groups	.493	1	.493	.390	.535
	Within Groups	65.600	52	1.262		
	Total	66.093	53			
Efficient technical know how	Between Groups	2.642	1	2.642	2.485	.121
	Within Groups	55.284	52	1.063		
	Total	57.926	53			
Adequate funding for scheme	Between Groups	.777	1	.777	1.528	.222
	Within Groups	26.427	52	.508		
	Total	27.204	53			
Adequate government participation	Between Groups	2.676	1	2.676	5.712	.021
	Within Groups	24.361	52	.468		
	Total	27.037	53			
Effective post conflict housing policies	Between Groups	.075	1	.075	.128	.722
	Within Groups	30.517	52	.587		
	Total	30.593	53			

Table 5 continued

Participation of NGOs	Between Groups	8.120	1	8.120	9.623	.003
	Within Groups	43.880	52	.844		
	Total	52.000	53			
Use of appropriate local building materials	Between Groups	.084	1	.084	.105	.747
	Within Groups	41.564	52	.799		
	Total	41.648	53			
High standard of workmanship	Between Groups	.530	1	.530	.749	.391
	Within Groups	36.803	52	.708		
	Total	37.333	53			

Source: Field Survey (2017).

Conclusion

The study assessed designers' perception of post conflict housing schemes for internally displaced persons. (IDPs). External Design and Services features which include adequate external space, vibration/noise control, proximity to other public services, use of sustainable building materials, safety and security of occupiers, aesthetics to IDP taste, waste disposal systems, interior acoustics, ventilation, flexible and adaptable accommodation and affordability; Socio-cultural features which include landscaping features and socio-cultural design needs; and Space and Maintenance features which include provision of WASH/Sanitary areas, considerations for future maintenance and adequate space consideration were considered the critical features to be provided in of post conflict housing schemes for internally displaced persons (IDPs). In Component 1 - External Design and Services features, the significant factors influencing it includes – demands of the household, choice or selection of building materials and population of IDPs. In Component 2 - Socio-cultural features, the influencing factors include size of the family, demands of the household, choice or selection of building materials, time of completion, affordability of housing scheme, construction method, population of IDPs and number of units envisaged. Component 3 - Space and Maintenance features were influenced by factors such as demands of the household, choice or selection of building materials, construction method and population of IDPs. The study revealed that politics/partisanship, lack of international assistance/aid, need to make profit and non-involvement of IDPs in building process were significant threats to post conflict housing schemes for internally displaced persons (IDPs). The study revealed that participation of IDPs, effective monitoring mechanisms, adequate government participation and participation of non-governmental organizations (NGOs) were significant enablers to post conflict housing scheme's success. The study developed a framework for the design of post conflict housing schemes for IDPs. It is recommended that professional designers should consider the contribution and characteristics of internally displaced persons (IDPs) in the design of post conflict housing schemes. This should lead to different arrays of design that is sensitive to the physical and socio-cultural needs of IDPs. Characteristics of household size, population, socio-economic and cultural needs should be put into post-conflict housing designs. Instituting post conflict housing schemes in any region should be devoid of politics or partisanship and the need to make profit or money from the scheme. The role of non-governmental organizations (NGOs) and the international agencies cannot be over-emphasized. These entities have the role of increasing pressure on internal government to participate and commit to post-conflict housing schemes, adequately spread in different regions of the country. The underlying

influence of engaging internally displaced persons (IDPs) in the reconstruction process is a durable solution that would engender lasting peace in conflict regions.

The study may have been limited in the method of survey which could be prone to bias and highly subjective. Even though, there is a focus on design of post conflict housing schemes (PCHS), the research did not survey the perception of internally displaced persons (IDPs). A top to bottom approach in suggesting a durable housing solution for PCHS was utilized. Therefore, further studies can focus on bottom to top approach where internally displaced persons (IDPs) are the focus of the survey in determining design parameters and their influencing factors. In addition, other construction professionals such as builders, planners and quantity surveyors can participate in future studies.

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