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**Youth-Friendly Streets: Promoting well-being in Malaysian Cities**

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**Abstract**

Urban environments have a significant impact on the well-being and development of young people. This paper examines the qualities of comfort and convenience that meet the needs of youth groups on urban commercial streets in Malaysia. Surveying a hundred youths unveils vital factors shaping their street experiences: freedom from pollution and noise and protection from the elements are crucial. Additionally, greenery and seating along pedestrian routes are essential for their comfort. These findings underscore the significance of designing streets that cater to youth, promoting their well-being and sense of belonging in the Malaysian context.

Keywords: Youth, Environmental Qualities, Friendly Commercial Street, Well-being, Quality of Life

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**1.0 Introduction**

The world's youth population, aged 1-24, is 1.8 billion strong and represents 30% of the population (OECD Development Centre, 2018). In urban design, streets and youths play a crucial role in creating well-being and positive well-being within a city. Previous studies have shown that people are prepared to walk and use the space more if there is an improvement in the quality of public spaces (Rahman, 2018; Gehl, 2010). Creating user-friendly, functional, attractive and sustainable street environments can cater to the community's needs and well-being. Therefore, every city should take the initiative to attract people, especially youth groups, back to urban areas and adapt to the new street environment to support the current needs to make people feel secure and safe when using the space. According to Carmona et al. (2021), Urban design necessitates a deep comprehension of how individuals interact with their surroundings. This paper examines the elements of comfort and convenience qualities that meet the needs of youth groups in urban commercial streets. This study is crucial to understanding the youths' needs and perceptions and evaluating their quality of life, which can impact developmental outcomes in Malaysia.

**2.0 Literature Review**

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## 2.1 Street Qualities and Youth in Cities

Knowledge of the role of the street is essential in designing user-friendly streets because the street design will affect the people's uses and activities on the street (Carr et al., 1992; Whyte, 1980). Great streets are user-friendly and can support and facilitate activities. The needs and preferences can be expected to depend on the physical and social context of the streets (Jansson et al. 2010).

In Malaysia, identifying the appropriateness of street design by focusing on the factors and attributes contributing to user-friendly commercial streets has been one of the research's subjects (Sulaiman et al., 2019). Commercial streets in Malaysia are essential to the urban landscape, providing economic opportunities and social interaction for youth groups. In order to create youth-friendly environments in urban public spaces, we need to understand and ask young people where they hang out, why, and what they want in their communities (Millard, 2015). Two factors influencing people to walk and use the street are the psychological and physical environments. One of the physiological factors is the ambient environment, which refers to the intangible elements of the built environment, such as temperature, sound, smell and illumination. These elements influence the users' physical well-being, moods and behaviours (Gifford, 2002). The physical environment affects the qualities of the place directly or indirectly through the perceptions and sensitivities of the people (Rahman, 2018; Jacobs, 1996).

UN-Habitat (2018) emphasised the significance of enhancing public spaces, including commercial streets, to improve the quality of life, well-being, and microclimate. The importance of comprehending streets' physical design and attributes lies in ensuring that alterations to these elements impact users' patterns of use, activities, physiological well-being, and sociocultural identity in Malaysia. This paper focuses on the attributes and elements that contribute to the quality of comfort and convenience in urban street environments.

## 2.2 Comfort and Convenience

According to Jacobs (1996), for a street to be used and be the best place to take a walk, the street must offer a sense of comfort and a pleasing atmosphere. Comfort is a hallmark of a thriving street and serves as a metric for its quality (Rahman, 2018; Jacobs, 1996). Carmona et al. (2021) argued that the quality of comfort is associated with environmental, physical, social and psychological factors. Environmental conditions have a very significant relationship with people's behaviour and the usage of street spaces (Nikolopoulou et al., 2001). Urban designers should have a good understanding of the influence of climate on urban settlement. The buildings, trees and other elements created in urban areas self-shade the streets and protect the surrounding spaces from the hot sun or dispersed to allow wind to flow through the spaces in hot, humid climates; considering the suitability of the elements in local climate is essential. Comfort is both a defining characteristic of a vibrant street and a key indicator of its quality. Lynch (1984) noted that cooler, shadier and pleasant streets are suitable settings for activities that bring people together. Design decisions wield significant influence in mitigating the impact of microclimates, thereby facilitating the creation of comfortable streets. (Carmona et al., 2021).

Increasing the greenery in the environment, planting trees, and incorporating greenery onto roofs can mitigate Urban Heat Island, reduce energy use, and improve air quality (Rahman et al., 2018; Rahman, 2013; Eliasson et al., 2007). Certain streets become undesirable due to physical discomfort, prompting people to avoid them (Carmona et al., 2021; Rahman, 2018; Rapoport, 1990). Another form of comfort often overlooked and disregarded in urban areas across many nations is the accessibility of essential services, including restrooms, shops, public telephones, kiosks, cafes, and food outlets (Carr et al., 1992; Rapoport, 1990). In addition, the presence of these facilities is essential in making a street welcoming and easily accessible for people of all ages and capabilities (Burton & Mitchell, 2006).

Social and psychological comfort are related to the character and ambience of the street (Carmona et al., 2021). A sense of psychological comfort may be a prerequisite for relaxation (Carr et al. 1992). Within urban environments, natural elements like trees and greenery serve as vital components that provide users with a sense of "relaxation," fostering both physiological and physical comfort in individuals (Carmona et al., 2021; Carr et al., 1992). Convenience quality fulfils people's fundamental physiological needs, offering a cosier comfort that attracts more users to the space. Rivlin (1994), Jacobs (1996), and Lynch (1984) stressed that convenience is an important quality that the space must have to attract people to use the space. In this discussion, the attributes that contribute to psychological comfort are mainly based on the authors from Western countries and refer to the needs and preferences of these groups of users. Therefore, these attributes need to be evaluated by youth groups to ascertain the relevance of the attributes in contributing to youth-friendly streets in the Malaysian context.

## 3.0 Research Methodology

This research seeks to answer questions about the qualities of comfort and convenience youths associate with user-friendly urban commercial streets. It also attempts to investigate Malaysian youths' needs and preferences regarding elements and attributes of comfort and convenience contributing to friendly urban commercial streets. This paper involves two significant aspects of the needs and perceptions of youths that influence them to walk and use the street: the psychological and physical environments. This research employed a quantitative approach adopted from a previous study based on the research's background. A questionnaire was used and distributed to the sample of one hundred (100) randomly selected respondents. The respondents were gathered from different institutions across three states in Malaysia: Perak, Kuala Lumpur, and Penang. The selected students were sent an email to participate in this study, and the data were analysed using SPSS software. The attributes evaluated in this study were the qualities of comfort and convenience in the context of urban commercial streets in Malaysia. The characteristics and attributes linked with these qualities were examined to gain a deeper understanding of how they contribute to crafting a welcoming street environment. The questionnaire in this study was based on a 4-point Likert scale ranging from strongly important (1) to strongly unimportant (4). The questionnaire was used to explore youths' evaluations of the comfort and convenience elements of the streets. Based on the literature review, this paper has

identified eighteen (18) criteria of comfort and convenience in urban design qualities, and these criteria were included in the questionnaire (refer to Table 1 and Table 2).

#### 4.0 Findings And Discussion

This section presents the findings of data analysis associated with the attributes and characteristics of the street environment from the physical and functional aspects that make it friendly to youth groups. The survey results were based on a 4-point Likert scale ranging from strongly important(1) to strongly unimportant (4). The primary attributes associated with a user-friendly street were identified through the results of a questionnaire survey conducted among one hundred randomly selected youth respondents in Malaysia. The elements associated with these comfort and convenience qualities were analysed to understand further how they influence the needs and preferences of youth groups, contributing to a youth-friendly street. These findings will help to determine the attributes and elements of street qualities that meet the psychological and physical needs and preferences of the youth groups, which can encourage them to use and perform activities such as walking, shopping, socialising and interacting with each other in the street environments.

##### 4.1 Attributes and Characteristics of Comfort and Convenience

Based on the youths' perceptions concerning their level of comfort and convenience, a lot of covered and shaded pathways can protect them from the sun and the rain, being free of pollution, noise, smell and vibration, and a breezy environment with suitable temperatures are the most important criteria that make a street comfortable and convenient.

##### Free of Pollution, Noise, Smell and Vibration

According to the survey, freedom from pollution, noise, smell, and vibration are the main criteria of comfort that encourage youth groups to use the streets. Seventy-six per cent (76%) of the respondents indicate that these criteria are strongly important for the feeling of comfort in using the streets (refer to Table 1). The other twenty-four per cent (24%) of the respondents indicate that these criteria are slightly important. This finding is supported by Lang (1994), and Carmona et al. (2021), who note that environmental pollution, noise, smell and vibrations are the factors that affect the microclimate in streets and give a sense of discomfort to the users.

Table 1: Youths' Perceptions Concerning the Importance of Comfort Criteria

Criteria	Strongly Unimportant	Slightly Unimportant	Slightly Important	Strongly Important
A sufficient number of covered walkways and other protection from sun and rain	0%	8%	28%	64%
Free of pollution, noise, smell and vibration	0%	0%	24%	76%
Breezy environment	0%	0%	44%	56%
Suitable temperature	0%	4%	36%	60%

Source: Authors

##### Protection from the Sun and Rain

The results of the findings noted that the second criterion of the street environment, which most significantly encourages the youths to use the street, is a sufficient number of verandahs and shaded walkways, which provide pedestrians protection from the sun and rain. Based on the survey result, sixty-four per cent (64%) of the respondents highlighted that a sufficient amount of verandahs and shaded walkways, which provide pedestrians protection from the sun and the rain, are strongly important criteria that encourage youths to use the street. Another twenty-eight per cent (28%) is slightly important, and 8% is slightly unimportant.



Figure 1: Buildings and Trees are Ways of Protection From the Hot Sunlight and Protection From Rain on the Street

Source: Authors

These findings are supported by Rahman (2018), who stressed that protection from the sun and rain is essential in hot and humid countries to create a conducive street environment (Figure 1). There are three main ways of protecting from the hot sunlight and the rain: the design, orientation and spacing of the buildings, tree planting and the spacing between trees and building, and the presence of covered walkways (Carmona et al., 2010; Lang, 1994).

*Breezy and Suitable Temperature*

This study shows that a breezy environment and suitable space temperature are among the most important attributes of the youths' perceptions to encourage them to use the street (Table 1). Based on the survey, sixty-four per cent (64%) indicate that this criterion is very important in giving comfort to the street users and encouraging people to use the street. Another thirty-six per cent (36%) of the youth respondents highlighted slightly important (Table 1). Meanwhile, sixty per cent (60%) of the youths responded that the breezy environment is very important and contributes to the feeling of comfort to street users (Table 1, Figure 1).

Greenery within the cityscape not only offers shade but also has the potential to lower temperatures in a given area. Therefore, increasing vegetation along the street may help reduce the local temperature and, at the same time, create a comfortable environment which encourages the public to use the streets. The finding was also supported by Simonds (1994) and Gill et al. (2007), who stressed that in addition to the beautification of the area, the presence of trees, ground covers, and open water in the open space would reduce the surface temperature by 30 degrees, cooler than that of sun-hot paving. These findings are also supported by Rahman et al. (2018) in their observation that there is a strong relationship between microclimate conditions and the use of space. Rahman (2013) also found that air temperature and wind speed are among the vital parameters based on their observations of the use of space.

**4.2 Physical Attributes Of Comfort and Convenience That Contribute to the Youth-Friendly Street**

*A Sufficient Number of Greenery and Clear Signage Along the Street*

According to the survey findings on youths' perceptions of physical attributes, ample greenery and clear signage emerged as the most crucial factors for ensuring comfort and convenience when using commercial streets. Based on the results, seventy-two per cent (72%) of the respondents indicate these as the most important criteria under physical attributes of comfort and convenience (Table 2). The findings are aligned with those of Shobri et al. (2021), who stated that walking in an area of greenery provides peace and calmness to the users on the street.



Figure 2: A Sufficient Number of Greenery and Clear Signage

Source: Authors

**Table 2: Physical Attributes That Contribute to Youth-Friendly Street**

Criteria	Strongly Unimportant	Slightly Unimportant	Slightly Important	Strongly Important
Width of the walking space	0%	0%	32%	68%
A sufficient number of rest areas and seating	0%	8%	32%	60%
Comfortable and sufficient seating	0%	12%	32%	56%
Seating places adjacent to pedestrian flow	0%	4%	56%	40%
Very clear pedestrian signage	0%	8%	20%	72%
A sufficient number of convenient places for shopping	0%	4%	32%	64%
Very clear direction of the place	0%	8%	24%	68%
A sufficient number of greenery (trees/ shrubs/flowers/grass)	4%	4%	20%	72%
Very attractive building facades	4%	8%	32%	56%
Availability of dust bins, telephones and toilet	4%	8%	24%	64%
A sufficient number of outdoor cafes, refreshment kiosks	0%	12%	20%	68%
A sufficient number of banking and communications centre	0%	20%	36%	44%
A sufficient number of spots for entertainment	0%	16%	40%	44%
A sufficient number of recreation facilities	0%	4%	48%	48%

Source: Authors

The research also indicates that individuals who report experiencing stress exhibit a more positive inclination towards walking in green areas or along specific routes. Interestingly, the result related to clear signage contradicts the previous study by Rahman (2013),

who found that this criterion is not significant in creating a user-friendly street in Malaysia. This result highlights the significant difference between the needs and perceptions of the youth groups compared to other street users towards the attributes that contribute to the comfort and convenience in the street environment (Figure 2).

#### *Clear Direction of a Place, the Width of the Walking Space and a Sufficient Number of Outdoor Cafes, Refreshment Kiosks*

The results from the survey indicate that clear direction of the place, the width of the walking space and a sufficient number of outdoor cafes and refreshment kiosks in the streets are the most important criteria that streets should have to give comfort and convenience to the youth groups (Table 2 and Figure 3). These prove that the youth groups are more concerned with the qualities related to environmental conditions and physical elements that can give and facilitate a friendly environment for the youths to spend time and engage in activities.



Figure 3: Width of the Walking Space and a Sufficient Number of Outdoor Cafes and Refreshment Kiosks  
Source: Authors

#### *Sufficient Street Facilities, Rest Areas and Seating and an Adequate Number of Convenient Places for Shopping*

In the case of urban streets, comfort refers to the extent to which streets enable people to visit places of their choice without physical and mental discomposure. Comfortable streets are calm, welcoming, and pedestrian-friendly, and the facilities and services required by the street users are available (Burton & Mitchell, 2006). The availability of comfortable and sufficient seating is essential to any successful urban space. According to Carr et al. (1992), "...the feature of physically comfortable seating includes the orientation of the seating, its proximity to areas of access, seating that is moveable, seating for individuals and groups, seating that enables reading, eating, talking, resting and privacy, seats with back, and, in the case of adults with children, seating in the sight line of play areas". In addition to physical comfort, seatings should be designed to offer social and physical comfort. These statements are supported by the survey results, which noted that the availability of facilities such as dustbins, telephones, and toilets, as well as sufficient, convenient places for shopping along the streets, are the strongly important criteria that encourage youths to use the streets.

Table 2 shows that sixty-four per cent (64%) of the youth respondents stated that these two criteria are strongly important. Hence, the results also showed that a sufficient number of rest areas and seating places are among the most important criteria a street should have to create a friendly street environment. The survey shows that sixty per cent (60%) of the respondents agreed that this criterion is one of the most important criteria a street should have (Table 2). Burton and Mitchell (2006) added that the presence of all these facilities is essential in making a street welcoming and accessible for people of all ages and capabilities.



Figure 4: A Sufficient Number of Convenient Places for Shopping  
Source: Authors

#### *Attractive Building Façade*

In this survey, the respondents also stated that comfortable and sufficient seating and attractive building façades contribute to the comfort of using the street. Based on the results (Table 2 and Figure 5), fifty-six per cent (56%) of the respondents stated that these

criteria are the most significant for the street environment. The findings proved that a visually pleasing environment is one of the sub-factors that can attract activities onto the street and one of the criteria that support youth-friendly activities. The results are supported by Rahman (2013), who found that physical elements such as building façades are among the attractions that entice people to use the streets in urban commercial areas. However, the characteristics of the urban setting, including streets in a different context, represent different meanings as it depends on how people observe, sense and interpret their surroundings (Ghani et al., 2018).



Figure 5: Comfortable and Sufficient Seating and Attractive Building Façade  
Source: Authors

## 5.0 Conclusion And Recommendations

This study examines the attributes of comfort and convenience qualities that meet the needs of youth groups to create a youth-friendly street environment in Malaysian cities. Based on the findings, it can be concluded that concerning the criteria of comfort and convenience, the youth groups are more concerned with the qualities related to the environmental conditions and physical elements that can give and facilitate a friendly environment for the youth to spend time and perform their activities. Based on the youths' perception, the five main criteria which are the most important in contributing to the comfort and convenience in the streets are as follows. They are (in order of importance): (i) 'free of pollution, noise, poor smells and vibration'; (ii) 'sufficient amount of greenery'; (iii) 'clear signage and direction of the place'; (iv) 'sufficient number of outdoor cafes and refreshment kiosks; and (v) 'sufficient number of convenient places for shopping'. The findings indicate that being 'free of pollution, noise, poor smells and vibration' is the main criterion under comfort and convenience quality that contributes to a youth-friendly street in Malaysia. This study is essential to understand the youths' needs and preferences to develop friendly commercial street environments that can promote well-being, attachment and a sense of belonging to the city youth groups. The findings can guide urban designers in approaching situations to meet the desired criteria of street users, especially the youth. The attributes revealed in the study are based on the youth respondents' perceptions of what youth-friendly commercial streets should have. Thus, the findings could assist the authority in developing policies to encourage more youths to use the streets to promote equality and enhance the quality of life in urban environments.

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