The design of successful residential environments is usually linked to the role the latter plays in the lives of its inhabitants. It has been proven through some previous studies and research in attempts to explain and determine the relationship between the physical characteristics of the dwelling and its surroundings, but the spatial shape and design of traditional architecture were subject to a range of different factors, including natural and functional factors. Natural approach holders believe that vacuum regulation is controlled by natural factors that have a direct impact on the design form such as conditions and climatic data, geographical terrain and general orientation of housing units (David Lee 1969), but the functionalists believe that the form is followed and subject to the function for which it was created (Lewis Morgan 2003).

In the early 1970s, the first studies of Amos Rapoport, which adopted the multi-cause cultural theory, which was concerned with interpreting and determining the relationship between the physical characteristics of the built environment and the socio-cultural characteristics of individuals, which considers that the architectural environment and in general are the area that provides places and spaces for human activities, thus reminding individuals of the quality of these activities, and rapoport supports a close relationship between the design of housing and the lifestyle of individuals (Shehayeb,Dina and all, 2003).

This mutual relationship between man and his surroundings is embodied through urban design and socio-cultural life, which has clearly emerged in traditional environmental gatherings that are considered precious architectural and urban heritage left to us by the ancestors as a model of wonderful and ancient creative art that performed a continuous civilized function in the form of his local designs and architectural solutions for a more integrated social and cultural life over time. As an example, Sidi Okba, northeastern Algerian Sahara, is one of these cities characterized by a traditional architectural environment surrounded by palm oases and different from modern ones, with the specificity of its urban fabric, architectural style and social customs there.

Our goal through this research paper is to identify the role played by the house in its various dimensions in meeting the social and cultural needs and the extent to which the latter influences the design of the traditional residential
environment in Sidi Okba in order to reach a set of recommendations that are supposed to be taken into account in all modern architectural and urban designs.

**METHOD AND MATERIALS**

In this study, we relied on field survey methodology, which is one of the best and most effective methods used in scientific research when it comes to studying social or natural phenomena, where we collected data in the field by means of direct interview, questionnaire and architectural statement.

**Presenting the case of the study**

Sidi Okba is the capital of the Daïra who has the same name. It is located 20 km southeast of Biskra, the Wilaya capital as shown in figure 1. It covers an area of about 360 hectares, with a population of more than 76,000 in 2015.

![Figure 1](http://www.carte-algerie.com)

The city is one of the cities with an ancient history dating back to the Roman presence in Algeria 2,000 years ago, as shown by the remaining Roman relics near the village of Tehouda, formerly known as Thabudeos, which is the origin of the first nucleus around the mausoleum of the Conquerante martyr Okba Ibn Nafi Al-Fahri during the 12th century BC (Farhi. A and Belakehal. A 2008). The city development can be divided into four distinct major phases, as illustrated in figures 2 and 3.

![Figure 2](http://Source authors 2022)

**Figure 2.** The first urban evolution from the fondation of the city to the frensh occupation. The second is the colonial period (Source authors 2022)
The impact of the daily socio-cultural activities on the Spatial organisation of the traditional residential environment of Sidi Okba city, Algeria

Figure 3. The third and forth urban evolution from present the first and second the city development after independence (Source authors and students of 2nd year in architecture treated by authors 2022)

For the study area, it includes the perimeter of the old neighborhood, located on the south-west side of the city, as shown in figure 4, which sits on an area of 62.15 hectares and is surrounded by palm forests and agricultural land dedicated to grains and pulses, and this is shown the figures 5 and 6.

Figure 4. Perimeter of study (Source: Google Maps 2022)
Figure 5 and 6. Palm oasis of the old city of Sidi Okba (Source: Authors 2021)

Figures 7 and 8 illuster that the fabric of the traditional city is characterized by irregular and multi-form compacting and closing from the outside, the streets are narrow and arboreal, some of which are limited. The urban block are formed by the tribe system.

Figures 7 and 8. The narrow streets of the old city of Sidi Okba (Source: Authors 2021)

The Workplan and Study Sample

**First step:** The study sample was identified and measurements were taken for some houses to be studied.

**Second step:** Communicate with the population through in-kind observation, interview guide and questionnair to come up with accurate details explaining lifestyle and adapth methods to identify the most important daily social activities.

In this study, we adopted the following activities as indicators of the lifestyle of the individuals:
The impact of the daily socio-cultural activities on the Spatial organisation of the traditional residential environment of Sidi Okba city, Algeria

Living activities indicator: sitting family members, preparing food, watching TV, reviewing lessons, eating / Guest reception indicator/ Sleep indicator/ Movement indicator and transition between spaces.

Third step: Analysis of the answers and dropping them on the spaces to study the appropriate ratio between social activity and spatial organisation.

Figure 9 present the study sample, it is a sample of 12 houses from the same traditional urban fabric, so it is a representative sample of the community.

These houses are inhabited by different families in terms of their social composition (women, men, children, youth, elders, single family, branching family, as well as in terms of number of individuals)

**Figure 9.** Some examples of Houses statement (Source: Authors with the collaboration of students of 2nd year in architecture, treated by Authors 2022)

RESULTS AND DISCUSSION

The field study showed that most of the activities recorded can be limited to four areas:

- The Part I (represented in blue): the area of daily social activities that requires to be carried out in fixed areas such as storage, cooking, bathing, sleeping, sitting family members, receiving women guests.

- The Part II (represented in yellow): The space of daily social activities that do not require achievement in the field of Thabeth such as sewing, textiles, watching TV, studying, eating, children’s play area

- The Part III (represented in red): movement and transition between the interior and outside the dwelling.

- The Part IV (represented in green): receiving male guests, a bedroom for guests and male family members

To facilitate the study, we redraw the spatial organization according to these sections as shown in the figure 10.
As for analysing the relationship between the daily social activities, it is limited to comparing the results according to the following: (Graphs 1, 2, 3 and 4)

Graph 1: Social activity according to the total area rate of total sample area studied
Graph 2: Social activity according to the movement and transition throughout the day
Graph 3: Social activity according to the daily day time
Graph 4: Social activity according to the daily night period

These results show through the first graph that the area allocated for social living activities occupies the biggest part of the housing area with 49% due to the presence of a large number of gaps allocated to these activities, especially the cooking, sleep, resting activities as well as the field of reception of female guests due to the religious and cultural social custom that provides for the principle of separation of the male and female guests, especially if they are from outside the family.

In addition, storage activity occupies a considerable space where in many dwellings we find more than one room dedicated to storing dates because the area depends on agricultural activity within the palm oasis. The smallest part of the area was allocated to the third section 25%, which is often considered a buffer zone between the inside and the...
outside and called Sguifa. In addition to its climate role, it is considered a space dedicated to separating first the inside and the outside and second between the reception place of the male guests and the inner section of the house as the embodiment of the principle of decency (intimacy). This is precisely what the results of the second graph in which the part (III) appears represent a value in terms of the movement between areas while it is considered a distributed area of movement and characterized by the inevitability of transit through which unlike other sections.

Through the third and fourth statements, we note that the largest percentage of daily activities is concentrated during the morning period in the second section 37%, which represents the period of carrying out rapid daily activities that do not require much time and no area allocated to them such as sewing, textiles, watching TV, studying, eating, playing. These activities often require natural lighting, which is at its highest level during the morning period, which makes these activities accomplished in this area called Wastedar because it is equipped with an opening in the ceiling that allows the passage of solar radiation and natural lighting inward. In the evening and in the period of the night, where the daily social activity tends to remain large, we notice the rise in the level of night activity, often 68% in the first section and a lower percentage in the fourth section, because it is also intended for sleep for men, whether family members or guests.

**CONCLUSION**

Through this study we conclude that daily social life, including cultural and religious characteristics, greatly interferes in determining the organisation of the internal divisions of the traditional residential environment of the city of Sidi Okba, where it is clear that there is a spatial hierarchy controlled by daily social activity, which is from the private and then semi-private to the completely private, and this is embodied in the reception room of guests that is isolated from the inner section of the house through the Sguifa then Wastedar, which is full of daily activities.

Wastedar is considered as a multi-activity area where no fixed furnishing is placed to facilitate some quick activities that do not require a permanent space dedicated to it such as sewing and weaving and then bedrooms, which are considered the most private area because they are used for sleeping or receiving female guests and have direct contact with the outside only with upper and very small openings while we find these areas open to Wastedar which earns them an introvert character. This last is usually explains by the climat impact of the hot desert areas, but it also affects the social characteristics and lifestyle. On the other hand, agricultural activity is also reflected in the components of the house through the presence of pet breeding rooms and many stores, as well as surfaces used to dry dates.

**REFERENCE**