Perception of Safety, Social Participation and Vulnerability in an Urban Neighbourhood, Lagos, Nigeria

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Abstract

Various models explain the fear of crime in the literature. This paper reports a study on the fear of crime in a public housing scheme. It examines two different models which may explain the fear of crime. The rationale was that the components of these models and the fear of crime are associated with the quality of life of residents. The result suggest that the model which explains the perception of safety using facilitating factors (vulnerability and disorder) is more explanatory than the model which uses inhibiting factors (social participation and sense of community variables). © 2012 Published by Elsevier B.V. Selection and/or peer-review under responsibility of Centre for Environment-Behaviour Studies(cE-Bs), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia Open access under CC BY-NC-ND license.

Keywords: Social participation; fear of crime; perception of safety; sense of community; public housing; vulnerability

1. Introduction

In the last 30 years, virtually all social indicators of the quality of life of a population have included some measure of crime or personal safety (Michalos 1980, 1992 quoted in Michalos & Zumbo 2000). Consequently, an increasing number of researchers have argued for the factors which would best explain...
This paper focuses on understanding and explaining the factors which underpin perception of safety or
the fear of crime in urban neighbourhood in Nigeria. The rational is that safety or crime factors are very
pertinent indicators of the quality of life of residents in any neighbourhood. If these factors which
contribute to safety are well understood, it will assist both designers and policy makers in the
development of future urban housing as well as in improving people’s quality of life. Furthermore, as
factors which explain the fear of crime have been studied in Western countries, this study provides the
opportunity to study them in a different cultural setting. This paper adopts Kellecki & Berkoz (2006)
which view the term housing as related not only to the physical components consisting of the house and
the immediate neighbourhood but also the social and economic conditions of the residents. Although
some researchers (Dunstan et al 2005) have argued that defining a neighbourhood as a unit of analysis is
fraught with problems because the notions of neighbourhood as expressed by residents, may not coincide
with the convenient units envisaged by researchers. In this paper, such differences do not pose a serious
threat to operationalising the term as the authors believe they are not so fundamental as to affect the
outcome of the study.

This study was conducted in the context of public housing, specifically a public housing scheme called
FESTAC (Festival of Arts and Culture) Housing. Generally, public housing has been used primarily as a
tool to allow families on the road to the middle class a way in which to acquire the necessary economic
status to move on in life (Delone 2008). The emergence of FESTAC (Festival of Arts & Culture 1977)
estate did not exactly fit into this model because it was developed primarily to accommodate delegates to
the festival. After the event, majority of the units were sold to the public by ballot with only 10% (ten
percent) retained for the staff of ministries and agencies. It was conceived as an estate expected to be
equipped with first class facilities that compare with any such estate around the world at that time, but
most of the facilities have collapsed over the years due to neglect and population explosion. In spite of the
problems, it is still to date one of the major efforts of government in public housing. The estate has fallen
into the stereotype of public housing as often being portrayed by the media as being run-down, and rife
with crime and disorder. (Holzman, 1996 quoted in Delone 2008). Consequently, it provides a unique
opportunity for researchers to study users’ perception of safety with a view to understand the
contributions of physical and socio-psychological aspects of these residential environments to the quality
of life of residents (Roman et al 2009). Specifically, the paper examines two models which explain
perception of safety in order to identify the more relevant explanatory model in the context.

2. Literature Review

A careful study of relevant literature indicates that some factors have been associated with perception
of safety in the residential neighbourhood. These include issues of social participation, sense of
community, disorder, vulnerability and victimization. Various models have also been posited as
explanatory models of the fear of crime. These issues are discussed subsequently.

2.1. Explanatory Models of Fear of Crime

Fear of crime has been identified as a significant social problem affecting the quality of life across
various demographic and socio-economic conditions (Franklin et al 2008). Studies have shown fear of
crime is synonymous with the perception of safety (Baba & Mark Austin 1989). Indeed studies on the
quality of life of a population is increasingly including measures of crime or personal safety (Michalos
1980 in Michalos & Zumbo 2000). Scholars (Ferraro 95, Mark Weir, quoted in Kohn 2009), have
suggested that fear of crime is an ‘emotion or feeling of alarm or dread caused by awareness or expectation of danger’. Indeed Karakus et al (2010) sees fear of crime as an individual reaction to perceiving likelihood of victimization. The three dominant models that predict fear of crime in most recent literature are the victimization (or Vulnerability) model; the disorder (Broken Windows) model; and the social participation (community concern) model (Karakus et al 2010; Crank et al 2003).

Some researchers have further categorized these models into two broad theoretical frameworks: one being facilitators of fear which are represented by the vulnerability and disorder models and the other being inhibitors of fear as represented by the social integration model (Franklin et al, 2008). The social integration model is one in which fear of crime is understood through characteristics that inhibit or reduce the grounds of fear. The argument is that increased participation, sense of community and cohesion in the neighbourhood dampens the fear of crime. Other characteristics in this model include social control mechanism such as the presence of the police and the relationship between the police and residents. The vulnerability model is thought of as having two categories namely the physical and the social. Physical vulnerability is explained as the perception of increased risk to physical assault. (Denkers & Winkel, 1998 quoted in Franklin et al 2008). While social vulnerability is seen as increased exposure to victimization resulting from factors such as economic distress, high crime and lack of resources to protect one-self (Franklin et al, 2008). The disorder model argues that the perception of high levels of physical and social disorder is related to high levels of fear of crime. (Bursik & Grasmick, 1993). Both vulnerability and disorder may be considered as the likelihood (risk) of attack of both humans and property in the neighbourhood. That people are vulnerable is an indication of their being at a high risk of being assaulted or victimized.

In the literature, the fear of crime can be a powerful and independent factor that may affect people through different pathways than actual experiences (Pain 2000 quoted in Wood et al 2007) hence residents perception of safety as conveyed by the built environment are believed to be inherent in fear of crime discourse. Indeed, a measure of fear of crime, some have argued (Baba & Mark Austin 1989) can be seen as a measure of perceived neighbourhood safety in that past research in perception of crime or fear of crime have explained fear as a consequence of victimization.

2.2. Social Participation and Sense of Community

Citizen (social) participation has been defined by Gamble & Well (1995 quoted in Ohmer & Beck 2006) as the active, voluntary involvement of individuals and groups to change problematic conditions in poor communities and to influence the policies and programmes that affect crime, safety and urban blight. Indeed participation of residents was identified by Wandesmann & Florin (2001 quoted in Ohmer & Beck 2006) as a major resource (often irreplaceable) of small voluntary organizations such as that of the neighbourhood. This often involves the mobilization of their time and resources. Over time, other categorization of participation have emerged such as formal and informal (Veba & Nile quoted in Dekker 2007; Allenhays et al 2007); cooperative and confrontational (Allenhays et al 2007). Formal participation was seen here as a scenario where people take part in the decision making process that influence their neighbourhood positively (socially or politically). ‘Informal’ participation is said to manifest in a situation where a resident is a member of a street committee (like a vigilante group). Yet other scholars (Long & Perkins 2007; Coleman 1990 quoted in Kawachi et al 1999) considered social participation as one of the four dimensions of social capital (others being collective efficacy, social cohesion and social disorganization). Furthermore, studies that have examined the effects of recreation participation on overall quality of life in a model that examines residents’ perception of their community have reported a positive relationship (Lloyd & Auld 2002 quoted in Baker & Palmer 2006). Indeed participation in leisure or recreation activities is considered by many researchers as an essential component of an individual’s
sense of well-being resulting in positive benefits such as self-improvement and family functioning (Putnam 1996 in Wood et al 2007). Scholars have also asserted that the physical environment can facilitate informal neighbouring through the availability of opportunities for casual interaction between neighbours (Beam & Palmer 2002 quoted in Wood et al 2007).

The importance of social participation has been highlighted in several studies. First participation in formal organizations has been shown to increase the feeling of safety (Crank et al 2003; Kruger 2007). The corollary is that this may be part of a feed-back loop where declining social capital (participation) spurs an increase in crime which then results in greater fear leading to psychological and physical stress.

Scholars (Long & Perkins 2007) have argued that social capital is intricately linked to sense of community and that it is often an outcome of social participation. Sense of community operates differently at individual (among neighbours) and community levels to predict informal neighbouring behaviour and citizen participation. In fact, Sarason (1971 quoted in Mannarini & Tedi 2009) defined Sense of Community as “the sense that one was part of a readily available, mutually supportive network of relationship”. She posited further that sense of community is related to various indices of quality of daily life such as life satisfaction, mental, physical and social well-being, perception of safety and security. This justified the conclusion from Jane Jacobs that once residents lose their sense of community and belonging, the neighbourhood is vulnerable to increases in crime which are thought then to lead to increases in fear of crime (Delone, 2008).

3. Methodology

Conceptually, this study identifies two major types of models which explain the perception of safety from the literature review. In the first model were certain factors which inhibit the fear of crime. These factors are related to the social participation of the residents and their sense of community. The second model suggests that fear of crime may be facilitated by the vulnerability of a place to physical assault and social distress. This includes the vulnerability of the residents to attack and the vulnerability of the place itself which is influenced by the state of disorder of the place. However, these two models will be examined in this study and is illustrated in Figure1.

This study is part of a larger study which evaluated the perception of safety in FESTAC Estate, a public housing scheme in Lagos, Nigeria. For the purpose of the study, the housing estate was divided into six neighbourhoods on the basis of the differences in the physical characteristics of the units of houses prevalent in each of those neighbourhoods. All the six neighbourhoods were included in the study. The unit of analysis was the household head in the housing units. Stratified systematic sampling technique was used. Out of a total population of 5348 housing units a sample of about 18% (1000 units) was selected, and questionnaires were distributed to the household heads of these units. Seven hundred and ten (710) questionnaires were returned, and these were subsequently analyzed.

The questionnaire was used as the instrument for collecting data. Four types of data were collected. The first was the residents’ perception of safety. This was done using 19 variables measured on a Likert scale. These variables measured safety within the housing unit and the whole neighbourhood. The second was the residents’ sense of community. This was measured also on a Likert scale with four variables. The was social participation. The variables of social participation for this study are ‘membership of residents association’ (Ohmer & Beck 2006; Dekker 2007); ‘presence of vigilante groups’ (Ohmer & Beck 2006; Long & Perkins 2007 Kawachi et al 1999). ‘friendship in the neighbourhood’, ’feeling of friendliness’ - as neighbourhood cohesion (Aalbers & Rancati 2008) and neighbourhood attachment (Levicka 2010). Disorder was operationalized as the type of neighbourhood because previous study (Okunola, 2010) had shown that the neighbourhoods were at different states of disrepair. Four variables, measured on a Likert scale, were also used to measure the vulnerability to attack in the housing estate. The socio-economic
characteristics of residents were also collected and are presented in this paper only for a clear picture of the context of this study. The data collected were analysed using categorical regression model. In line with the aim of the study, two models were examined; the social participation model and the vulnerability model. In the first analysis, the variables of social participation (independent variables) were regressed with fear of crime scores (dependent variable). Similarly, the variables of vulnerability were also regressed with fear of crime scores in the second analysis. The two models from the regression were subsequently compared for their explanatory strengths.

![Fig. 1: Explanatory Models of Perception of Safety/Fear of Crime](image)

### 4. Results and Discussions

#### 4.1. Demographic Characteristics of Respondents

The characteristics of residents as shown in Table 1 indicates the mean age to be 38.7, more than half (53.95%) are university degree holders, an average income of 66,480naira and the simple majority are home owners (56.16%). Furthermore, the average family size is approximately 6 persons per household and the average length of residency are around 14 years indicating a low resident turn-over.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Characteristics</th>
<th>Mean</th>
<th>Frequency</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>358</td>
<td>52.03</td>
<td></td>
<td>688</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>330</td>
<td>47.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>20-29</td>
<td>38.7</td>
<td>212</td>
<td>31.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>199</td>
<td>29.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>124</td>
<td>18.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>82</td>
<td>12.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60-69</td>
<td>48</td>
<td>7.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70 and above</td>
<td>18</td>
<td>2.63</td>
<td></td>
<td>683</td>
</tr>
<tr>
<td>Educational Level</td>
<td>Primary school</td>
<td>11</td>
<td>1.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Secondary school</td>
<td>114</td>
<td>17.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post secondary school</td>
<td>113</td>
<td>17.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>University degree</td>
<td>355</td>
<td>53.95</td>
<td></td>
<td>658</td>
</tr>
<tr>
<td></td>
<td>M.Sc./Ph.D.</td>
<td>65</td>
<td>9.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly Family Income</td>
<td>below 20,000</td>
<td>66,480</td>
<td>102</td>
<td>21.47</td>
<td></td>
</tr>
</tbody>
</table>
Two models were adopted for the analysis. The first model tested the association between the perception of safety scores as the dependent variable and social participation/sense of community variables (inhibitors of fear of crime) as independent variables.

4.2. Social Participation/Sense of Community and the Perception of Safety Model

The result as shown in Table 2 yields $R^2 = 0.123$. This indicates that there is a relationship (though weak) between the dependent variable and the independent variables. The analysis of variance (sum of square = 45.439; df = 28; $p \leq 0.016$) shows that it is nonetheless a significant relationship.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta</th>
<th>df</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit to recreation</td>
<td>.100</td>
<td>4</td>
<td>4.759</td>
<td>.001*</td>
</tr>
<tr>
<td>Participation in recreation</td>
<td>.022</td>
<td>4</td>
<td>.283</td>
<td>.889</td>
</tr>
<tr>
<td>Membership of resident’s association</td>
<td>.054</td>
<td>3</td>
<td>1.348</td>
<td>.259</td>
</tr>
<tr>
<td>Presence of vigilante groups</td>
<td>.031</td>
<td>3</td>
<td>.651</td>
<td>.583</td>
</tr>
<tr>
<td>Commercial activities around unit</td>
<td>.080</td>
<td>3</td>
<td>3.112</td>
<td>.026*</td>
</tr>
<tr>
<td>Hours spent at home during the day</td>
<td>.128</td>
<td>2</td>
<td>3.202</td>
<td>.042*</td>
</tr>
<tr>
<td>Length of residency</td>
<td>.161</td>
<td>2</td>
<td>9.296</td>
<td>.000*</td>
</tr>
<tr>
<td>Friendship in the neighbourhood</td>
<td>.070</td>
<td>2</td>
<td>.515</td>
<td>.598</td>
</tr>
<tr>
<td>Friendship in the estate</td>
<td>.030</td>
<td>2</td>
<td>.086</td>
<td>.918</td>
</tr>
<tr>
<td>Feeling of friendliness (neighbourhood cohesion)</td>
<td>.166</td>
<td>2</td>
<td>5.697</td>
<td>.004*</td>
</tr>
<tr>
<td>Sense of Community</td>
<td>.056</td>
<td>1</td>
<td>.348</td>
<td>.556</td>
</tr>
</tbody>
</table>

*P $\leq 0.05$
The results indicate that five variables of social participation namely, visit to recreation by residents; presence of commercial activities around the neighbourhoods; number of hours spent at home during the day; length of residency and feeling of friendliness (neighbourhood cohesion) were significant predictors of residents’ perception of safety. As indicated in the (Table 2), participation in recreation is not a significant predictor of perception of safety. This did not support previous findings on the subject. Of the variables that are significant predictors of perception of safety, strong feeling of friendliness (neighbourhood cohesion) is the strongest (Beta = .166). This is followed by length of residency (.161) and then by hours spent during the day (Beta = .128). The next one is the visit by members of the family to recreation spots (Beta = .100) and lastly, by the presence of commercial activities in the neighbourhood (Beta = .080) as the least significant predictor.

This result implies that neighbourhood cohesion would encourage informal contacts which would in turn enable residents to watch out for their neighbours’ interest. This may enhance social trust and reciprocity that may lead to reduction in the fear of crime. Secondly, residents who have stayed in the neighbourhood for a fairly long time may likely have developed acquaintance with the neighbours and familiarity with the environment. This may have positive and direct effect on the strength of local social bonds that may also enhance perception of safety. Furthermore, residents who spent more hours during the day may, be in a position to provide surveillance of the residential neighbourhood. Also visitation to recreation centres may encourage chance encounters that may reinforce neighbouring behaviour.

Finally, there are indications that the presence of commercial activities will ensure that people are always around the neighbourhood, and this may go some way to discourage crime. In all, this model supports previous findings about the positive influence of social participation on the perception of safety which in turn has the potential to enhance residents’ quality of life.

4.3. Disorder, Vulnerability and Perception of Safety Model

The result of regression of this model had an $R^2 = 0.138$ which indicates that there is a statistically significant relationship between the dependent variable (perception of safety score) and the independent variables of vulnerability/disorder. Indeed the analysis of variance confirms the significance of the relationship ($\text{sum of squares} = 69.634; \text{df} = 11; p \leq 0.000$), although the relationship is weak.

Table 3: Categorical regression analysis of perception of safety, vulnerability and disorder

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta</th>
<th>df</th>
<th>F</th>
<th>Sig p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chance of being a victim of car theft</td>
<td>.132</td>
<td>2</td>
<td>4.467</td>
<td>.012*</td>
</tr>
<tr>
<td>Chance of being a victim of assault</td>
<td>.101</td>
<td>2</td>
<td>1.994</td>
<td>.137</td>
</tr>
<tr>
<td>Chance of being a victim of robbery</td>
<td>.169</td>
<td>3</td>
<td>10.264</td>
<td>.000*</td>
</tr>
<tr>
<td>Neighbourhood type</td>
<td>.185</td>
<td>4</td>
<td>24.005</td>
<td>.000*</td>
</tr>
</tbody>
</table>

The result (Table 3) suggests that the predictors of perception of safety in this model are chances of being a victim of car theft (.012) chances of being a victim of robbery (.000) and the type of neighbourhood, (.000). The result shows that of the three, type of neighbourhood is the strongest predictor (Beta = .185) followed by chance of being a victim of robbery (Beta = .169) and then chance of being a victim of car theft (Beta = .132). This implies that perception of safety score is neighbourhood sensitive as it is possible that some neighbourhood affords the residents to develop a sense of proprietary. This may minimize disorder which is one of the facilitators of crime in the neighbourhood. It also suggests that robbery and car theft have a very significant relationship with the perception of safety score.

In summary, a close look at the two tables suggests that the facilitators of crime (vulnerability/disorder) have a stronger relationship than the inhibitors of crime (social participation/sense of community) with perception of safety. This seems to suggest that the variables that represent
facilitators of crime –vulnerability and disorder, are stronger predictors of perception of safety than the variables that represent inhibitors. Therefore, closer attention should be paid to these facilitator-variables in the design and management of not only existing residential environment but also in the conceptualisation of new ones. Indeed, it would seem that addressing variables which inhibit crime less than variables that facilitate will improve the perception of safety in the neighbourhood which will in turn enhance the quality of life of residents. As shown in the literature (Karakus et al, 2010), both of these models explained only about 10% of the perception of safety. It is expected that they would explain more of the variance in perception of safety if the demographic characteristics of residents is included in an integrated model.

5. Conclusions

This study supports previous studies (Crank et al 2003; Wood et al 2007; Kruger et al 2007) that social participation, vulnerability, victimization and disorder affect residents’ perception of safety (Kruger et al 2007). It also contradicts previous studies that purport that participation in recreation is a predictor of perception of safety (Lloyd&Auld quoted in Baker & Palmer, 2006). The methodology used in this study is to test two models identified in literature as facilitators and inhibitors of fear of crime through the use of the variables that predict such models. The result suggests that controlling for cultural and socio-demographic variables, it should be possible to generalise the findings of this study. Planning and design of neighbourhoods for improvements and new developments should include some form of commercial activities. This is because participation in recreation may not guarantee residents’ feeling of safety. Future research may therefore, consider the use of integrated models of both inhibitors and facilitators, but more of facilitating variables should be used for such studies.

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