Housing Decay Causes
 in Koya's Down Town

Abstract

Prof. M. k. Omar[[1]](#footnote-2) Mr. R. S. Aziz[[2]](#footnote-3)

Spatial Research Unit Dept. of Geography

Diyala University Koya University

The paper aims to explore housing conditions and the causes of decaying in three old residential neighborhoods in Koya town . The residents point of view about causes is in focus , as well .

 It was assumed that the three old neighborhoods have similar features , in respect of housing conditions , household types , and their opinions regarding housing decay causes .

Three old residential neighborhoods were chosen to the study . They are : Qalat , Bayzaka , and Bafri Qandi . They surround the CBD , making the intransition zone (according to internal structure models) .

A questionnaire was distributed randomly , and buildings were inspected personally during May – July 2010 . Moreover, photographing particular buildings were taken to show decay state .

 The questionnaire covered three important dimensions : the physical housing conditions , household types , and their own opinion about the deterioration causes .

It was proven that the three old neighborhoods of Koya are similar in most of housing features (physical and human) , but in terms of residents opinions they are less . This means that the study area needs special attention from planners and policy makers , to look ahead at Koya future and its impacts on the study area .

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Introduction

 Ageing and decay are an old standing problem facing human being, not just in their own physical bodies , but in every entity of everyday life as well . In order to tackle such problem , science and experience are used to monitor the situation , manipulate what possibly prolong life, and easing bad conditions . It is the doctrine of life .

 Koya , is an old human settlement in north of Iraq , capital of Koysanjaq county , Erbil Province , Kurdistan Region . During the second half of the twentieth century , the town face out migration at first , then in migration later . At the outset of the third millennium a University established there , which gives the town an expansion incentives , consequently , putting more stress on old residential areas .

This paper deals with Housing life cycle , pre-end stage in particular . At this stage , housing physical conditions are unfit for human habilitation . Even though, areas considered at this stage are usually resided by under poverty line people , low socio-economic class . Mainly , they are either immigrants and \ or indigenous old people .

1 - Methodology

1-1 Problem

Studying housing heritage means dealing with bad housing conditions , and decay causes , which are regarded as deep and expanding problem , and inherited in old residential areas . Old parts of Koya facing deterioration in many aspects , physical appearance is the most apparent .

1-2 Aim

 The paper aims to explore housing conditions and the causes of decaying in three old residential neighborhoods in Koya town . The residents point of view about causes is in focus , as well .

1-3 Hypothesis

 It was assumed that the three old neighborhoods have similar features , in respect of housing conditions , household types , and their opinions regarding housing decay causes .

1-4 Sampling

 Due to insufficient time to go deep and wide in terms of sampling and field inspection , sampling procedures cover only (8.707%) of Bayzaka , (5.750%) of Qalat , and (6.804%) of Bafri Qandi , (31 , 41 and 33 respondents respectively) . This means that (6.756%) of the occupied dwellings in the study area were inspected and their residents were interviewed . A questionnaire was distributed randomly , and buildings were inspected personally during May – July 2010 . Moreover, photographing particular buildings were taken to show decay state .

 The questionnaire covered three important dimensions : the physical housing conditions , household types , and their own opinion about the deterioration causes .

1-5 Analyzing techniques

 Questionnaire information fed to SPSS package , analyzed as cross tabulation data . Then , the output was rearranged to constitute the variables indicating the three study dimensions . In order to measure the degrees of similarities between the three neighborhoods , co-variance correlation coefficient were abstracted for each dimension indicators (Pearson Product moment correlation coefficient) . Squaring these coefficients( r) and multiplying them by (100) (R= r2 \* 100) gives the percentage of co-variance in values of indicating variables set . It measures the sharing percentage between every two neighborhoods in that dimension . In terms of ranking order comparison , Spearman Correlation Coefficients were used to determine the percentage of sharing such ranks , following the same procedure .

1-6 area of Study

 Three old residential neighborhoods were chosen to the study . They are : Qalat , Bayzaka , and Bafri Qandi . They surround the CBD , making the intransition zone (according to internal structure models) . Figure 1 shows the area of study within the neighborhoods setting . Table 1 , shows essential data needed to designate the sampling frame for the study area .

Table (1)

Area of study information

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name | Number | Buildings | Occupied | Derelict | Families | Population |
| Bayzaka | 201 | 425 | 350 | 74 | 356 | 1613 |
| Qalat | 203 | 778 | 757 | 71 | 713 | 3202 |
| Bafri Qandi | 301 | 591 | 484 | 106 | 485 | 2318 |
| Total |  | 1794 | **1591** | 251\* | **1554** | 7133 |

Statistics Bureau , Koysanjaq , 2009 \* plus two government buildings

2 – Housing Physical condition

 Historical references include that there was a covered market (Kaysaria) in Bayzaka in 1840 , and houses of more than 500 squared meters found in Qalat . Because Koya settled in a mountain area , local materials were used in building , which let walls widen between 40 – 80 c.m. Official records indicate that in 1935 Koya settlement had only four neighborhoods , namely : Qalat ; Bayzaka ; Bafri Qandi ; and Hawawa , with about (743) dwellings . In 2009 , the area of study had (1794) buildings, occupied by (1554) family . Even though , some dwellings contain more than one family . That means , about (250) buildings in the area of study are not used for residential purposes .

 Table 2 , presents the relevant questionnaire results on building materials . It shows that stone & mortar are the dominated building materials . Bafri Qandi presents the oldest building style : high percentage using stone & mud ; wooden roofs ; and the least using cement materials . In contrast comes Qalat with the highest percentage of stone & mortar ; and cement . In between comes Bayzaka , with conservative appearance .

Figure 1.The old quarters of koya

Table 2

Building materials in study area

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| s | Indicator | Bayzaka % | Qalat % | Bafri Qandi % |
| 1 | Stone & mud | 29.032 | 14.634 | 39.393 |
| 2 | Stone & mortar | 67.741 | 75.609 | 57.575 |
| 3 | Cement | 3.225 | 9.756 | 00.00 |
| 4 | Flat roof | 6.451 | 7.317 | 6.060 |
| 5 | Arc roof | 22.581 | 14.634 | 18.182 |
| 6 | Wooden roof | 35.484 | 21.951 | 51.515 |
| 7 | Cement roof | 19.355 | 24.390 | 3.030 |
| 8 | Cement & iron bars roof | 16.129 | 31.707 | 18.182 |

 Table 3 sheds light on dwellings size and contents . Amazingly , the number of rooms do not coincide with the plot size . This means large plots do not necessarily have the biggest number of rooms , and small plots may have no space except for rooms . Moreover , It seems that cooking activity do not need a fixed place , a special room designated for it .

Table (3)

Dwelling size and contents

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| s | Indicator | Bayzaka% | Qalat% | Bafri Qandi% |
| 1 | One floor | 64.516 | 70.731 | 72.727 |
| 2 |  1-2 rooms | 58.064 | 34.146 | 48.485 |
| 3 |  3-4 rooms  | 35.484 | 53.658 | 48.485 |
| 4 | 5 + rooms  | 6.451 | 12.195 | 3.030 |
| 5 | Less than 50 m2 | 16.129 | 2.439 | 00.00 |
| 6 | Between 51-79 m2 | 6.451 | 4.878 | 00.00 |
| 7 | Between 80 – 100 m2 | 25.806 | 12.195 | 43.750 |
| 8 | More than 100 m2 | 51.612 | 80.487 | 56.250 |
| 9 | Front garden | 6.451 | 24.390 | 18.182 |
| 10 | Water closet | 96.774 | 100.00 | 100.00 |
| 11 | Kitchen | 32.258 | 53.658 | 27.272 |
| 12 | Fixed bath room | 80.645 | 82.926 | 72.727 |

 The table presents Qalat as a neighborhood with big houses in terms of number of rooms and plot size . This feature confirmed by the appearance of front gardens (24.390%) , kitchen room (53.658%) , and fixed bath room ( 82.926%) . Although Bafri Qandi has less number of rooms per dwelling , but it has large size plots compared with the other two neighborhoods .

The field inspection shows that (74.194%) of the visited dwellings in Bayzaka have crack on wall and / or roof . This is true with (70.731%) and (69.696%) in Qalat and Bafri Qandi respectively. Looking at the housing condition indicators all together , the co-variance analysis reveal that Bayzaka and Bafri Qandi have (86.490%) of sharing features , then Bafri Qandi and Qalat with (79.932%) in common variance . Qalat and Bayzaka sharing (79.219%) of the variance in indicators values . In short , the three neighborhoods almost similar in physical features and conditions . The difference could be related to the CBD expansion , which is vary in its effects .

3 - Household Characteristics

Although the comparison between the households indicators shows a high percentage of co-variance (slightly above 97%) between the three selected old neighborhoods , but differences exist . For instance , the average household size in Bayzaka is (6.354), while the average for Qalat is (5.780) , and for Bafri Qandi is (5.484) person per dwelling . The gender ratio for Qalat and Bafri Qandi is (94.623) , and it is (93.137) male for each hundred female in Bayzaka .

Table 4 gives a brief idea about household composition in the study area . It shows that female heading (15.151%) of the dwellings visited in Bafri Qandi , (12.903%) and (12.195%) in Bayzaka and Qalat respectively . Female heading families \ households is a well distinguished phenomenon in inner city areas all over the world , and Koya makes no exception in this respect . More than half (56.097%) of the household's heads in Qalat were involving in free trade activities , less than that in Bafri Qandi (45.454%) and (45.161%) in Bayzaka .

Owner occupation in Qalat records more than three quarter (75.609%) , and this explains why only (2.439%) of the household in this neighborhood thinks to move from it . While , the situation in Bafri Qandi is different . It was shown that (51.515%) own their residence in Bafri Qandi , (63.636%) has desire to stay in it and (36.364%) thinks to move away . Bayzaka has another story ; (45.161%) of the visited households there was renting their residence , and (48.387%) owner occupier , (32.258%) prefers to stay in it , and (35.484%) likes to move to other neighborhoods .

Comparing between Koya and other Iraqi case studies , Mosul , Baghdad , and Baquba , Koya is unique . And as D.J. Dwyer state "it is extremely unsafe to generalize about the socio-economic characteristics of spontaneous settlement , not only within nations or within regions, but even within single cities."[[5]](#footnote-6) . They have the right to believe that there is no twin cities over the surface of earth , and Koya has no twin sister .

Table (4 )

Household characteristics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| s | Indicator | Bayzaka | Qalat | Bafri Qandi |
| 1 |  Number of Males | 95 | 115 | 88 |
| 2 | Number of Females | 102 | 122 | 93 |
| 3 | Government employees | 41.935 | 31.707 | 39.393 |
| 4 | Trade activities | 45.161 | 56.097 | 45.454 |
| 5 | House Wife | 12.903 | 12.195 | 15.151 |
| 6 | Indigenous | 74.193 | 87.805 | 84.848 |
| 7 | Owner Occupier | 48.387 | 75.609 | 51.515 |
| 8 | Tenants | 45.161 | 19.512 | 24.242 |
| 9 | Prefer to stay | 32.258 | 43.902 | 63.636 |
| 10 | Think moving | 35.484 | 2.439 | 36.364 |
| 11 | Like Oriental Design  | 6.451 | 9.756 | 18.182 |

4 - Decay Causes : Residents Views

Twenty three items in the questionnaire were devoted to residents' opinions about the causes of housing decay in their neighborhood . They chose what they think the cusses without categorizing them according to their importance or effects . The table of frequency helps to rank them in descending order . Table 5 shows the ranking order of the causes . Time factor comes in the seventh order, and bad materials in the sixteenth , and shares it with old age owner and female owner , whereas dampness comes first cause . Looking closer to the cross tabulation results , and combining related indicators helps to understand the causes in the study area .

Table ( 5 )

Decay causes in ranking order .

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| rank | Indicator | Bayzaka | Qalat | Bafri Qandi | Total |
| 1 | Dampness | 1 | 1 | 1 | 3 |
| 2 | Bad drainage System | 2 | 2 | 3 | 7 |
| 3 | Misuse of property | 3 | 4 | 2 | 9 |
| 4 | Finance Problem | 6 | 4 | 4 | 14 |
| 4 | High Density | 5 | 3 | 6 | 14 |
| 5 | Tenant's Changes | 5 | 5 | 5 | 15 |
| 6 | CBD Invasion | 7 | 2 | 7 | 16 |
| 6 | Unused Rooms | 4 | 9 | 3 | 16 |
| 7 | Time Factor | 4 | 6 | 7 | 17 |
| 8 | Ignoring maintenance | 7 | 8 | 8 | 23 |
| 9 | Rain | 6 | 8 | 11 | 25 |
| 9 | Front changes | 8 | 4 | 13 | 25 |
| 10 | Change in Use | 10 | 7 | 9 | 26 |
| 11 | New buildings in area | 10 | 7 | 10 | 27 |
| 12 | Incoherent ground | 9 | 11 | 8 | 28 |
| 13 | Derelict Land nearby | 9 | 12 | 8 | 29 |
| 14 | Competition | 11 | 10 | 9 | 30 |
| 15 | Multi uses  | 13 | 11 | 12 | 36 |
| 16 | Bad materials | 11 | 13 | 13 | 37 |
| 16 | Female owner | 12 | 13 | 12 | 37 |
| 16 | Old age owner | 14 | 11 | 12 | 37 |
| 17 | Cross Cut | 13 | 12 | 13 | 38 |

Dampness considered as the prime cause by all respondents , it is usually related to rain (especially when pooled in holes and low parts of the houses or streets) , pipe water leakage , and bad drainage system . No one refer to water leakage , but eight refer to the other three indicators , (18) tick on dampness and rain only , and (38) combine dampness with ill drainage system in the area . That is (7.6%) , (17.1%) , and (36.2%) of the respondents respectively .

Misuses of property is a term cover a variety aspects of status and behavior of residents . It could be the results of overcrowding , low density (unused rooms) , and tenants changes over time . Meanwhile , the dwelling could combine two opposite states , overcrowding in part and unused room for particular reasons . Moreover , even in dwellings owned by their occupiers , demographic changes took place naturally . Such changes affect the way that house maintained and managed .

About (10.5%) of the respondents combine between the ill use of building , and tenant changes with unused rooms , while (5.7%) of them combined them with high density . Even though , the misuse exist and has its own impacts as witnessed by the field visit .

Financial problem is an old standing dilemma all over the world , especially in inner city areas . Hence , one can look at its relation with old age and female owners in particular . Although (39) respondents consider financial problem as one of the decay causes , only (4) of them combined it with female ownership , and (6) with old aged owners . Seventeen respondent relate ignoring maintaining the dwelling to finance ability .

Central Business District in Koya invade its down town , especially the study area . Signs of invasion are : Cross cut through buildings ; changes in fronts of buildings ; changes in building uses ; competition for buying buildings (land prices speculation) ; appearance of derelict lands ; redevelopments (mixing new buildings within old residential area) ; and multi uses of the building . All these indicators are found in the study area . It could be said that the invasion process pass to the second phase (succession) [[6]](#footnote-7) . So , Koya town is in desperate need for developing control , and a new master plan comprehending the new factors ( the University in precise) affecting its expansion and land use changes.

CBD expansion (as a cause for decay ) accompanied by other features in Koya , like : (12) front changes ; (7) competition ; (6) new buildings ; (5) derelict land nearby ; (4) multiuse and (4) use change in buildings , and (1) cross cut case .

The paper shed light on co-variance between the three selected neighborhoods in terms of housing conditions (physical & human) , now it is time to look at residents opinions related to causes of decay in their living area . Ranking the frequency of causes and abstract Spearman Rank Order Correlation Coefficient , square and multiply by (100) gives the percentage of sharing orders between each two sets of indicators .

It seems that Bayzaka and Bafri Qandi people sharing opinions (74.476%) more than others , Bayzaka and Qalat residents have (62.465%) in common ideas , and the least coincided answers were between Qalat and Bafri Qandi people (45.562%) .

5 - Conclusion

Referring to the research hypothesis , it was proven that the three old neighborhoods of Koya are similar in most of housing features (physical and human) , but in terms of residents opinions they are less . This means that the study area needs special attention from planners and policy makers , to look ahead at Koya future and its impacts on the study area .

Housing policies need to be evaluated according to new situation , considering incentives for maintaining housing heritage , and setting control over land use . Stick and carrot policy is the ultimate procedures local and regional authorities needed at hand to control development . Such policies should be backed legally , and well understood and accepted by people . Public participation is essential in this respect .

Looking at the foreseeable future , Koya, as a town , has to be designated as growth point , utilize the establishment of the university , explore its region's potentials . Achieving this strategy puts more and more burden on the study area , putting it in jeopardy and facing intense pressure , accelerating over time . That’s why field work study , like this , is vital for exploring the situation and hinting for future trends .

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1. Director of S.R.U. Diyala - Iraq , e-mail: Sru.diyala@gmail.com [↑](#footnote-ref-2)
2. Postgraduate student , Koya University , e-mail: rosam.salam@yahoo.com [↑](#footnote-ref-3)
3. Director of S.R.U. Diyala - Iraq , e-mail: Sru.diyala@gmail.com [↑](#footnote-ref-4)
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