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Investigating the Built Environment of Damascus Traditional City as a Child Friendly Built Environment

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□ ABSTRACT □

A child friendly city is a city, or any local system of governance, committed to fulfilling children's rights. It is a city where the voices, needs, priorities and rights of children are an integral part of public policies, programs and decisions. As a result, it is a city that is fit for all. Today, Damascus city rate poorly in terms of the child friendly status. Due to modern planning and zoning practices, planning for the car and uncontrolled growth, children of Damascus are growing up unhealthy, obese and depressed. This research reviews the studies done on the built environment that is convenient for the child's physical, mental and social health and safety. For the purpose of this research, 64 children (28 girls and 36 boys) aged between 10-14 years, along with their parents were interviewed and asked to describe their perception and experience of the built environment of the New City of Damascus to meet their needs. Then, the research analyses and evaluates the Traditional Damascus Built Environment in order to consider key planning and designing factors that could be learnt through looking at the way the Traditional Built Environment providing for children's needs, and using this as the blueprint for designing child friendly neighborhoods of new and damaged neighborhood of Damascus City.

Key Words: Damascus City, Traditional Damascus City, Child friendly built environment.

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دراسة وتحليل البيئة المبنية لمدينة دمشق القديمة وفق مفهوم البيئة المبنية الصديقة للطفل

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□ ملخّص □

المدينة الصديقة للطفل هي كل مدينة او بيئة مبنية تلتزم بإنجاز وتطبيق حقوق الطفل. وعلى ذلك، هي كل مدينة تعتبر أصوات واحتياجات واولويات وحقوق الطفل عاملا" مؤثرا في سياساتها وبرامجها وقراراتها العامة. وهي كنتيجة، المدينة التي تلائم الكل. و بناء" على ذلك تصنف مدينة دمشق في مرتبة متأخرة كمدينه صديقة للطفل. في الواقع، يعاني الأطفال في مدينة دمشق، وبسبب تبني النظريات التخطيطية الحديثة ومبدأ فصل الوظائف وإعطاء الأفضلية لحركة السيارات في التخطيط والنمو العشوائي وغير المنظم. من النمو غير السليم وامراض البدانة والسكري وكذلك الاكتئاب.

يتناول هذا البحث الدراسات والبحوث السابقة التي تناولت البيئة المبنية المناسبة لصحة الطفل الجسدية والعقلية والاجتماعية وسلامته. وللوصول الى هدف البحث، تم اجراء استبيان ل 64 طفلا" (28 بنت و 36 صبي) تتراوح أعمارهم بين 10–14 سنة، وتضمن الاستبيان أسئلة تتعلق بتصورات وخبرات الأطفال عن البيئة المبنية لمدينة دمشق الحديثة ومدى تلبيتها لاحتياجاتهم وتطلعاتهم. ومن ثم يحلل ويقيم البحث البيئة المبنية لمدينة دمشق التقليدية وذلك من اجل استقراء الأسس العمرانية والمعمارية التي يمكن الاستفادة منها في تحديد مبادئ توجيهية وتطبيقية لتحقيق المدن والاحياء والأماكن الصديقة للطفل في مرحلة إعادة الاعمار لأحياء مدينة دمشق المدمرة نتيجة الحرب القائمة حاليا".

الكلمات المفتاحية: مدينة دمشق، مدينة دمشق القديمة، البيئة المبنية الصديقة للطفل

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Introduction

Today's children are the citizens of tomorrow's world, and their survival, protection and development is the prerequisite for the future development of humanity. Thereby, empowerment of the younger generation with knowledge and resources to meet their basic human needs and to grow to their full potential should be a primary goal of national development, as their individual development and social contribution will shape the future of the world. However, it is quite evident from the increasing instances of the children's domestic rebellion, educational difficulties and public disorder and distress, that today's children, especially under stressful urban conditions, are not leading to a prosperous healthy life. Indeed, the alarming increase, in the number of at-risk of children, throughout the world and especially in the urban areas (UNICEF, 2002), is a clear manifestation of the malfunctioning of communities, cities, towns and villages they come from. Projections suggest that six out of ten children will live in urban areas in low- and middle-income nations by 2025 (UNICEF, 2002).

Ever since the Year of the Child (1978), there has been lots of talk about an everyday environment more friendly towards the child and about measures supposed to provide better help for children. While, the World Summit for Children (1989) has talked about widespread acceptance for a new ethic for children; an ethic which demands that children should be the first to benefit from mankind's success and the last to suffer from its failure. In nineties, the situation of urban children was a rising concern, and has caught the special attention of numerous local leaders throughout the world in the light of the widespread concern that something has been lost in the relationship of the child and the city. In this regard, the Child Friendly Cities Initiatives (CFCI) was launched in 1996, to act on the resolution passed during the second United Nations Conference on Human Settlements (Habitat II) to make cities livable places for all; in UNICEF terms, for "children first". The conference declared that the well-being of children is the ultimate indicator of a healthy habitat, a democratic society and of good governance (UNICEF, 1996).

The research will analyze and evaluate the built environment of Traditional Damascus City، in order to consider key planning and designing factors that could be learnt through looking at the way the Traditional Built Environment is providing for children’s needs, and using this as the blueprint for designing child built environment and communities of new and damaged neighborhoods of Damascus City.

However, before analyzing, and evaluating the Traditional Built Environment of Damascus City, it is important to review the studies done on the built environment that is convenient for the child's physical, mental and social health and safety.

Research Hypothesis

- The built environment both reflects and conditions the wellbeing of children and gives children a very clear message about how they are valued within their community.

Research Questions

- What does child friendly built environment mean?
- What are the factors that contribute to a sense of child friendly built environment?
- Is the traditional city of Damascus a child friendly built environment?

Research Objectives

- Identify the role of the built environment on child's physical, social and mental health;
- Study the characteristics of child friendly built environment;
- Find out the factors that contribute in the realization of child friendly built environment according to children perceptions;
- Evaluate the traditional city of Damascus as a child friendly built environment.

Research Importance

- Many studies mention that aggression, poor socialization, limited opportunities for cognitive development, obesity, crime and anti-social behavior are just some of the social and health consequences of poorly designed environments (Tranter, and Pawson, 2001). Given that children and young people constitute more than 35% of the Syrian population (Central Bureau of Statistics, 2009), it is essential that the views, needs and interests of children and young people are catered for in the way that homes, neighborhoods, parks, schools, transport and shopping centers are designed and managed, especially, in the phase of re-planning and designing of the destroyed and managed neighborhoods of Damascus City.
- Ensuring that the interests of children and young people are considered in these developments is increasingly acknowledged as critical for long-term sustainability of cities and neighborhoods.

Child Friendly City

A child friendly city is a place where children's rights and needs are at the center of good community planning and design. It is a place where adults listen to children and young people and take what they say seriously. The principles of the United Nations Convention on the Rights of the Child (CRC) highlight the responsibility of the States Parties (Syria is among them) to uphold the child's right to live in a safe, clean and healthy environment and the right to engage in free play, leisure, and recreation (UNICEF, 1992). UNICEF's Child-Friendly Cities (CFC) initiative was first conceived in response to the United Nations Conference on Environment and Development in 1992 and then more strongly in the meetings leading up to and around the development of the *Habitat II* meetings in Istanbul in 1996. It came at a time when it was being recognized that the situation of urban children around the world was of critical concern and that discussions on sustainable development, the management of human settlements and the rights of children could not be done in isolation (UNICEF, 1992).

The term 'child friendly cities' was coined as part of a UNICEF document (1996) entitled *Children's Rights and Habitat,* which stated that: "The needs of children and youth, particularly with regards to their living environment have to be taken fully into account; special attention needs to be paid to the participatory processes dealing with the shaping of cities, towns and neighborhoods; this is in order to secure the living conditions of children and of youth and to make use of their insight, creativity and thoughts on the environment" (UNICEF, 1996). However, there are no standard models of what a child friendly city looks like, and while the emphasis around child friendliness differs between institutions, the common denominator is to make cities, communities and neighborhoods better places for children and youth. According to Malone, the concept of child friendliness

is typically represented as "the physical and social environment that allows children to feel a sense of belonging, to be respected and valued, and to have opportunities to become increasingly independent" (Malone 2006, p 24). Moreover, Gleeson and Sipe state, it is a response to growing concerns about the health and wellbeing of children in the face of increasing urbanization (Gleeson & Sipe, 2006).

Child and Built Environment Relationships

The environment surrounding us sends strong messages about how to behave and what to perceive. Planners and architects play a key role in constructing these messages, and help determine how people view and interact with the world. The built environment embraces a wide range of concepts, from the design and integrity of housing, to land-use and urban planning and covers a broad array of structures, developments and spaces, which have significant consequences for the quality of life, civic relationships, play, exploration, safety and security. In this regard, the built environment and its associated messages can greatly influence the physical, social and mental health of all residents.

Unlike adult, for whom the built environment is regarded in a functional way, children will often perceive their surroundings as locations for play, learning, interaction and stimulation (Tranter & Pawson, 2001). Research demonstrates that for children, a reduction in spontaneous play and physical contact with their environment can restrict their cognitive development, development of motor ability, personal identity, social play skills and emotional resilience (Fjortoft & Sageie, 2000). While, Bartlett notes that: "Through their playful interaction with the world around them, children acquire the physical, social and mental skills they need for life" (Bartlett 2005, p 11).

When evaluating the potential value of existing planning and designing urban environments for children there are three key elements that should be considered, 'safety and security', 'independence and mobility' and 'creating opportunities for outdoor play'. Provided next is a short summary of key research literature around these three key elements.

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Children's Safety and Security

Every child in developed or developing world, financially secure or poor, has a right to a healthy environment, and the built environment is the one in which children spent most of their young lives. A children's safe environment is not an environment free of risk because all children need to face and monitor risks in order to learn how to self-manage their safety. Instead, it is an environment attempts to remove the unacceptable levels of life threatening risk that lead to permanently disabling injuries. Safety and security matter to the children in this study in both a physical and social sense.

The safety of children has emerged as one of the dominant concerns within communities. These concerns include fear of child exposure to traffic and congestion,

violence and criminal acts, stranger danger, and pollution and toxins. Today, increasing fears about the risks to children within their communities are often cited as a reason for the need for children to be highly supervised (Jenkins, 2006). Recent research by Leonard entitled "Trapped in space? Children's accounts of risky environments" highlights that the "once innocent spaces of childhood such as streets, parks and other public places have become redefined as areas where children are in potential danger" (Leonard 2007, p 2). In this regard, the form and layout of streets, formal and informal open spaces, the nature of built edge defining them, the dwelling type, are critical issues from the point of view of the child's safety. Consequently, as children lose the freedom to create, explore and gain mastery over their physical and social environments they lose opportunities that will be significant in developing healthy lifestyles, social networks and environmental competence.

Children's Independence and Mobility

The opportunity for children to move freely in the environment without an accompanying adult is defined in the literature as children's independent mobility (Hillman, Adams, &Whitelegg, 1990). Children's independent mobility is measured in terms of spatial range or roaming range. Children's spatial range may change according to a child's maturation, health background, cultural influences in parenting styles and boundary making (often influenced by issues of safety and risk), and physical attributes of the environment.

According to Davis and Jones "healthy children are those who are able to access and use city streets for work and play, move about their local area with a reasonable degree of independence and safety" (Davis and Jones, 1996; p108). While, in later work, Tranter argues that "children's freedom of movement, along with having a diversity of environmental resources to facilitate play, has long been recognized as being of fundamental importance" (Tranter, 2006; p121). Yet, achieving children's independence is difficult when there is a lack of adequate walking and cycling path that connect children's homes to community activities and services within a reasonable distance. Actually, walking and biking, forms of travel that involve physical activity and give children a degree of autonomy, are discouraged in environments that are more adapted to cars than to pedestrians or cyclists. Tranter and Pawson's research found that the presence of a culture of cycling, walking and public transport are all particularly meaningful indicators of children's independent access to community activities and spaces (Tranter and Pawson, 2001; p 42). Moreover, researchers have also asserted that urban spaces with higher density development can offer greater opportunities for mobility for children than suburban spaces (Kytta, 2004). They believed that children can meet other children, visit friends locally, travel to school on their own, and access community and commercial services, and these all contributed to their health and wellbeing through active lifestyles and quality of life. Consequently, as children lose the freedom to create, explore and gain mastery over their physical and social environments, they also lose opportunities that will be significant in developing healthy lifestyles, social networks and environmental competence.

Creating Opportunities for Children to Outdoor Play

The outdoor environment is perceived as a social space, which influences children's choice of informal play activities and promotes healthy personal development (Thomas & Thompson, 2004). Play is fundamental not only for children's physical development, but

also for intellectual, social, and emotional development. Yet, there is not a broad understanding by most professionals, of the great importance of play, and that constraints on children's freedom to play can be detrimental in numerous ways (Malone, 2007). Indeed, the dimension of play that most people understand is its value for healthy physical exercise and the growth and development of physical skills. Less obvious to many adults is the value of play for the development of children's thinking and creativity and to the learning of social skills of cooperation, sharing, and caring (Barlett, 2005). In addition, it has also long been established that play can offer an important means for children to establish a sense of control over difficult circumstances (Korpela et al, 2002). In this regard, research conducted in the UK suggest that children use more energy when they went places on their own, and they use more energy in unstructured play activities than organized activities (Mackett, et. al 2007). The results indicate that children's physical health and wellbeing is related to children's opportunity for unstructured exploration and active play in urban environments. With research suggesting so many key beneficiaries of access and exposure to play outdoor, it is concerning that, opportunities for children to join in safe play are rapidly diminishing, mainly because of parental fear of crime and road traffic. Moreover, the idea of removing children from their outdoor spaces is opposed to the conception of civil society articulated by urban planner Jane Jacobs (1961), who argued that children need opportunities to mix with one another and with neighbors.

As a society, we are increasingly dependent on cars. There is more traffic in urban and suburban of cities and wider, busier roads to accommodate the traffic. This has led to a significant decline in roads being used as a place where children and young people play informally either by themselves or with other children in the street (Tranter, and Doyle, 1996). Karsten (2005) argues that the public space of the street is now adult space, whilst home space has become the dominant child space. For many planners, architects and other government officials, children barely register on the radar. Thus, when conflicts of interest occur around public space, the needs and desires of children are rarely given priority (Harden 2000).

The City of Damascus

Damascus (photo -1) lies about 80 km (50 mi) inland from the Mediterranean Sea, and sheltered by the Anti-Lebanon mountains. It lies on a plateau 680 metres (2,230 ft) above sea-level. The city has an area of 105 km^2 (41 sq mi), out of which 77 km^2 (30 sq mi) is urban. Damascus is surrounded by an oasis, the Ghouta region, and watered by the Barada river.

(photo -1)
Map of Syria –Location of Damascus
Source: Atlas of Damascus

(photo -2)
Map of Damascus – 1927
Source: Atlas of Damascus

Damascus Traditional city was first settled in the 2nd millennium BC. It was chosen as the capital of the Umayyad Caliphate from 661 to 750. While, the shift from a medieval city into a modem metropolis was prepared in the late Ottoman period, when the Turks, inspired by European models, reformed their colonial administration. This development continued under the French mandate after the First World War and gained an almost explosive impetus after independence, when Damascus became the capital of modem Syria (photo -2).

In 1936, the Western Master Plan of Danger and Echoshar, for the New City of Damascus (photo -3), as well as the Master Plan (1968) of Echoshar and Banshoya (photo -4), differed from the planning of Traditional City of Damascus in terms of its separation of functions, designating specified areas for housing, commerce, civic use, industrial use, and recreation. The purpose of this kind of planning was to divide the city into sectoral components to create a more efficient and rational urban system rather than accommodate the human needs and social considerations of the populace. As stated by Bianca, the division of uses does impart functional improvements, but at the consequence of losing many human and environmental qualities (Bianca, 2000).

(photo -3)
Damascus Master Plan 1936
Source: Atlas of Damascus

(photo -4)
Damascus Master Plan 1986
Source: Atlas of Damascus

Due to modern planning and zoning practices, planning for the car, and uncontrolled growth, children are growing up unhealthy, obese, and depressed in sprawling subdivisions. The neighborhood designs that met adult needs, primarily for automobiles, negatively affected children being able to use their neighborhoods for outdoor physical activity (photo -5). Wider roads made the streets more accessible for automobiles but more dangerous to play on or to cross (photo -6). Today, Damascus city rate poorly in terms of their child-friendly status. When Syrian parents have been asked to reflect on their childhoods, they usually remember having far more freedom than their own children have today. This is, mostly, due to increased fear of strangers, crime and road traffic (photo -7). Other reasons include loss of natural spaces for free play and the attractions of indoor alternatives, such as computer games, TV and the Internet.

(photo -5)
Planning for the car
Source: the author

(photo -6)
Lack of space for
Source: the author

(photo-7)
Dangerous street for children
Source: the author

Research Questionnaires

For the purpose of this research, 65 children aged between 10-14 years along with their parents were interviewed and asked to describe their perceptions and experiences of risk, their travel modes, physical activity and free play, and the effectiveness of the built environment of New City of Damascus to meet their needs. The surveys and interviews en place in December 2014.

The research found that due to both real and perceived concerns about safety, children experienced considerable constraints on their activities. Girls in particular, states that they are not allowed to play outdoors, use local parks, or cycle to school, or that they did not feel comfortable doing so. From the children's own perspective, traffic danger and "stranger danger" were the greatest barriers to keeping healthy and active.

Regarding children's independence mobility, parents mention that they are so reluctant to let children out of their sight that they drive them to the school and everywhere alse rather than allow them to walk or ride their bikes. Moreover, the research found that factors affecting parents' decisions about permitting or restricting children's mobility and factors affecting children's decisions about their mobility are place-based. These placed based decisions are influenced by children's age, what the physical, social and traffic environment offers, as well as cultural issues such as parenting styles and norms and views of childhood and children's competence. For children themselves, the research found that the opportunity to move freely within their own communities is something they really value, as it gives them the opportunity to discover and explore their communities on their own terms.

When asked what they (children) would like to do on a sunny day, the majority of children choose outdoor activities, which could take place in and around the neighborhood. The children expressed that more account should be taken of how they use public space. While parents mention of the importance of taking into account children's changing spatial needs as they get older so that resources and initiatives meet the real, and not the perceived needs of children. Moreover, parents expressed that there has been inadequate attention paid to the needs of children and young people for high quality public space.

However, the children participated in the questionnaires identified several needs and desires that relate specifically to the physical environment, these needs and desires of children could be summarized in these main points:

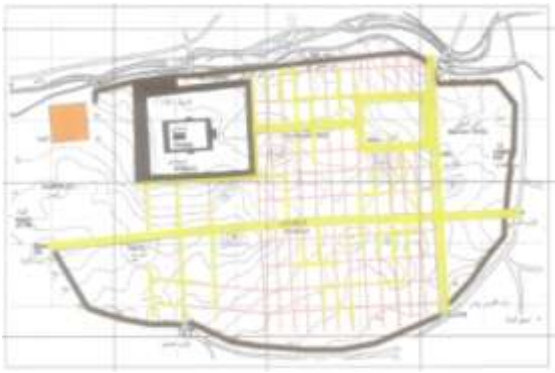
- Increase their ability to make choices and independently access a diverse range of community services and activities.

- Enhance their capacity to engage in play and develop competence in their local community environment.
- Ensure their rights and needs to be safe and healthy within community public places.
- Create spaces that offer them a sense of welcome, belonging and support.
- Increase their opportunities to access green, natural areas for play and relaxation.

Having examined the key three themes that are most important in creating child's good built environment, the study will analyze and evaluate the characteristics of the built environment of the Traditional city of Damascus. Abu-Lughod has written that: "The reason why we are interested in 'traditional' forms of building, dwellings, and settlements is that we believe that such achievements met human needs in a more sensitive way than contemporary and/or alien methods do" (Abu-Lughod 1993, p 185).

The Traditional City of Damascus

The present physical pattern of the city is the outcome of an ‘overlay’ of Islamic period structures on a Roman-Hellenistic grid system (photo -8). In the following, the study shall concentrate on the analysis of the various components of the old urban fabric with regard to the concept of Child Friendly Environment.



(Photo-8)
Map of Syria –Location of Damascus
Source: Atlas of Damascus

(Photo-9)
Building use of Traditional City of Damascus
Source: Atlas of Damascus

The Traditional City of Damascus is a system of hierarchical elements of various sized cells based on the primary unit of the inward-looking courtyard house. The hierarchal cells are created through a process of agglomeration rather than subdivision. Whereas, the streets are composed of leftover space after houses were built, and the houses formed clusters around the narrow, leftover, and semi-public alleys. Eventually, housing districts are composed of several housing clusters, which are composed of enclosed units around a central courtyard and wrapping around internal dead-end alleyways (photo -9). At the center of the traditional City of Damascus, the main land-use pattern focuses on the multifunctional core structure. The grand Mosque (Umayyad Mosque) is the center structure of the city surrounded by the markets, commercial facilities in the form of caravanserai, civic and educational buildings, *hammams* (public bath) and *khans* (hotels), and other religious and social structures. The central courtyard of the complex is the primary public open space of the complex (photo -10-11). The circulation system of

Traditional Damascus City, instead of merely dividing up spaces, worked to connect and interrelate various components of the urban fabric. It ensures that the network matches the character of the space and the social needs of the users.

(Photo -10)
The central courtyard of Umayyad Mosque
Source: Atlas of Damascus

(Photo -11)
The central square in front of Umayyad
Source: the Author

The neighborhoods plan of Traditional Damascus City is based on the principle of creating integrated sub-units. Each of these parts sustains itself as a whole in and of itself. Each neighborhood controlled its own public facilities, such as a local mosque, one or more schools, and public courtyards and fountains. Moreover, the neighborhood scale is humane, intimate and friendly, and as such, is an extremely dense with a very high degree of complexity. The design principles and scale of the neighborhood in Traditional Damascus City plans and design, thus, help children to move around their home neighborhoods safely and to take little trips farther and farther from home to gain a sense of independence (photo -12-13-14). The Traditional Neighborhood, therefore, very suitable for the child to experience and use it in a satisfactory manner, to feel that they have control over it, and to imbibe a sense of security and belonging.

(photo -12)
Planning for the car
Source: the author

(photo -13)
Lack of space for
Source: the author

(Fhoto -14)
Dangerous street for children
Source: the author

Another feature of Traditional Damascus City is a marked separation between a multifunctional public urban core, and the private zones of residence. The street system

demonstrates a clear functional hierarchy made, basically, of three different types of routes revealing a carefully articulated logic "a system of filtered access" (Çelik 1997). This system is fundamental since it indicates to the passer-by what is private and what is public. In this regard, building functions are reflected in the nature of the streets adjacent to them, and the street is subordinated to the buildings it serves, if these are private houses then so is the street. The main thoroughfares or arteries, the first level of streets, are open ended streets, open to the "public" including foreigners and strangers, lined with shops, tea and coffee houses and large commercial and public structures. They have a high level of vibrancy and sociability, as they attracts major public activities and are crowded with people and merchandise all day long (photo -15).

The second level are the local thoroughfares of smaller dimensions than the main thoroughfares that take on pedestrian traffic to the cul-de-sacs and helps in breaking the way from the public areas to the residential quarters into successive hierarchical sections which herald increasing degrees of privacy (photo -16). The cul-de-sac is a path without an exit; they link a public street to a residential neighborhood of courtyard tissues accommodating the introverted lifestyle that centers on the privacy of the home and the family (photo -17).

(photo -15) The main thoroughfares or arteries
Source: the author

(photo -16) The local thoroughfares
Source: the author

(photo -17) Cul de sac with a semi private space
Source: the author

Hence, in Traditional City of Damascus, the ultimate function of streets within a quarter was on the one hand to for the actual neighborhood residents, but at the same time to restrict mobility (acting as interior corridors that adjust the degree of privacy) rather than facilitate it to ensure safety for its residents. According to Bianca, those streets and alleys that looked like a maze of featureless cul-de-sacs to foreigners are in reality coded with a subtle, complex visual reference system of thresholds, transition zones, and buffer spaces, which act collectively as filters to keep strangers, outsiders, and bachelors out (Bianca, 2000). The thresholds used were usually things such as arches, low stone posts, piles of bricks, or simply the sudden narrowing of an alley. So as mentioned earlier, residential streets acted as devices serving the social order well in its desire for privacy and exclusion. Moreover, the cul-de-sacs where one end of a street is closed off to through traffic does not only makes a street safer from traffic, but often also seems to enable families to monitor the passage of strangers through their territory, thereby building a greater sense of community and declaiming the streets for their children (photo- 18-19-20).

(photo -18)
Arch as a threshold
Source: the author

(photo -19)
Sudden narrowing of an alley
Source: the author

(photo -20)
Alley as an extension of the h

Source: the author

Thus, the residential streets in Traditional Damascus City function as an extension of the private realm. Leftover space, located between buildings and street circulation space are used as places for passive and active recreation. Parents are able to allow their children outside without constant and close supervision. Children, in their turn, feel safe from traffic, pollution, and unnecessary physical and social hazards while utilizing the residential streets as play spaces. Consequently, streets of Traditional Damascus City provide free-playing outdoors and independent mobility, which have great benefit, on the one hand, for children's physical and mental health and, on the other, their acquisition of the kinds of practical life-skills that are best acquired through daily, unsupervised activity and interactions. Indeed, the distinction between the private and public spaces and good access to public areas help children to stay healthy and tackle problems of obesity by providing opportunities for exercise and getting fresh air.

The traditional houses are formed with a courtyard (square, rectangle, and trapezoid plan type) surrounded by buildings. Blocks surrounding courtyards are usually perpendicular to each other irrespective of the plot geometry (Reynolds 2002). Many scholars have pointed out that the courtyard pattern was generated as an appropriate solution to functional, practical, climatic, social and cultural needs of the Arab people. Reynolds, (2002) explains the social functions of courtyard as that of allowing almost any activity to be carried on at least in a temporary basis. He explains that the most common usages of courtyards are as an extension of living, dinning and kitchen activities. Indeed, there was no clear-cut division between the interior and exterior of the house. The courtyard is a room without a roof, a domain set aside for the gainful activity of the entire household that is well adapted to complicated environmental, practical, and socio-cultural situations. Indeed, the function of the courtyard as elaborated by Reynolds, is “social delight” of being in safe playground with great variety (Reynolds, 2002). For children, it offers enough contact with nature to be entertaining, yet rarely so much as to be threatening (photo -21-22). Children are able to experience the pleasures of finding bugs, picking leaves, smelling flowers, collecting things and so on without their parents harassing them.

(photo -21)
Al Naasan House
Source: the author

(photo -22)
Al Naasan House
Source: the author

Moreover, the courtyard house provides a comfortable living environment. This is achieved thanks to the shade cast by the courtyard's opposing walls and the existence of water features, which favor humidification -fountains- and therefore a drop in temperature, and the reflection of part of the sunrays, thus reducing the absorption of heat. The presence of foliage is also a factor in ensuring climate mildness. The courtyard is usually planted with trees, flowers and shrubs, not only to provide comfortable condition and beautiful setting, but also to shade spaces adjoining, and increase the relative humidity of the courtyard. In order to provide proper ventilation while preventing pollution, the courtyard, with its cool temperature serves as a high pressure environment while the outside (street) provides as an outlet area (low pressure). Thus, an air current is always flowing from the courtyard towards the street. This ensures pollution-free ventilation and tempers the internal atmosphere.

Noise levels in modern cities are certainly beginning to threaten the psychological serenity and wellbeing of the population. The most important source of noise is the street, which is crisscrossed by tremendous numbers of diverse vehicles that make a liberal use of annoying horns. About 70% of the noise filters into the houses through the openings looking onto the street. Naturally, in the case of courtyard houses where openings onto the exterior are reduced to the minimum, the noise penetration will occur in far lesser extents.

Conclusion

The physical environment has a significant effect on the wellbeing and future prospects of children. The impact of traffic and pollution, the qualities of play space, the connectivity and proximity of community activities and services, and the availability of natural areas to children are all important to their wellbeing.

The research highlights that healthy children are those who are able to access and use city streets for work and play, move about their local area with a reasonable degree of independence and safety, play some part in local decision-making and have some sense of ownership or entitlement to be heard.

What is lacking in the New City of Damascus is respect and understanding by professionals involved in creating the built environment of the actual needs and perceptions of the children for whom facilities are designed for.

Compact, connected urban environments with a mixture of densities and land uses of Traditional Damascus City create shorter distances between desired destinations, thus encouraging children to walk. Indeed, walkability refers to how 'friendly' an area is for children. The planning principles of Traditional Damascus City have created walkability by taking into account three factors:

Mixed-use planning—the variety and proximity of destinations and access to key destinations (schools, parks, shops.., etc.) is a critical factor influencing the choice to walk for children in Traditional Damascus City.

Density _the higher density of traditional neighborhood of Damascus offer greater opportunities for mobility for children. It allows children to meet other children, to visit friends locally, to travel to school on their own, and to access community and commercial services, and these all contributed to their health and wellbeing through active lifestyles and quality of life.

Street connectivity—Streets of a Traditional City of Damascus support children's independent access to facilities in a number of ways, obstacles are kept to a minimum, and there is no requirement to cross major roads.

The streets of Traditional City of Damascus have the provision for dual use for both circulation and children playing. Residential streets function as a semi-public space worked to connect and to interrelate the various components of the urban fabric, and at the same time, as a platform for social activities among children neighbors who used the blind alleys as an extension of their houses that opened onto them. Indeed, they provided safe sheltered areas (playgrounds) for children to play watched over by old men chatting and drinking tea and coffee. In addition, their narrow cross-sections ensured a nice micro-climate and protection from desert winds. As such, the traditional streets create a safe, nurturing and amenity place for children and youth, and provide a social connection and common pathways and corridors or simply as shared entryway where public interactions will occur.

The courtyard house is a single-family dwelling. It creates a specific private space that promotes family gathering and child's play and personal space for peer group interactions and many different activities within the house.

The urban form of Traditional Damascus city provides an acoustically controlled environment in relation to exterior noise and noise from adjacent living units and public spaces.

Thus, the core design principle of Damascus Traditional City that consider dense and mixed land use, pedestrian friendly design, accessible public spaces, and urban places

framed by architectural and landscape designs and the courtyard house, supports child friendly principles and design strategies by deliver for children:

- A sense of place.
- A variety of experiences for children.
- Playful environs and places.
- Public spaces that engage children.
- Freedom of movement for children and safe circulation for non-motorized travel (Pedestrians and cyclists).
- Acceptable levels of risk for children.

Recommendation

Therefore, the study makes the following recommendations:

Achieving the desired outcomes for children requires sustainable systems and increased local capacity. This will be made possible by creating environments that are based on cooperation at different levels. Indeed, the challenge facing local authorities is to integrate child-oriented programming and policy-making into local governance structures.

Innovative strategies and mechanisms have to be developed and implemented to ensure a new political culture in which efforts made by communities and civil society are coordinated with local government activities, all acting in the best interests of children. The best interests of children are not only sought in the traditional sphere of children's services (school, health care, early childhood development services, etc.) but also in all interventions in the city.

Better consideration must be given to children's needs in decision-making on the design of public space. Children and young people should be consulted about: major developments; community safety; provision of services and facilities for the community (eg. recreation facilities); the management of public land, and other Council planning processes.

Knowledge of children's perceptions is vital in order to be able to design the best possible open spaces. Social scientist, designers and children should cooperate. Revise urban planning guidelines, and the national code to foster development of livable neighborhood and urban environments suitable for children.

It would be advantageous to provide future built environment professionals with information about how to involve children and young people in planning at the undergraduate level. This should be investigated with universities that offer architecture and planning degree the inclusion of a curriculum component or module on how to involve children and young people planning.

Planning initiatives and strategies should try to reintegrate children into urban environments and get children back outside to engage with the outdoor spaces. Moreover, Design and plan streets as learning environments that are inclusive of the social, economic and cultural diversity of their local community.

Developing an indicator framework for child-friendly communities, which focuses on the nature and attributes of the physical environment.

Studying only *children's* environments can be interpreted as enhancing children's separateness and spatial segregation. Therefore, the division between child-specific and adult-specific environments should be overcome by using the concepts of *child-friendly environments* and *environmental child-friendliness*. We argue that these concepts do not separate children and adults into isolated environments, but allow exploration of how various environments can accommodate both children's and adults' preferences.

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