Public Facilities Preference of Youth Residents in Low-cost Housing Flats towards Sustainable Living

Alice Sabrina Ismail*, Nor Shahida Azili, Fadhlina Ahmad @ Taufik, Ezlina Mohamad Esa and Ahmad Azim Ashar

Abstract--- Public facilities are an important component that guarantees the country's growth and human development. Nonetheless, public facilities located in residential areas play an essential role in providing support services to create a viable and sustainable living for cohesive communities. Past studies on public facilities however, much focused on accessibility, provisioning and service requirements. So far there has been no literature that addresses the aspects of preparing and managing public facilities for the benefit of youth residents in low-cost housing flats. The objective of this study, therefore is to obtain the perception of youth residents in two low- cost housing flats located in the urban areas of Kuala Lumpur and Johor Bahru city. This is vital to obtain youth resident satisfaction in terms of maintenance effectiveness on the provided public facilities. To conduct this study, qualitative and quantitative methods involving the perception of youth residents on two selected case studies were done to establish appropriate public facilities design attributes. Findings indicate that proper preparation and managing of public facilities may contribute to the development of positive psychological behavior among youths in terms of promoting the value of responsibilities (obligation) and respect (gratitude). The findings are of benefits for future designers, builders, developers, and related authorities to improve the preparation and management of public facilities in low -cost housing sectors. This is important to enhance the quality of public facilities for the youths in low- cost housing towards better satisfaction for fostering sustainable living.

Keywords--- Public Facilities, Low - cost Housing Flats, Youth Preference, Sustainable Living.

I. INTRODUCTION

Low-cost housing is a densely populated area. Commonly, it is the focal interest of buyers namely among the lower -income groups in the category of (B40) who represent monthly household income below the indicated poverty line. Past scholars' underlines that there are two major problems faced by these low-cost B40 dwellers in the urban areas(Rose, Nor, Ahmad, Buang, & Zainol, 2017). First, relating to communal issues comprising of religious and social activities, safety and health. Second, is the architectural characteristics issues in housing settlements. This involves the aspects of workmanship, durability and quality, safety, home environment, design, and planning as well as the provision and management of public facilities.

Alice Sabrina Ismail*, Associate Professor, Department of Architecture, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia. E-mail: b-alice@utm.my
Nor Shahida Azili, Senior Lecturer, Department of Architecture, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia.
Fadhlina Ahmad @ Taufik, Senior Lecturer, Department of Architecture, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia.
Ezlina Mohamad Esa, Post Graduate Student, Department of Architecture, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia.
Ahmad Azim Ashar, Post Graduate Student, Department of Architecture, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia.

In this case, much low-cost housingsis not well-maintained in terms of providing enough physical needs for the user. Thus, resulting in various unpleasant social conditions that threatened the comfort and harmony of the locals. Past scholars highlighted that the arising factors concerning the management and utilization of physical facilities in low cost housing can be identified at two different levels involving the housing providers and public users (Rose et al., 2017). This paper, however will focus on the aspects of public users namely the youth age group since they represent the highest percentage of household occupancy namely in urban areas (Rose et al., 2017). In brief, past scholars had identifies that there are three main issues about the preparation and usability of public facilities in low-cost housing.

First, public facilities for youth are not well-designed to meet the growing numbers and needs of users from socio-cultural aspects as well as harmonize with the environmental context (Besar, Ali, WC, Lyndon, & Ali, 2018). In this case, many did not conform to the standards set by the local authority, in terms of location and placement, design approach, quality of building materials as well as numbers and sizes (Besar et al., 2018). If available, it is only built by the developer for the sake of fulfilling the basic requirements made by the local housing authorities (Karim, 2012). According to Jusoh & Ahmad (2009), low cost housing was constructed within limited site areas and this resulted in a lack of built-in communal facilities that unable to cater to the needs of the population, namely the youth age group. Such examplesis the football field, leisure areas, communal hall and cyber cafes which were constructed in restricted numbers and sizes, only to fulfill the basic needs (Mohit, Ibrahim, &Rashid, 2010). Furthermore, the built-in public facilities for youth do not comply with planning principles such as artistic value, aesthetics, and beauty as well as promote creativity amongst the youth. Due to this, youths are much susceptible to negative activities to overcome boredom and dullness in life. This clearly shows that the provided public facilities unable to encourage good interaction between dwellers, foster the spirit of brotherhood among the younger generation as well motivate them to freely express themselves (Mohit et al., 2010).

Second, many public facilities in low -cost housing, namely tailored for the youth are not well maintained, conserve and properly monitored in terms of equipment usage to meet with the current user needs(Goh & Yahaya, 2011). According to scholars, these factors occur due to lack of concern among private developers who not interested to invest and take risks in maintaining many public facilities due to economic reasons like high maintenance costs and less profit gain since it unable to generate good income (Carruthers & Ulfarsson, 2003). Based on past public utility report on low -cost housing by authorities (2010-2017), these maintenance issues typically comprises of two aspects: a)preventive maintenance in which many public facilities do not comply with the planned program or planning based on maintenance policies, periods of premises and periodic checks by developers; as well as b) maintenance breakdown in which there is no action taken and works carried out based on customer damage reports during periodic inspection or in other words maintenance work after damage by responsible authority(Kumarasamy, 2015). Besides, long-term public amenities over the life span of 2 years and above are left without improvements, replacements, neither alterations nor upgrading to meet with the current needs(Kumarasamy, 2015). In brief, there is a shortage of public utilities maintenance and needs due to negligence by the local authorities in ensuring a comfortable and healthy life among dwellers. Hence, the youth age group did not have a proper public places to perform their past time activities.

As a result, they tend to get involved in unethical social activities such as vandalism, gangsterism, gambling, loitering, illegal racing, drug addiction and theft (Stivens, 2012). This is also supported by past report from the PPRM (Persatuan Pusat Aduan Rakyat Malaysia 2014-2018) which outlined that there had been a significant increase in the percentage of social issues namely among youth concentrating at low-cost houses in urban areas since there are improper support facilities and infrastructures for youth to conduct healthy activities (PPRM 2018).

Third, there is no guaranteed features and security elements in public facilities design for youth (Kumarasamy, 2015). Based on previous studies by scholars, many indicate that most of the public utilities in low-cost housing, in particular, lack of security features in terms of building materials, structures and adopted technologies (Malek & Husin, 2012). As a result, the provided facilities tend to be easily damaged, under-utilized, unmanageable and eventually abandoned which later becoming nesting grounds for rebellious youth to conduct immoral and unhealthy activities.

Nonetheless, concerns on the needs to provide better public facilities for youth in low-cost housing had not been thoroughly addressed and discussed by past scholars. To date, current literature on low cost housing (from year 2010- 2017) only much focuses on safety issues and users satisfaction in general(Abdul-Aziz & Kassim, 2011; Abdullahi & Aziz, 2017; Goh & Yahaya, 2011; Karim, 2012; Mohit et al., 2010; Omar, 2009; Salleh, 2008; Zaid & Graham, 2011). This include discussion on the quality of communal life in housing settlement; neighborhood amenities and its effectiveness; prevention of crime through housing design; residential support services; the basis of homeownership; corporate social responsibility on housing development from developer and buyer perspective; efficient housing construction system; waste management in residential areas; rising housing prices and economic-related factors as well as documentation on the implementation of sustainable technology in low-income housing schemes. Nevertheless, none discusses the design evaluation of public facilities in low-cost housing and its influence on the development of youth psychological well-being focusing on the promotion of positive values among teenagers' through the usage of public facilities.

The objectives of this study, therefore are to identify the types of communal facilities provided in low-cost housing, followed by outlining the existing communal facilities for youth in low-cost housing as well as assessing the effectiveness of these communal facilities for youth towards the development of psychological well-being and the promotion of positive values among youth users. The findings of this study are important as it will provide an overview of the effectiveness of public facilities design in low -cost housing on propagating positive moral values among youth. These positive moral values such as responsibility, respect and obligation are vital in nurturing sustainable social life among adolescents. These values are also important to cultivate the formation of a caring society and promote constructive personality among individuals with an optimistic world view. Concerning this, the provision of communal facilities should be attractive to the community's culture in the residential area. Due to this, findings from the selected case studies will suggest guidelines as a method for improving and enhancing the presence of communal facilities in low-cost housing for future reference, namely the youth populace. This is important to create a more comfortable and harmonious living environment in the future. For the benefit of the study and to fulfill the objectives, the literature review is divided into three sections. The first section discusses public facilities followed by section two to describe the presence of public facilities in low- cost housing.

Section three will highlight on how architectural elements may symbolize communal values. The third part is important as it will examine how public facilities can influence the development of youth psychology namely the adolescent group and establish related indicators that will be used to analyze the case studies. These three sections are discussed in turn as in the following.

II. LITERATURE REVIEW

2.1 Meaning, Function, Categories and Type of Public Facilities

The term 'facility' can be defined as a description or situation that is convenient to fulfill the needs of certain parties in communal life whereas the word 'public' means open and free for all with clear accessibility. According to scholars, the public facility comprises of physical features that portray a sense of identity and place. It is the center of attraction in addressing many social issues that exist within the community (Nientied, Mhenni, & de Wit, 1990). For that matter, the physical features should be enhanced and supported with beneficial programs and activities that cultivate communal development like knowledge building, skill enhancement, promoting cultural ties, physical and spiritual development as well as social enrichment. In other words, communal facilities that have good physical aspect with multi- functioned spaces to cater to all groups of people comprising of children, youth and elderly age users will guarantee social wellbeing and comfort. In this sense, the good design of public facilities will much benefit the development of dwellers' social life from three main aspects (Nientied et al., 1990).

First, the existence of many, diverse and well-functioning community spaces will reduce the level of crime rate within the settlement area (Tan, 2012).This is because, by frequent usage of public facilities, communities will tend to interact , recognize as well as healthily socialize with each other. This stimulates the feeling of belongingness and a sense of responsibility among them. As a result, will inevitably create sense of surveillance within their settlement to encourage safer living territory(Teo & Huang, 1996).Second, the existence of communal space will enliven the housing settlement to become centre of attraction as a societal focal point. In this regard, it allows all communal members to interact freely and communicate without any obstacles or boundaries. This is vital as common acceptance will strengthensocial ties and foster unity (social cohesion) regardless of different religious backgrounds, ethnicity or race(Teo & Huang, 1996).Thirdly, the presence of good public facilities will also create a sense of attachment between the user and the provided public facilities. This is important as it will contribute to the creation of good values among users such as confidence, security as well as a communal spirit that devoids selective affection, distrust, suspicion and doubt. As a result, a community will be able to live in a safe and mutually respectful manner with different individuals and belief systems (Teo & Huang, 1996).

There are four categories of public amenities depending on the size and area to be serviced (Zaid & Graham, 2011). This includes high level, medium, low and the mobile (moving) type. According to scholars, high- level public facilities usually functioned for serving the entire region, metropolitan area or city (eg hospitals, universities)(Mohit et al., 2010). This type of facilities is not located within the perimeter of a single-dwelling accommodation or residential area. The location of this public facility is determined based on strategic location needs. In other words, high- level facilities type should be easily accessed by a macro-network communication system to accommodate the need of a much larger population at the state level.

In essence, this high-level public facility is designed in the form of a large-scale development framework(Omar, 2009).Moderate type of public amenities on the other hand, are facilities to cater for different communal needs (e.g. schools, clinics). These facilities are important for the community to serve two or more residential communities at one time.Lower level public facilities however, are typically utilized by community in a single residential area (e.g. kindergarten centers, community center). This kind of facilities is usually shared and allocated within a particular housing area(Omar, 2009). Mobile public amenities are facilities that move from one location to another. This kind of facilities is typically used to accommodate a large number of communities who are located in remote areas. By utilizing this type of facility, various problems relating to location, transportation and accessibility to public facilities can be easily solved. Furthermore, will cut cost, save energy and reduce manpower to manage the facilities for serving the huge number of remote users at one time(Omar, 2009). According to the communal development planning standard, there is three types of public facilities commonly found in Malaysia's urban settlements (Abdullahi & Aziz, 2017).

These public facilities are health and safety, education and recreational type. First, it is the health and safety facilities are physical support for communities relating to the wellness and security aspects like police stations, police huts, fire stations, neighborhood hospitals, clinics and others(Abdullahi & Aziz, 2017).

Secondly, an educational facility. Educational facilities are provided in residential areas for the community to acquire certain skills and knowledge encompassing of learning institutions like colleges, primary and secondary schools as well as kindergartens(Abdullahi & Aziz, 2017). Third is recreational facility. Recreational facilities provide activity spaces for all groups of people to communicate, integrate, play as well as to socialize actively. It is a place that allows all communal members regardless of age, race and background to organize and perform activities together. Below are the public facilities standard outlined by the Malaysian authorities and housing board(Abdul-Aziz & Kassim, 2011).

In general, public facilities are needed to ensure the development of community in housing areas. Nevertheless, not all public facilities can be provided due to unavoidable constraints such as limitation in size area, provision and maintenance cost, as well as the rapid increase of population growth. This is particularly critical in settlements located in densely populated urban cities where land prices are expensive(Besar et al., 2018). Adding to that, is the issue of high economic demand from involved stakeholders who much only interested in profit gain projects(Karim, 2012).

For that matter, only the essential public facilities are customarily provided by housing developers and authorities(Besar et al., 2018). Such occurrences are much seen in low -cost housing areas. To understand the context and condition of low-cost housing in Malaysia the following sections will elucidate this matter in detail.

2.2 Definition, characteristic, categories of low-cost housing and public facilities in low cost housing

Low- cost housing includes all affordable housing projects whether it is built by the government or the private sector for the lower- income groups. The lower -income groups are categorized as those earning a monthly household income between RM750 to RM 1500. The ability to afford a house is important in the housing market of a country. It is a good indicator of stable socio-economic development of the country.

According to implementation guidelines for low- cost housing, the government has set the standards that must be adhered to by housing developers in terms of location, target group income, and the type of low-cost housing as well as the unit selling price to the buyer per the following (refer Table 1 and 2). Based on Table 2, there are three categories of low-cost flats have been fixed by the government for housing developers and residents.

Table 1: Proposed location, target groups and housing types based on the new pricing of low-cost housing (source: Author 2018)

Location/area* (Land Price Per Square Meter)	Target Group Income (RM)	Type of Suitable Housing**	Unit Selling Price (RM)
A Cities and Big Townships (RM45 & above)	1200 to 1500	Flats with more than 5 floors	42000
B Big townships and its Outskirt (RM15-RM44)	1000 to 1350	Flats with 5 floors	35000
C Small towns and Outskirt (RM10-RM14)	850 to 1200	Terrace and Group Housing	30000
D Rural (Under RM10)	750 to 1000	Terrace and Group Housing	25000

* The determination of assigned location/areas is based on the land value for residential homes

** The suggestion housing types that are suitable to be built in a cost-effectively manner. This does not preclude other types to be built but the selling price is dependent on the location/area and the suggested selling price of the proposed homes.

Table 2: Housing categories by area and price (source: Author 2018)

No.	Housing Category	Floor Area*	Price (RM)	
			Peninsular Malaysia	Sabah & Sarawak
1.	Low Cost	700 sq. ft	From 35000	From 50000
2.	Low-medium Cost	750 sq. ft	From 50000	From 70000
3.	Medium cost and above	800 sq. ft	From 80000	From 100000

* Subject to change

** Subject to terms and conditions

2.3 The need for values in society and architectural elements with communal values

According to scholars, the need for good values is important to create community groups that possess noble behavior, commitment, emotions and personality. There are a various set of communal values that are held by and applied to a community, group or society. However, for the benefit of this paper only two main communal values that are related to a positive youth psychological development which are values of respect (gratitude), obligation (responsibility) will be highlighted. This is because according to many psychologist analysts (Thomson & Holland, 2004), the youth phase is where the transition to adulthood occurs in which they tend to become increasingly "destructured" and "individualized".

Therefore, the cultivation of respect (gratitude) and obligation (responsibility) values are the main determinant that will affect their behavioral patterns. According to scholars, the definition of respect (gratitude), is to be able to share, value, and tolerate each other, to accept differences between each person, and not violating the rights of other human beings. There is three importance of gratitude which are being able to cooperate in spite of race, religion, status, wealth and position, to be able to be courteous and give respect to others and to appreciate the past contributions, past deeds, opinions and capability of others. The definition of obligation(responsibility) is to bear, assume and give responsibility and accept the consequences. Individual obligation can be traced back to the Creator, family and community as well as the surrounding environment, each with its set obligations and duties.

Based on the above explanation, the values of (respect) gratitude and obligation (responsibility) will be utilized as an indicator. This is important to understand how public facilities that are provided can positively influence adolescent psychological behavior. According to scholars, these two societal values are closely related to the architecture including form and space elements. Communal values can also be interpreted through architecture because according to scholars, architecture is a form of proof that social life that can convey meaning including expression of religious belief or values that are practiced by the community through its physical aspects (Latiff, 2012; Kamarul, 2006). In other words, architecture can also be understood because of its unique aspects as it can create a structured relationship between the building and the surrounding context whether during its construction or before (Abdullah, 2011; Kamarul, 2006).

In this sense, communal values can be translated and conveyed through architectural elements that encompass both form and space. This occurs because architecture has its code and syntax that is capable of conveying a specific meaning to its users. Based on this understanding, it is obvious to become a positive youth that possesses respect, responsibility and obligation, it can be nurtured through the provision of public facilities that can nurture good values. Because this study focuses on the influence of communal values on effective psychological development among adolescents through the provision of public facilities, the next section will explain how public facilities can become a symbol of shaping of communal values from the architectural form and space elements through the methodology that is used.

III. METHODOLOGY

This study utilized case studies as the research strategy under the framework of mixed methods which is the combination of qualitative and quantitative approaches. Direct observation and close-ended questionnaires are used as methods to gather data on the role and effectiveness of public facilities for the sake of promoting positive values such as respect (gratitude) and obligation (responsibility) among the youth. This is important to fulfill the study objectives in outlining the suitable design approach for public facilities that can contribute to youth psychological development. The findings are analyzed in three phases. First, analyze the findings from primary and secondary sources using a hermeneutic method via coding. Second, analyze data from direct observation, using methods such as semiotics as it involves the study of meaning and sign. This method of analysis is vital as it introduces new ways of looking at a built form or physical objects as a system of 'sign' as well as proposing indicators to investigate this matter in depth.

Data from observation then is built upon the theories and concepts outlined by Saussure, Barthes and Gottdiener on sign relations.

To analyze data from the questionnaire, the SPSS method is used and findings are tabulated for discussion. All collected data then is used to propose the best possible design guideline to achieve the objective of the study. The findings are discussed in two main parts. The first part of the study focuses on the observation of physical design attributes of public facilities representing only two typologies of public facilities which are community hall and open space for recreational purposes.

This is because the chosen two low -cost housing flats have only these two kinds of public facilities for their residents. These two case studies are a) Perumahan Awam Seri Perlis 2 (PASP), Jalan Dato' Keramat, Kuala Lumpur; b) Perumahan Awam Lima Kedai (PARLK), Gelang Patah (refer Table 3). The selection of these case studies are based on the context of low-cost residential flats and subjected within the multi-level low cost housing category per the specifications outlined by the Housing Ministry and Local Government as determined in the National Housing Standards for Low- Cost Residential Flats (CIS2).

In general, the selection of these two case studies is based on two main criteria. The first criterion is that the flats represent medium-high low-cost flats typology. The second criterion is based on the location and placement of low-cost flats, where they are within the urban context. Location is an important aspect to see because indirectly it can influence the surrounding development of the flats. According to scholars, the density of the population is more critical in city areas as compared to suburbs and is always laden with more serious social problems that involve various ethnic and racial backgrounds, age groups and gender (Abdullah, 2011; Kamarul, 2006).
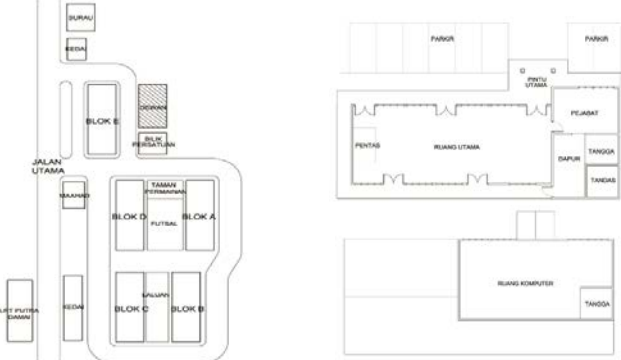
Hence, indirectly the population capacity will influence the effectiveness of the public facilities design that is provided. The observation process referred to are form making and spatial analysis as indicators (comprising of location, placement, hierarchy, accessibility, circulation configuration, spatial arrangement, functionality, thermal comfort and acoustic level).
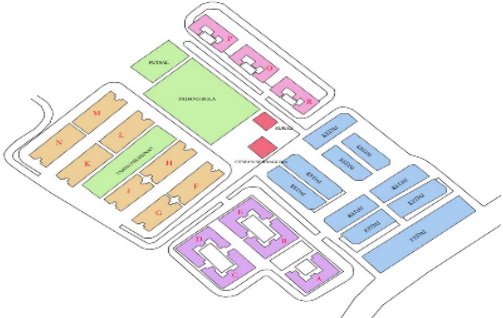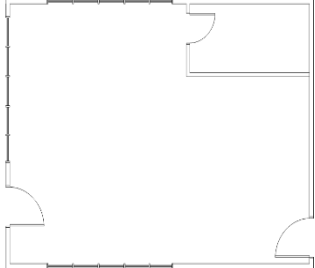
The second part will describe the findings of 120 respondents within the age category of 18-25 years old to represent each of the low-cost housing case studies. The justification of these 120 respondents is based on the population capacity of the low-cost flats. The respondent size is also determined based on the Limit Theorem efficacy that covers the population size to an infinite capacity. Respondents are chosen also based on the age groups from the different racial backgrounds and with various cultural backgrounds. Each respondent was questioned in two main parts. First, is related to the context of public facilities that are provided from the aspects of form and physical space that encompasses access, circulation, scale and proportion, hierarchy and function of the space setting including air quality, lighting and acoustic conditions as well as technological capability. This is important to determine whether the design fulfills the criteria of an effective and conducive public facility as emphasized by academic scholars.

Second, is related to the effectiveness of public facilities, such as community halls and recreational areas to the adolescent groups in terms of three main values, which are responsibility, respect and obligation for positive psychology.

This is important because the provision of good public facilities will give rise to users that are positive with a sense of ownership as well as responsibility towards public facilities that are provided.

Table 3: Descriptive background on a- Perumahan Awam Seri Perlis 2 (PASP), Jalan Dato' Keramat, Kuala Lumpur; b- Perumahan Awam Lima Kedai (PARLK), Gelang Patah. (source: Author 2018)

Case studies	Building typology	Description	a) Location, detail floor plan and frontal façade of the community hall *(source : Author 2018)* b) View towards futsal court *(source : Author 2018)*
a) PASP (PerumahanAwam Seri Perlis 2)	Community hall	a) this residential housing was developed by Kuala Lumpur City Hall (DBKL). The area consists of 5 building blocks. It is located in the middle of Kuala Lumpur about 3 km from the city center. A multi-purpose hall, named KelabWargaTuaEmas (Senior Citizen's Club), is located behind the blocks. b) Open area (futsal court) is available in the middle of the residential area far from the main road. Availability of a 'wakaf' (pavilion) besides the futsal court.	
PASP (PerumahanAwam Seri Perlis 2)	Open area (recreational area) – open yard futsal court, field		

Case studies	Building typology	Description	a) **Location, detail floor plan, frontal façade and interior of the community hall** *(source : Author 2018)* b) **View towards futsal and sepaktakraw court** *(source :Author 2018)*
PerumahanAwam Lima Kedai (PARLK),	Community hall	a) This area was developed by the developers with approval from the Johor Bahru City Council. This area was built around the year 2000 and inhabited initially in 2002 and in 2003 the residential housing was completed and fully inhabited. This area consists of 16 blocks in total that are divided into three different phases. The multi-purpose hall is located in between the two phases alongside the Al-MuhajirinSurau.	

PerumahanAwam Lima Kedai (PARLK),	Open area (recreational area) – open yard, futsal and sepaktakraw court, field	Passive and active open spaces located in the middle of the housing area blocks and are relatively far from the main road. Other open spaces like a futsal court, football field, sepaktakraw court, silat arena are located far from all residential blocks Absence of pavilion and benches in the area.	

IV. FINDINGS

This section discusses the findings gathered from observation on the two selected case studies above referring to two types of common public facilities found in low- cost housing flats. These public faculties are communal hall and open public space (recreational space). The observation on community hall is conducted referring to two main indicators referring to form making and spatial analysis (comprising of location, placement, hierarchy, accessibility, circulation configuration, spatial arrangement, functionality, thermal comfort and acoustic level) (refer Table 4 and 5). Table 6 and 7 discuss on the findings gathered from questionnaire to review the level satisfaction of youth and their response on the management and existing condition of the public facilities involving its community hall and public open space on the two-selected case study a) Perumahan Awam Seri Perlis 2 (PASP), Jalan Dato' Keramat, Kuala Lumpur; b- Perumahan Awam Lima Kedai (PARLK), Gelang Patah.

The questionnaires are conducted referring to two main determinants which are (C1) Form making (location and placement, hierarchy of form; (C2) Space making (circulation and accessibility, spatial arrangement, space functionality).

Table 4: Results from direct observation on community hall at a) Perumahan Awam Seri Perlis 2 (PASP), Jalan Dato' Keramat, Kuala Lumpur; b- Perumahan Awam Lima Kedai (PARLK), Gelang Patah. (source: Author 2018)

Type of public facility	Architectural elements	Features	PASP	PARLK
Community Hall	Design (location)	-the distance of the hall closest to the housing area is within 5 meters.	Yes	Yes
		-location of the hall is in the strategic path and focal point of the public - the hall location is on the ground level close to the main door entrance of the site -	No	No
		The hall building is separate and not adjoining to the residential block	Yes	Yes
	Design (placement)	-the placement of the hall in a safe location that can be seen easily to the corridor path and parking space	Yes	No
		-the distance of the hall that is close to the main public facilities, residents' association room/office within <5 meters	Yes	No
	Form (hierarchy)	Have a clear hierarchical form encompassing -a form of hierarchical component that dominates the entire hall design in terms of size or shape for it to be a design that is easily identifiable from afar as a user-friendly landmark.	No	No
	Space (access and circulation) -horizontal movement	Have ease of movement in the entrance, foyer or hall lobby, Have a circulation space that is easily identifiable (wayfinding) from the outside into the hall.	No	No
	Space (access and circulation) -vertical movement	Have a vertical movement method Have a vertical circulation that is comfortable such as stairways or elevators that is placed strategically and close to the hall from the residential blocks	No	No
	Approach	Have an entrance Enter the hall in an axially-frontal manner with a clear visual view.	No	No
	Entry	Have an entrance door that is significant (with a sense of welcoming) that outlines the borders clearly between the exterior and interior as well as reinforce the character and value of the building	No	No
	Access route configuration	Have a route configuration to the hall that is welcoming of the user's arrival by foot or by vehicle.	No	No
	Pathway size	Have a corridor pathway size that is spacious and not narrow as well as safe.	No	No
	Path nodes	Have nodes that indicate the path of movement through the hall building that provides a chance for the user to rest and orient themselves	No	No
	Transition nodes	Building nodes that are conceived have variation in terms of scale, size, function and form such as rest benches, garden landscapes etc.	No	No
	Spatial arrangement	A systematic and organized spatial order from a public space, to semi-public and to private space. Interior conditions create a sense and meaning of belonging and personalization through the spatial experience by the user.	No	No
	Space function	The organization of space is universal that can be modified according to various functions and without obstruction such as pillar structures, permanent fixtures and etc. to stimulate user activity.	No	No
	Thermal comfort	Plenty of openings for air circulation and natural lighting Equipped with mechanical devices (lights, fans, air conditioning) that is sufficient to ensure the comfort of the hall space	No	No
	Acoustical system	Use sound absorption materials such as carpets on the floors to limit and reduce noise-echo in the hall. Use an appropriate ceiling system to increase noise insulation. Use new technology such as an audio system to overcome the challenges associated with acoustics in the hall.	No	No

Table 5: Results from direct observation on public open space at a) Perumahan Awam Seri Perlis 2 (PASP),

JalanDato' Keramat, Kuala Lumpur; b- Perumahan Awam Lima Kedai (PARLK), Gelang Patah.

Type of public facility	Architectural elements	Features	PASP	PARLK
Public open space (Open yard, futsal court, field)	Design (location)	-the distance of the open yard to the housing area is within <5 meters.	No	No
		-location of the open yard is in the strategic path and focal point of the public - the open yard is on the ground level close to the main door entrance of the site -	No	No
	Design (placement)	-placement of the open yards is surrounded by barriers, fences or buffers such as hedges, trees from the road, slopes and etc. as a safety feature.	Yes	Yes
		-the distance of the open yard that is close to the main public facilities, residents' association room/office within < 5-10 meters	Yes	No
	Space (Function and finishing)	Have a space functionality that is clear that includes universal space for various activities such as relaxing, exercise and recreation. Use of finishing as well as suitable construction materials on the floors and walls for the user's outdoor activities and resistant to changes in weather. Finishing's that are used accentuates the texture, color and patterns to stimulate the user's activities.	No	No

(Source: Author 2018)

Table 6: Results from the questionnaire on community hall and public open space at a) PerumahanAwam Seri Perlis

2 (PASP), Jalan Dato' Keramat, Kuala Lumpur; b- PerumahanAwam Lima Kedai (PARLK), GelangPatah.(source:

Author 2018)

Typology of public facilities at low cost flats	Findings		Case studies	Satisfaction level %					% Positive view (PP Total)	% Views negative (PN Total)
				1 (PN)	2 (PN)	3 (PP)	4 (PP)	5 (PP)		
Community hall	CI	Form – i)Location and placement including- -distance of the hall nearby the housing area is within <5 meters. -location of the hall is in the strategic path and focal point of the public -placement of the hall in a safe location and can be seen easily -distance of the hall nearby to other public facilities is within <5 meters ii) Have a hierarchical form that is clear that includes -a form of hierarchical component that dominates the entire hall design in terms of size or shape for it to be a design that is easily identifiable from afar as a user-friendly landmark.	PASP	36	42	10	8	4	22	78
			PARLK	31	44	17	5	3	25	75
	C2	Space-	PASP	43	36	5	7	9	21	79

i) Have a circulation and access that includes movement methods that are ai) horizontal and aii) vertical, bi) approach; ci) entrance; di) route configuration into the building	PARLK	44	30	8	10	8	26	74

ai) horizontal movement method

Haveease of movement in the entrance, foyer or hall lobby,

Have a circulation space that is easily identifiable (way finding) from the outside into the hall.

aii) vertical movement method

Have a vertical circulation that is comfortable such as stairways or elevators that is placed strategically to the upper sections of the hall

bi) Approach

Enter the hall in an axially-frontal manner with a clear visual view.

ci) Have an entrance door that is significant (with a sense of welcoming) that outlines the borders clearly between the exterior and interior as well as reinforce the character and value of the building

di) have a route configuration to the hall that is welcoming of user's arrival by foot or by vehicle.

Have a corridor pathway size that is spacious and not narrow as well as safe.

Have nodes that indicate the path of movement through the hall building that provides a chance for the user to rest and orient themselves

Building nodes that are conceived have variation in terms of scale, size, function and form such as rest benches, garden landscapes and etc.

ii) Have a spatial order that is clear that includes

a) A systematic and organized spatial order from a public space, to semi-public and to private space.

b) interior conditions that create a sense and meaning of belonging and personalization through the spatial experience by the user.

iii) Have a clear space functionality that includes

a) The organization of space in the hall is universally open that can be modified according to various functions and without obstruction such as pillar structures, permanent fixtures and etc.

b) An interior, that has a matching composition with the hall's role as a community center that utilizes finishing as well as construction materials that are suitable on the floors, walls and ceiling. Finishing that is used accentuates the texture, color and patterns to stimulate the user's activities.

c) An interior that induces comfort in terms of –

		i) Room temperature for activities in the that has - moderate room temperature- not too hot or too cold, - many systems for room temperature comfort such as ceiling fans and HVAC - many openings that can be adjusted and used to enable the circulation of air into the hall's interior. ii) sufficient and suitable lighting for the community's activities- -Has sufficient visual comfort -Optimize energy for mechanical lightings -Has sufficient illumination - Application of passive lighting strategies, such as unilateral and two-way lights, light racks and permanent sunshades iii) Acoustic comfort for the community activities that include- The Sound Transmission Class (or STC) (low echo and background noise) in the hall -Use sound absorption materials such as carpets on the floors to limit and reduce noise-echo in the hall. -Use an appropriate ceiling system to increase noise insulation. -Use new technology such as an audio system to overcome the challenges associated with acoustics in the hall.									
Public Open space (Open yard, futsal court, field)	CI	Form – i)Location and placement including- -the distance of the open area nearby the housing area is within <5 -10 meters . -location of the open area is in the strategic path and focal point of the public -placement of the open area is in a location that can be seen easily (surveillance), safe and easily accessed -distance of the open area that is nearby to other public facilities is within <5- 10 meters -placement of the open area is surrounded by barriers, fences or buffers such as hedges, trees from the road, slopes and etc. as a safety feature.	PASP	52	31	9	3	5	17	83
			PARLK	40	57	-	1	2	3	97
	C2	Space- i)Have a clear space functionality that includes a) Universal space for various activities such as relaxing, exercising and recreation. b) Use of finishing as well as suitable construction materials on the floors and walls for the user's outdoor activities and resistant to changes in weather. Finishing that are used accentuates the texture, color and patterns to stimulate the user's activities. b) The maintenance of open spaces that is neat, tidy and clean c)Availability of hard landscape such as benches, pavilion or canopy as well as soft landscape such as gardens.	PASP	39	50	1	2	8	11	89
			PARLK	67	30	-	-	3	3	97

Table 7: Results from questionnaire on youth satisfaction on the public facilities involving community hall and public open space in promoting the development of youth psychology and positive values -sense of responsibility (obligation) and sense of respect (gratitude) at a) Perumahan Awam Seri Perlis 2 (PASP) b) Perumahan Awam Lima Kedai (PARLK), Gelang Patah.(source: Author 2018)

Typology of public facilities at low -cost flats	Findings		Case studies	Satisfaction level %					% Positive view (PP Total)	% Views negative (PN Total)
				1 (PN)	2 (PN)	3 (PN)	4 (PP)	5 (PP)		
Community hall and open spaces	CI (responsibility) obligation	-to trigger values of responsibility through a sense of place. Form and space that is provided create efforts to - i) have a familiarity with the place	PASP	52	32	5	6	5	11	89
			PARLK	35	40	12	8	5	13	87
		ii)be emotionally attached to the place and have a sense of affection	PASP	42	39	15	3	1	4	96
			PARLK	43	32	20	2	3	5	95
		iii) have the place easily identified and recognized	PASP	26	20	20	24	10	34	66
			PARLK	24	31	16	14	15	71	29
		The form and space that is provided triggers values of responsibility until it creates feelings and efforts to i) have long term interactions and sense of involvement	PASP	25	32	13	15	15	70	30
			PARLK	27	24	18	16	15	31	69
		ii) pay particular attention and attachment to the place until it creates a sense of belonging	PASP	21	32	23	14	10	24	76
			PARLK	17	18	20	23	22	45	55
		iii) be ready to sacrifice resources, time, energy and money to make the place better (sense of sacrifice)	PASP	18	32	22	18	10	28	72
			PARLK	26	28	40	4	2	6	94

Typology of public facilities at low cost flats	Findings		Case studies	Satisfaction level %					% Views positive (PN Total)	% Views negative (PN Total)
				1 (PN)	2 (PN)	3 (PN)	4 (PP)	5 (PP)		
Community hall and open spaces	C3 (Respect) gratitude	The form and space that is provided triggers values of respect until it creates feelings and efforts to i) appreciate and have an interest in the place – (sense of appreciation)	PASP	26	20	20	24	10	34	66
			PARLK	34	44	17	3	2	5	95
		ii) have a sense of care and interest to maintain the place	PASP	49	23	15	7	6	13	87
			PARLK	17	18	20	23	22	45	55
		iii)have a sense of surveillance and maintain the sustainability of the place	PASP	35	21	8	15	21	36	64
			PARLK	18	26	31	19	6	25	75
		iv) utilize the place for a benefit such as generating economic income for the population (sense of utilization)	PASP	13	30	25	17	15	34	66
			PARLK	26	28	40	4	2	6	94

V. DISCUSSION

Based on findings from direct observation and questionnaires, it clearly shows that public facilities provided in low-cost housing can influence the development of youth psychology to act positively or vice versa. Generally, the analysis conducted does not emphasize on the good or bad of public facilities but rather on the design effectiveness of the public facilities towards the creation of user values. Based on the findings, many respondents tend to agree that public facilities are still lacking and do not fully meet the basic needs of the population especially for the comfort of youths, which includes two main aspects in terms of form and space provided. Besides, the effectiveness of public facilities provided is not able to shape and influence the development of good psychological traits among users, especially adolescents towards the inculcation of respect (gratitude) and responsibility (obligation) values. This can be identified from two aspects of this provision of public facilities. The first is a provision in terms of the physical aspects of public facilities, that is its form. Secondly, is the provision in terms of the quality of public facilities space, which includes functionality and utility. This is because the public facilities in the two case studies investigated are found to be provided without proper consideration and do not create a sense of belonging or attachment among users causing them to ignore and neglect the existence of these public facilities. Based on the findings, the public facilities were not designed with an appearance that can create sense of appreciation among users to care for and respect these public facilities. Besides, the public facilities provided have not succeeded in creating an environment with "third places" characteristics or feel that emphasizes a conducive and accommodating social environment where it can accommodate all users' wants and emotions, hence they feel that their needs are not met. The existence of this "third place" concept is important in shaping and uniting a community as it can trigger a sense of place within the individual.

In summary, the public facilities represented in these two case studies were not successful in developing positive youth psychology as they could not fully benefit from these public facilities due to problems in terms of the

provided form and space. Many respondents suggested improvements and enhancements as they feel the architectural design is inadequate and does not work well. As a result, youth cannot use these public facilities and they are eventually vulnerable to vices as there is no place or outlet for recreation and self-expression. From the questionnaires conducted, the youth respondents outlined the following recommendations for the provision of better and more effective public facilities to influence the positive formation of values and psychological development especially among them. Hence, to create positive and good values in adolescents such as values of respect (gratitude) and obligation (responsibility), these public facilities should be well designed according to user's need responding to the physical aspects of design and quality of space. Based on continuous observation and data analysis from the questionnaire it can be outlined that the need for the provision of good public facilities is indispensable.

The next section outlines the proposal in the provision of these public facilities that focus on the community hall and the open yards that are often utilized by adolescents in low-cost flats. The importance of fulfilling this design feature and space is important as it will affect the user's psychological development especially adolescents to inculcate responsibility (obligation) and respect (gratitude) values in maintaining and utilizing these public facilities. This is in terms of a) public facilities placement with better accessibility and act as a landmark and b) provide appropriate public facilities for dealing with physical aspects in terms of space making. This will be elaborated further in turn in the following.

The placement of public facilities, especially community halls, should be located within proximity to the residential areas within 3 to 5 meters of walking distance as well as within the range of other public facilities such as management offices, kindergartens, playgrounds and so on. According to scholars, the location of public facilities should be easy to visit either on foot, using private vehicles or public transport (Besar et al., 2018; Ismail, Mohidin&Daud, 2017). It should be located in an area where the surrounding development is appropriate for the development of the residential area. It is therefore important that the distance of the public facilities provided meets the requirements of pedestrians at a comfortable pace and distance. Placement of public facilities should also emphasize the security risk aspects in the site to ensure the safety of users, especially small children. Among the areas that need to be avoided are near major highways or hillsides or water plants and it should be far from air pollution sources. In other words, the public facilities provided should also be placed away from any source of noise, vibration or factors that may affect the focus of the user. Placing these public facilities near the residential areas while ensuring security and safety will create the value of responsibility for caring and maintaining the facilities as it is within the daily living zones that are experienced and utilized by all. In other words, they will feel the existence of these public facilities as part of the scope of their living space. This situation creates a sense of belonging and connection with these public facilities where there is a shared good and common experience. Indirectly this will induce a sense of attachment with these facilities.

Better accessibility is necessary to ensure that access to all public utilities is available to all levels of users. According to scholars, accessibility by foot is the most important aspect as compared to access by motorists (Besar et al., 2018). This is because walking is a major consideration in the planning of public facilities especially in residential areas. Accessibility in terms of pedestrian comfort depends largely on the directness, continuity and the extent of the given accessibility in terms of the width of the route provided.

According to scholars, careful planning on pedestrian accessibility needs to focus on effective and unobstructed route designs (Salleh 2008; Besar et al., 2018). Public facilities should gravitate towards having easy pedestrian accessibility and having smooth movement at all times. Without reach and access to public facilities by foot, efforts to instill a sense of inclusion or belonging among users will be threatened. This is because walking is a form of the medium used very often by every class of society regardless of age and background.This is supported by scholars who describeaccessibility by foot as a variable that also influences human settlement patterns (Salleh 2008; Besar et al., 2018). Four shape patternsinfluence the accessibility of human settlements, which are radial, ring, grid and linear. However, according to scholars, accessibility to radial patterned public facilities are more appropriate for accessibility systems to public facilities in domestic-scaled environments such as residential areas (Goh & Yahaya, 2011). This is because such accessibility features open routes to various directions and from various nodes. This will make these public facilities easy to visit and viewed from various directions especially by pedestrians.

Accessibility to the main entrance of the hall should be axially-frontal placed with a clear visual view. This entrance needs a significance sense of welcoming that clearly outlines the boundaries between the outer and inner space as well as reinforces the character and value of the building. Additionally, the access path to this hall should have a route configuration that welcomes the arrival of users by foot or by vehicles. Apart from that, the pedestrian experience for access to public facilities also needs to be emphasized. An experience that triggers joy is important apart from the security, order, safety and enthusiasm factor. Access or route planning to these public facilities is not just about ensuring physical comfort and safety but also necessary to enhance the fun factor of the pedestrian's experience through the provision of various design features such as seats, benches, flowers and weather shielding elements at various nodes. Through the provision of nodes that signify the route of movement will allowuser the opportunity to rest and orient themselves. The provided nodes should also have variability in terms of scale, size, function and form such as lounge chairs, landscape gardens and etc. Based on scholars' views, the accessibility that is provided for public facilities need to fulfill the aspect of user-friendly wayfinding (Zaid & Graham, 2011). In this regard, the provision of accessibility with good wayfinding features should be given due attention through the use of signs or symbols that give immediate cues in order that users are not lost, confused and struggling to get to the public facility. Hence, this wayfinding should be through an easy-to-use and interesting walkway or pathway so that users can process information along the route easily and surrounded by pleasant surroundings. According to scholars, this wayfinding design affects the users of the surrounding environment emotionally and functionally (Zaid & Graham, 2011).

However, having only accessibility with good wayfinding features to the public facility is not enough as it should also be equipped with the presence of physical artifacts or synthetic objects especially in residential areas. This is vital to provide directions and reminders, as well as to deliver strong nonverbal messages related to the placement and accessibility to the public facility. These physical artifacts are usually in the form of symbols and signs, posters, artworks and murals. This is important so that the public facilities will act as a landmark. Public facilities in this area, especially community hall, also need to have a clear hierarchical form that dominates the entire hall features in terms of size and shape. This is important to make it a design that is easily identifiable from afar as a user-friendly landmark.

Indirectly, the created sense of clear recognition will trigger a sense of attachment and belonging by the user to the public facility. According to scholars when this feeling is conceived, it will create a sense of accountability among users to appreciate, care and respect these public facilities (Carruthers &Ulfarsson, 2003; Ismail, Mohidin&Daud, 2017). This value of responsibility is especially important among users of the younger generation as it will develop good traits and values.

b) Provide appropriate public facilities for dealing with physical aspects in terms of space, especially community halls such as,

Organized spatial order from micro to macro phase that is comfortable and can accommodate various functions. The importance of fulfilling this spatial feature is high as it will affect the psychological development of users especially adolescents to inculcate responsibility, respect and obligation in maintaining the existence of these public facilities. A clear spatial order from the macro to microphase needs to be created in the provision of public facilities, especially the community hall. According to scholars, there are 3 methods at the macro level to organize the placement of public halls in residential areas (Karim, 2012). Firstly, clustering all public facilities in an area. In addition to facilitating its management, such arrangements correspond well to boundaries for maintenance and control. However, it does not encourage cross-connections in a residential area as the clustering as a whole reduces its flexibility features. Secondly, the clustering of public facilities based on physical type or requirement. This type of clustering places public facilities based on functionality by age group. For instance, kindergartens and playgrounds are clustered in an area, while community halls and management offices in clusters in other areas and etc. This takes into account the functional requirements and can respond better to simplify management or servicing if needed. However, it can impede the necessary interactions as they are separate from the housing units and do not promote interaction between users.

Thirdly, the mixing of functions and clustering according to modular units that take into account the needs and wants of specific social communities. Based on this technique, public facilities are clustered into units that are mixed with other units or residential blocks to form a community development center within home-living. This spatial unit is similar to a diverse social unit and is informally consolidated. When a unit is functioning stably, this system is good as it promotes and encourages more interaction among users from various backgrounds to meet when using these public facilities. At the micro- level, public facilities such as the community hall are mainly required to have a clear spatial order that includes a systematic and structured space arrangement from the public space, to the semi-public space and to the private space where the existing interior conditions need to create a sense and meaning of belonging and personalization through the spatial experience by the user. The sense of personalization is important because it will nurture the shaping of obligation and respecting the rights of other individuals as well as the environment. This will indirectly cultivate the sense of responsibility to maintain and care for the provided facilities.

Clear space functionality that includes the spatial order in the hall should be able to accommodate various functions and without obstruction, such as pillar structures and fixed furniture. In this regard, the hall interior space like the community center should utilize suitable construction materials and finishing to accentuate the texture, color

and patterns for stimulating the user's activities. Besides, the activities carried out in the space are also very important to involve all groups of people without focusing on just one age group or gender. Therefore, the space provided should be in line with the conducted activities. In this regard, comfortable and functional space with active activities needs to be promoted to attract people's involvement.

VI. CONCLUSION

Based on the discussion above, in the planning of public facilities there are two main aspects contribute to the level of user well-being - the physical aspect that includes the form and the functional aspect that includes space making. These aspects are important as they can lead to a conducive 'third place' environment. Governments including developers and relevant authorities should consider this aspect in providing a better environment to improve the quality of public facilities to nurture important values such as responsibility (obligation) and respect (gratitude) in developing positive psychology especially among adolescents.

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