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Physical and Socioeconomic Dwelling Conditions: Identifying Satisfaction Level of Taluka Kotri Residents, Sindh, Pakistan

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Abstract: Physical and socioeconomic dwelling conditions are the most significant elements of the people's life. However, because of carelessness, inflation, higher materials cost an dill urban planning; dwelling conditions of the Kotri city are deteriorating as time progress. These sorts of problematic circumstances put damaging effects on the urban built environment. Thus, study aim is to assess the physical, social and economic housing conditions through assessing the resident's satisfaction level. To collect data; the close-ended questionnaire with the five-point Likert-scale was utilized, and calculated index scores were arranged in ascending order for each attribute, i.e. physical conditions (e.g. environment, shelter size, Public spaces, sanitation, infrastructure and services, waste collection),social conditions (e.g. neighbours, social condition and the neighbourhood, community and property safety, childhood environments)and economic conditions (e.g. job opportunities, working environments, transportation and communication).This study revealed the resident's satisfaction level in terms of index scores that confirmed the level of problems in the study area. Further, the clarified problems can be eliminated with the help of urban planning techniques and practices.

Keywords: Urban Planning, Deteriorate Dwellings, Satisfaction Level, Questionnaire Survey, Likert-scale.

1. INTRODUCTION

It is believed that if you take care of housing, urban planning would take care of itself (Integrated master plan for Lahore-2021).The predefined statement reflected that basic services and settlements directly linked with dwelling conditions and their maintenance (Rauh, Chew and Garfink 2002).Consequently, the dwelling is a more focused factor among living conditions (Tao, 2015).Housing isan essential human need, as every family requires shelter for living(consulting, E.A. 2014). Everyone hopes to live in a settlement that is comfortable and healthy. In some developing countries, there are still billions of people residing in inadequate housing without amenities (Tao, 2015).The sustainable dwelling units and their maintenance regarding liveable conditions still stay among the obstinate issues, confronting with the numerous urban communities of the world (Alnsour, 2014; Gibson *et al*., 2011;Braubach, 2011).Inadequate housing and deficient living conditions (Zhao *et al*.,2010) have serious implications on the satisfaction level of city residents (Chen *et al*., 2015). As, Tao (2015)argued that dwelling problems have become a gigantic social issue for future development. Therefore, this study was aimed to analyse the satisfaction level of residents of the Kotri city about physical and socioeconomic dwelling conditions. This study is imperative in a sense that it is quantifying resident's satisfaction level about dwelling conditions. By considering thetime and available resources, this research focuses only on the particular physical and socioeconomic attributes.

2. MATERIAL AND METHODS

Kotri was chosen for this study, which can be considered as the fast developing town and distinct headquarter of Jamshoro. The total area of Taluka Municipal Administration (TMA) Kotri was 1, 845sq.kms. The location map of the Taluka Kotri can be seen in (**Fig. 1).**

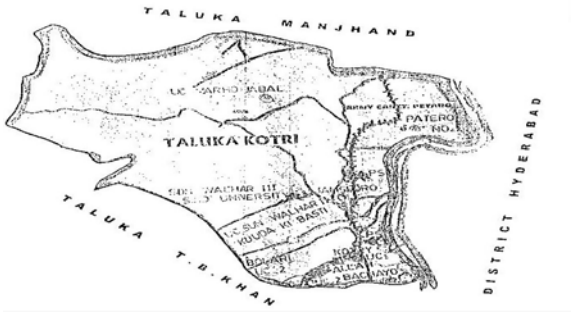


Fig. 1. Location map of TalukaKotri

Taluka Kotri administratively divided into ten union councils (Ahmed, 2007).By considering time constraints and other resources,this research covers only Kotri city as a case study, so that research work could be carried out in an efficient way.

Kotri city possessed a large number of inhabitants, lived in deteriorated housing units without basic facilities. Therefore, this research focussed to identify the satisfaction level of the local residents, about the physical and socioeconomic dwelling conditions.

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There are various means of data collection (Chandio *et al*., 2012); but for this study, anon-site questionnaire survey was conducted (Talpur *et al*., 2015). To procure data, the household survey was carried out during the day timings (Chen, 1998). Furthermore, to make survey proceedings successful, the modified probability sampling method was used to estimate the standard level of sample population (Talpur *et al*., 2015). To determine the resident's satisfaction about living conditions, a five-point Likert-scale technique was used. The five-point Likert-scale comprised of *High, Fairly-High, Moderate, Little* and *Very-Little,* through which *satisfaction index values* were generated.

2.1 Sample Population:

The standard level is (5–10%) of the total population that can be taken as a sample of the total population (UN, 2008). Due to lack of available demographic data on secondary resources about the study area, *"Compound interest formula"* was used to project the population, so that the sample population can be derived from it (Talpur *et al*., 2015; Roberts, 1974).The sampled population can be depicted in **(Table1).**

Table 1. Population Sample (Estimated)

Study Area	Population in 1998	Total Population 2016 (projected)	5% Sample	Number Of Sampled Households (Questionnaires)
Kotri city	19042	32418	1621	30

By adopting modified probability sampling method, cluster sampling from the probability sampling and quota sampling of the non-probability sampling categories were selected for this study (Talpur *et al*., 2015). Clusters from the study area were chosen in such a way that each cluster has at least 10 residential units and possessed similar socioeconomic characteristics. As one questionnaire would be able to represent 10 households and approximately 60 inhabitants. Similarly, 100 questionnaires would exemplify 1,000 households and 6,000 persons of the study area. This proportion actually was derived to fulfil the standard level of sampled population with the help of quota sampling. By keeping in view the research constraints, the Likert-scaleand related methods were selected for the purpose of reliable data retrieval.

2.2Likert-scale method:

Likert-scale, named after *Dr. Rensis Likert* (Brown, 2011) is a psychometric response scale, primarily used in questionnaires to obtain the participant's preferences or the degree of agreement with a statement or set of statements (Bertram, 2013).(Joshi *et al*.2015) described that if the purpose of research is to understand the opinions/perceptions of participants related to single *'latent'* variable (the phenomenon of interest).Then, it is suitable to adopt the Likert-scale for data analysis. Hence, considering the aim of this study,five point Likert-scale methodology (Nadeem *et al.,* 2013) was used for analysing the resident's satisfaction about living conditions that can be seen in **(Table 2).**

Table 2. Five Point Likert-scale Scheme

Highly satisfied	Fairly satisfied	Moderate	Satisfied	Highly unsatisfied
+2	+1	0	-1	-2

Neuman*et al*. (2002) and Nadeem*et al*. (2013) found that Likert-scale; if utilized with index numbers, resulted in the more valid tool to judge and record the people's opinions. On the other hand, Likert-scale can also increase the legitimacy and consistency of data. For this study, scores of *(+2), (+1), (0), (-1),* and *(-2)* were delegated to highly-satisfactory, fairly-satisfactory, 'moderate-satisfactory', and 'highly-unsatisfactory' respectively. To determine the index score, product ofthe actual frequency of each response category and its respective score was ascertained. Later, the resulting values were add-up to obtain the weighted total. It was then divided by a total number of responses/questionnaire of the respective attribute, i.e. 30, as explained in Equation 1.

$$\text{Satisfaction index} = \frac{\text{weighted total score}}{\text{total number of responses (n)}} \quad (1)$$

Equation 1was used to compute the satisfaction index for all selected attributes of dwelling conditions. According toselected Likert-scale, respective scores and index values were recorded between the ranges(+2 to -2).

3. RESULTS AND DISCUSSION

By using Equation1, satisfy action indexes for each physical, social and economic attribute were found, and the results were arranged in ascending order as shown in **(Table 3).**According to the adopted method, index values may vary from +2 to -2. Satisfaction level was defined on the basis of their existence on the Likert-scale from +2 to -2. As, +2 means 100% respondents are satisfied with the respective feature, and -2 means 100% respondents are dissatisfied with the respective feature.

Section-1 of **(Table 3)**illustrates the resident's satisfaction about the physical aspect. Index values proved that most of the people were satisfied with the environment, plot and shelter size, i.e. +1.43, +0.96 respectively. In contrast, residents were dissatisfied with public spaces, sanitation system, infrastructureservices and waste collection, i.e. -0.8, -0.8, -0.43, -0.23 respectively.

Section-2 of **(Table 3)** shows satisfaction index values about resident's housing conditions (Social

aspect). The results highlighted that residents were satisfied with their neighbours to some extent, i.e. +0.03, but they were dissatisfied with property safety and childhood environment, i.e. -0.03, -0.23 respectively.

Section-3 of **(Table 3)** indicates the satisfaction index about economic aspect. It was found that people were satisfied with available job opportunities, i.e. +1.03 and working environments, but in contrast they were dissatisfied with transportation and communication, i.e. -0.2.The overall results presented in **(Table 3)** alarmed the worst condition of waste collection and sanitation among physical aspect.It also indicates the need of immediate focus on property safety and childhood environment from social, transportation and communication aspects.

4. CONCLUSION

The aim of this study was only to identify the physical and socioeconomic aspects of housing through assessing the resident's satisfaction level. Hence, the goal of this research was successfully achieved, and the satisfaction index values were arranged in ascending order for each aspect.

Physical conditions were organised in ascending order on the basis of index values, like environment, shelter size, public spaces, sanitation, infrastructure and waste collection. Similarly, social and economic conditions were arranged as neighbours, social condition, the neighbourhood, community, property value, safety, job opportunities, communication and childhood environments. Economic conditions were set on the bases of satisfaction index values as job opportunities, working environments, transportation and communication. Modified probability sampling method (cluster sampling and quota sampling) was adopted to carry out the questionnaire survey. Likert-scale varying from highly satisfactory to highly unsatisfactory was used inthe questionnaire.

As, the satisfaction index values about the different features of living conditions were arranged in ascending order. So, it is hoped that the study would provide guidelines for prioritizing the development works in the Kotri city by any private and government agencies.

5. ACKNOWLEDGEMENT

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Table 3. Resident's Perception (Level of Satisfaction)

Features that depicts living conditions associated with dwellings	(Likert-scale scores)					Weighted total	Satisfaction
	Highly satisfied	Fairly satisfied	Moderate	Satisfied	Highly unsatisfied		
	+2	+1	0	-1	-2		
	Score	Score	Score	Score	Score	Score	Index
Section 1 - Physical aspect							
Satisfaction with environment	0	00	0	-15	-28	-43	+1.43
Satisfaction with plot and shelter size	22	7	0	-2	-4	29	+0.96
Satisfaction with public spaces	0	01	0	-17	-8	-24	-0.8
Satisfaction with sanitation	2	00	0	-14	-12	-24	-0.8
Satisfaction with infrastructure and services	0	3	0	-8	-8	-13	-0.43
Satisfaction with waste collection	0	5	0	-4	-8	-7	-0.23
Section 2 - Social aspect							
Satisfaction with neighbours	0	8	0	-7	00	1	+0.03
Satisfaction with social condition and neighbourhood	2	8	0	-10	00	0	0
Satisfaction with community and property safety	2	9	0	-12	00	-1	-0.03
Satisfaction with childhood environments	0	6	0	-13	00	-7	-0.23
Section 3- Economic aspect							
Satisfaction with job opportunities and working environments	0	0	0	-11	-20	-31	+1.03
Satisfaction with transportation and communication	0	0	0	-6	00	-6	-0.2

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