

Masyarakat, Kebudayaan dan Politik

Daftar Isi

Adaptation Behaviour of Residents Living in a High-Density Housing in Jakarta	
Sri Astuti Indriyati.....	85–97
Pemanfaatan Tanah Ulayat yang Menguntungkan Masyarakat	
Erwin	98–108
Cerita Rakyat Pulau Raas dalam Konteks Psikoanalisis Carl G. Jung	
Anas Ahmadi.....	109–116
Memori atas Tiga Gubernur Jenderal di Hindia: Coen, Daendels dan van Heutsz di Belanda	
Johny A. Khusyairi	117–129
The External and Internal Barriers to the Political Leadership for Minangkabau Women in West Sumatera	
Nurwani Idris	130–141
Harmoni Relasi Sosial Umat Muslim dan Hindu di Malang Raya	
Ahmad Munjin Nasih dan Dewa Agung Gede Agung	142–150
Perilaku Masyarakat Miskin di Kota Bengkulu dan Model Pengentasan Kemiskinan Berbasis Nilai Sosial-Budaya Lokal	
Hajar G. Pramudyasmono ¹ , Paulus Suluk Kananlua, Hasan Pribadi	151–161
Mencegah Trafficking melalui Prosedur Penempatan dan Perlindungan Tenaga Kerja Indonesia	
Dian Noeswantari, Yoan Nursari Simanjuntak, Aloysia Vira Herawati, Inge Christanti.....	162–175
Hubungan Patron-Klien di Kalangan Petani Desa Kebonrejo	
Rustinsyah.....	176–182

Adaptation Behaviour of Residents Living in a High-Density Housing in Jakarta

Sri Astuti Indriyati¹

Program Studi Arsitektur, Universitas Persada Indonesia, Jakarta

ABSTRACT

This study is centred on the contemporary problem of housing units that are designed with little regard for users and which, by neglecting some of their fundamental needs. This lead to a range of coping strategies in order to exist within such units— one is called Adaptation Behavior. Adaptation is another way in which individuals change their behaviour to fit environmental demands. Adaptation is a dynamic and continuous process, and can be to the physical, socio-cultural or community, and to the individuals' environment. This research conducted which in most cases, the conditions of high-density housing developments require occupants to adapt their behaviour to fit the space/environment provided. This research provides empirical evidence on the Adaptation behaviour of housing complex residents of high-density housing in Jakarta, Indonesia in relation to their use of space within their physical architectural setting. The primary data for this study was collected through semi-structured interviews with residents from various unit types within one high-density housing complex built in central Jakarta by the national urban development corporation of Indonesia (perum perumnas). Mixed data analysis method, combining both qualitative and quantitative was employed for the research. The study revealed that the design strategies deployed for the selected housing complex DID and DID NOT, to various and differing degrees, adequately meet the residents needs from many angles. The effect of this for residents was the enforced adoption of various coping strategies – not only spatial adjustment to compensate for both the physical and behavioural limitations of their living space as usual found in the previous study, but also coping conducted for adaptation behaviours by the occupants, which make the occupants' lifestyle have changed for the betterment on one hand and worsen on the other hands. This study has provided a descriptions to confirm the observation stated in the report by the Ministry of Public Works and State Ministry of Housing and Human Settlements Republic of Indonesia that, for most Indonesians, living in multi-storey buildings is the new way of life in socio-cultural terms.

Key words: *modest economy, accomodation, physical surroundings, spatial adjustment, perumnas*

This study is centred on the contemporary problem of housing units that are designed with little regard for users and which, by neglecting some of their fundamental needs (Heimsath 1977), lead to a range of both positive and negative coping strategies in order to exist within such units.

In the case of Jakarta City, the previous research has found that, more than 50% of existing housing and surroundings in Jakarta were classified as sub-standard, with those areas located in the urban centre requiring high-investment for facilities and infrastructure to bring them up to a minimum standard (Provincial Government of DKI Jakarta 1991, p. 11). This would suggest that the basic psychological and physical needs of housing and daily living have not yet been reached. Data concerning the poor provision of floor space further suggest that housing in Jakarta

needs radically improved and as such, the minimum standards for adequate housing needs to be redefined (Komarudin 1997, p. 299). Other than that, there were clear socio-psychological effects on occupants living in high-density housing in Jakarta (Subroto 1984).

This research provides empirical evidence on the one of coping behaviour in particular centred for Adaptation behavior of the occupants of high-density housing in Jakarta, Indonesia in relation to their use of space within their physical architectural setting. Adaptation is another way in which individuals change their behaviour to fit environmental demands (Bell, Fisher & Loomis Ross 1978, p. 224). which makes the occupants' lifestyle have changed for the betterment on one hand and worsen on the other hands.

¹ Korespondensi: S. A. Indriyati, Program Studi Teknik Arsitektur, Universitas Persada Indonesia, Jalan Diponegoro No. 74 Jakarta Pusat, Kode Pos 10340. Telepon (021) 3926000 ext.1911, (021) 3914844 (Direct) Fax. (021) 3914878. E-mail: indriyati@yai.ac.id

Research Methods

Post Occupancy Evaluation which involved semi-structured interview, field observation and photography was conducted. Semi-structured interviews were conducted with the occupant as a respondent. This interview was carried out in high-density housing complex located in Central Jakarta, representing an area with the highest population density (23,132 people/km²) (BPS 1998). The interviews carried out were face-to-face interviews, using questionnaires and tape-recording.

The proportionate stratified random sampling was employed determined for the research, was sought proportionate samples from $\pm 10\%$ of the total units available. The number of samples to be taken are a total of 61 units (out of 600 total households/units in Kebon Kacang Housing Complex) which is consist of 3 different unit types of 21, 42, and 51sqm unit type. The allocation of stratified samples is shown in Table 1 below.

Table 1.
Stratified Samples by Unit Types

Unit Type	Total	
	Kebon Kacang HC Built in 1982	Types taken per stratum
Type 21sqm	37 units (from 368 units)	37 units
Type 42sqm	17 units (from 166 units)	17 units
Type 51sqm	7 unit (from 66 units)	7 units
		61 units

Note: HC = Housing Complex

Sources: Data was obtained from (Direktorat Perumahan dan Perum-Perumnas Ditjen Cipta Karya Departemen Pekerjaan Umum & Kantor Menteri Negara Perumahan Rakyat 1980)

Table 2.
Sample Distribution for KEBON KACANG Housing Complex

KEBON KACANG Housing Complex			
Unit Types	Block or Building Names*	Samples taken (Unit or household visited)	Total Samples
Type 21sqm	Block 5	11	37 units or hhs
	Block 6	11	
	Block 7	6	
	Block 8	9	
Type 42sqm	Block 1	4	17 units or hhs
	Block 2	3	
	Block 3	4	
	Block 4	3	
	Block 8	3	
Type 51sqm	Block 1	2	7 units or hhs
	Block 2	1	
	Block 3	2	
	Block 4	1	
	Block 8	1	
TOTAL SAMPLES in location			61 units or hhs

* Data was obtained from (Resident Association for Kebon Kacang Housing Complex 2003)

There were 2 (two) major areas of information and assessment covering information as follows: (1) general and socio-demographic information; In order to obtain this information, the interviewer interviewed 1 (one) adult family member who was considered to represent the household's general and socio-demographic information; and (2) occupant's perception of their existing residential setting. For this information, it is expected that it was necessary to interview a minimum of 1 (one) adult family member per unit as representative of the household's perceptions of their unit and housing complex. Field observation & photography were also conducted in this study. The researcher in this observation section took photographs. This observation was non-participatory. Physical housing units and facilities to be observed were randomly selected and this visual information used to illustrate the existing housing units and complex.

Results and Discussion

Adaptation Behaviour of Residents Living in a High Density Housing in Jakarta

One of the major issues facing the city of Jakarta, Indonesia, as stated in the city's master plan for 2005, is the problem of housing. Specifically, this concerns providing homes that meet the demands of both physical well being and psychological needs of occupants. To date such expectations have not been fulfilled. Early research has shown that what housing has been provided tends to concentrate on the minimum space requirement for housing units in terms of economy of floor space, types and number of rooms. Initial research has also indicated that it is in response to these spatial disadvantages by occupants that they have sought various coping strategies to deal with their particular physical environment leading to an adaptive use of their architectural setting.

The focus of this paper, as an outcome of fieldwork findings, concerns how occupants have dealt with various physical domestic environments. This will discuss the coping strategies adopted by inhabitants living within high-density housing complex in Jakarta to their physical environment. These strategies, as defined by Bell, Fisher and Loomis, such involve both adaptation and adjustment where adaptation represents the way in which individuals change their behaviour to suit the physical demands of their home, and adjustment reflects the manner by which individuals reorganize the environment to satisfy their behaviour (Bell & Fisher 1978). It is these study, that will be addressed as an outcome of fieldwork case studies that investigate in more depth

the nature of coping strategies – in particular of Adaptation Strategies - undertaken by occupants to render their domestic environment more meaningful to themselves.

The Built-Environment Design needs more on Human Approaches

The facts indicate that the dominant situation in modern life is that individuals live in a setting which was not built for them (Boutourline 1970), resulting from the fact that only the three principal roles of the owner, the architect, and the regulatory government, behavioral data were involved in the design process - the user of a building is not, with rare exceptions, a participant in the design process. It was even worst when the poor communication between users and the environmental planner and designer (i.e. architects, planners) and their tendency to turn towards expert knowledge instead of user needs has become another disadvantage perceived by the users of buildings (Sarwono 1992).

Environmental design has been established as the formal process of adjusting built-environment to meet human needs more effectively (Bell & Fisher 1978). The importance of the human dimension in architecture is becoming crucial to consider. It can be understood for many environment's experts that Izumi's Reference tells psychological phenomena and building design is useful in understanding the meshing of human and non-human components in architectural fabric. A fundamental premise behind the investigation into the field of environment and behaviour involves the assumption of a systematic interrelationship between architecture and patterns of human behaviour. Those buildings containing both people and objects need to be more humanized (Holahan 1978). Residential buildings are one example to be considered in this light.

A successful result of an environmental design is influenced by important factors. One of the factors which influence an environmental design result is a need to understand the criteria that has to be met in a well-built environment. The criteria is as follows: (1) to meet the needs of user behaviour implemented in functional and floor space requirements; (2) meets the standard of physiological condition; (3) meets the standard of perceptual condition; and (4) meets the standard of social condition (Sarwono 1992).

In relation to the Izumi diagram on the meshing of human and non-human components in architectural fabric, the case studies of high-density housing in Jakarta should be considered to be design

focused towards the human. The case studies will consider the importance of the human dimension in architecture and essential for build a well-designed environment. Design ideas geared towards human psychological requirements particularly in the case of high-density housing in Jakarta, will start to consider the needs of the users' behaviour, the users' perception, the users' preference towards the home that relates directly to themselves. The active role of the user in the design process is therefore taken into account. It is expected that the resulting alternative design ideas will satisfy and support the explicit and implicit needs and values of the occupants through the improvement new designs, the improvement of minimum building standards, and clarification of user needs and preferences, etc.

A particular designed physical setting may be expected to evoke, or at the very least to serve as the locus of a range of expected behaviours whose variations could be studied as a function not of physical parameters but of those complex social and psychological determinants that are rooted in all human activities and relationships (Prohansky & Ittelson 1978).

However, any designed physical setting will be successful if it is able to serve not only the individual, but also society. Society signifies a group of people who share a common habitat and who are dependent upon each other for their survival and well-being (Harris 1980). The classes differ from each other, not only in amount of power per capita, but also in broad areas of patterned thought and behaviour called "life-style" (Harris 1980). From most anthropologists point of view, it is said that every human society has to have cultural provisions for its behaviour and thoughts, relating to making a living from the environment, having children, organizing the exchange of goods and labour, living in domestic groups and larger communities, and for the creative, expressive, sportive, aesthetic, moral, and intellectual aspects of human life (Harris 1980). And it is from anthropological perspective that culture of human means a socially acquired life-style of a group of people including pattern, repetitive ways of thinking, feeling and acting (Harris 1980). In the case of the architectural design of the Pruitt-Igoe Housing Project in St.Louis, Missouri, there is an atomizing effect on the informal social networks frequently found in lower and working-class neighbourhoods. Without the provision of semi-public space and facilities around which informal networks might develop, families living in Pruitt-Igoe retreated into the internal structures of their

apartments without the social support, protection, and informal social control found in other low and working class neighbourhoods (Yancey 1976).

In the case of high-density housing in Jakarta, both physical and socio-psychological problems are to be found. Using a previous study, problems concerning physical housing conditions have been identified as having a minimum space for the unit, a minimum floor space provided for most of the rooms available in the unit and minimum types of room available (Komarudin 1997). The needs of the occupants to facilitate their behaviour seem to have been insufficiently considered. The case studies will be conducted is an attempt to resolve and further analyse these issues. It will focus upon Adaptation behaviour and the actual space needed to accommodate the needs of occupants with their activities in such a contemporary neighbourhood, characterized by a very heterogeneous unit based on the nature of the geography, the numbers and kinds of people, the socio-economic status of these people, their ages, cultural background, and housing form (Altman & Wandersman 1987). The Adaptation behaviour pattern of occupants will be investigated to see how the spaces function to serve the housing complex residents.

Human Perception in context to Physical and Social Housing Environment

The effectiveness of housing servicing the residents can be assessed once the Human perception toward the environment is defined. It is characterised as follows: (1) human perception toward the environment is relatively based on the interaction occurring between each individual (with his/her personality, background and experiences) and the environment in which he/she lives (Sarwono 1992); (2) human perception towards the environment includes cognitive, affective, interpretive, and evaluative components, which are all operating at the same time (Ittelson 1978); (3) human perception towards the environment encompasses the meaning we derive from an environment. Does the environment make sense to us? Does it remind us of past experiences? Does it suggest ideas? Can we interpret the events in the environment in a meaningful way?; (4) environmental perception includes the valuation, or determination of good and bad elements. Indeed the affective and evaluative components of environmental perception are the roots of forming attitudes toward the environment (Fisher 1984); and (5) environmental perception has

at least three other characteristics, which are: firstly, the person perceiving an environment does not simply look from an angle at those things, which can be seen without turning ahead. The person brings individual goals and values into the perceptual experience, as well as group socio-cultural influences.

Previous studies on high-density housing in Jakarta have reported that high-density housing occupants have their own perceptions, not only toward their physical setting but also toward the social and psychological aspects. The socio-psychological disturbance of occupants, include feeling restricted when having guests visiting their home, noise, feeling uncomfortable, difficulty to concentrate, not being creative, not feeling free to do their own activity, making it difficult to work and study at home, not being able to talk freely, and restricting relationships with neighbours. Physiological and technical disturbances are also perceived by occupants such as the lack of space available creating poor air circulation in the room resulting in a feeling of stuffiness, a difficulty in making space arrangements, not feeling free to turn the radio on, difficulty in moving freely and following your own interests (Komarudin 1997).

In conclusion from the reviewing literature, previous study indicated that the occupants feel that housing currently available does not meet their needs and felt unsatisfied (Komarudin 1997). Expectations toward housing of high-density housing occupants are also reported from previous research. Expectations are to have public transportation reaching their housing area; to have school facilities; to have good electricity facilities and drinking water; to have well-secured stairs to use; to have good connection between blocks; to have shops available within the complex; and to have a feasible place for entertaining guests at home. It is also reported that the occupants complained that the response to damage occurring in the building or facilities is poor; the water pipes are often clogged up; security facilities are not guaranteed; the building and its environment is not well-maintained; the fire protection systems are not well equipped; the population density in the complex is too high and the use of stairs causes noise; there is a lack of communal and community facilities provided in the complex. In addition to that, the occupants also complained that the rental price was too high and unaffordable (Komarudin 1997).

Based on the findings of the occupants' basic perception, the case studies that will be conducted will investigate further perceptions of the occupants. The study will eventually expect to discover what

would be the designed environment that begins to address the perceptual and physical conditions of occupants.

Adaptation Behavior is One Way of Coping with Physical Environment

Even when we are dramatically affected by the physical setting within which we live, we typically remain unaware of, and insensitive to, such environmental influences (Prohansky & Ittelson 1978). A need to cope with the physical environment is initiated upon the perception of the environment by an individual, in interrelation to physical objects. If this perception cannot be accepted by the human, it then will be followed by stress and the effort to cope with the environment as seen in the Figure 1 below (Bell & Fisher 1978).

Successful coping strategies involve adaptation and adjustment. Adaptation is the way in which we change our behaviour to fit environmental demands, while adjustment is the way in which we change the environment to fit our behaviour (Bell & Fisher 1978). Two examples of specific adaptation behaviours in residential settings are the orientation and the determination of compatible functions for specific areas. To the extent if a residential environment facilitates functional adaptation, we tend to be satisfied with it (Bell & Fisher 1978), whereas the adjustment method of coping is altering or designing an environment to make it more compatible with human needs and behaviour (Bell & Fisher 1978).

It also has to be acknowledged that environmental coping is dynamic. One of the concepts of dynamic aspect of environmental coping is identified by Holahan. Three features of environmental coping reflect its essentially dynamic nature: (1) it is an active human process; (2) it reflects a high level of personal resourcefulness; and (3) it is characterized by individual differences (Holahan 1978).

Research studies of environmental coping in a low-income community of inner city residents say that while the residents are seen to be powerless to alter the physical qualities of their neighbourhood setting, they are able to redefine the function of available outdoor space to conform with existing social demands. Thus, spaces designed initially for non-social functional tasks can be reclaimed by community members to perform informally as casual social settings (Holahan 1978).

In the case of high-density housing in Jakarta, previous research indicated that occupants of high-density housing have a tendency to cope with their given environmental setting for many reasons. It was found that the occupants of high-density housing tend to spend most of their time outside their home/unit, letting the unit door remain open at all times, locating the chairs/sofas under the stairs, looking after their children in the corridor or stair areas and letting their children spend most of the time playing outside the unit or in the housing complex (Sarwono 1992). The disadvantages they perceive, will thus make them disappointed with a resulting stress on their lives and that will influence their behaviour (Komarudin 1997). The attempts of several occupants to cope with their physical setting are an indication of one-way to accept what is available or to overcome problems for themselves (as mostly conducted by the low income housing occupants so far), others overcome the problems together with their community, or try to report to the building maintenance officer (Komarudin 1997).

Adaptation is another way in which individuals change their behaviour to fit environmental demands (Bell, Fisher & Loomis Ross 1978:224). Adaptation is a dynamic and continuous process, and can be to the physical, socio-cultural or community, and to the individuals' environment (Mahfuzh 2003:15).

Research on the physical and architectural environment has focused on housing problems,

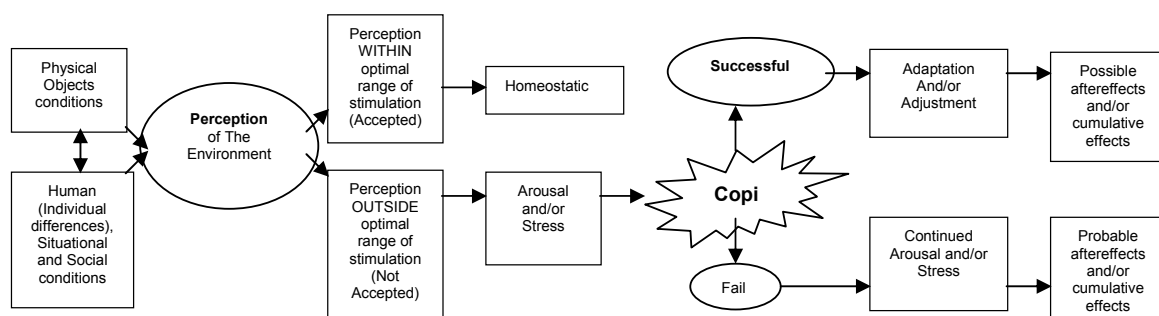


Figure 1.
Conceptual Model of Environmental Adaptation
Source: (Bell, Fisher & Loomis 1978)

privacy, and the number of people living in the residence. In assessing and measuring problems with the physical quality of housing environments (e.g., problems with safety and maintenance), it was found that the main issues relate to several aspects of adaptation, including the negative effects of having to adapt (Earls & Nelson 1988: 279–93).

For residents of urban slums, adaptation to the neighbourhood is usually dependent on strong social bonds with family and friends who live nearby, which contributes to their sense of neighbourhood and well-being. The neighbourhood tends to be perceived as a direct extension of their private homes. In other words, inner city residents are “apt to feel that other houses and places in neighbourhood are important parts of their personal home” (Fried & Gleicher 1972:231). This study has examined in detail occupants’ adaptation behaviours to living in the various unit types of high-density housing located in Jakarta. Particular attention has been given to differences between the smaller and the larger unit types within location. The study found that residents of high-density housing have changed their behaviours to adapt to the environment and expressed the view that living in any high-density complexes would require changes in their behaviour which in overall terms was seen to improve rather than reduce their quality of life.

This study has presented information about the adaptation behaviour of occupants of various types of high-density housing in Jakarta – Kebon Kacang (KKA). The findings have emphasized the difference between locations and between the smaller and larger unit types within each location.

The occupants of each type of unit in all the locations have had to modify their behaviour to adapt to the environment. The occupants reported that living in any unit type in the complex required them to make changes in their behaviour, and that they perceived these changes as improving their quality of life more than reducing it. However, some of the adaptations needed by the occupants of the smallest unit type in this housing complex were found to have reduced their quality of life.

This study confirms that from the socio-cultural perspective, as stated in the report by the Ministry of Public Works and State Ministry of Housing and Human Settlements of the Republic Indonesia (2004), for most Indonesians, living in multi-storey buildings is a new way of life. This style of living requires people to reorient their way of life.

Housing in Jakarta - Indonesia

To meet such housing demands for different levels of income groups, the strategies and methods of implementation to be considered are to execute housing improvement/urban renewal programs and new housing development. The housing demands were indicated where there is a gap of the housing needs and the housing stocks. The Figure 2 and Table 3 below explain the gaps on each parts of the city of Jakarta. New housing development, the city council of Jakarta determines the system called mass housing development, which is one option taken that may respond to the housing demands.

PERUMNAS (national urban development corporation), a state housing enterprise established in 1974, has built 24,000 units annually in urban areas of Indonesia (ADB 1984). Between 1979 and 1999 (throughout the third to sixth development plans of republic Indonesia), PERUMNAS built 21,097 housing units (both vertically & horizontally built) for low- income groups living in Jakarta (JAKARTA 1998).

Several of the housing development objectives in the city of Jakarta are essential to meet the housing demands of all households according to affordability and group aspirations, comfort and adequate housing environments that have proper infrastructure access as a sub-system of the city of Jakarta as a whole.

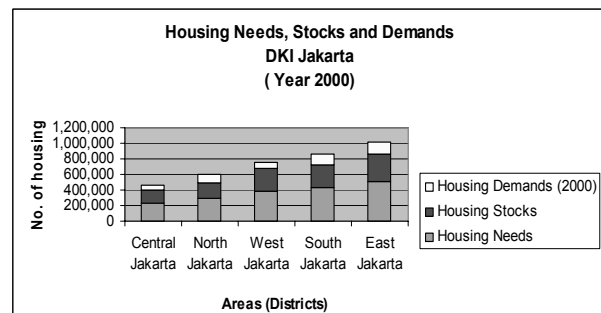


Figure 2.

Housing Needs, Stocks and demands in Jakarta in the year of 2000

Source: Jakarta City Council (2001)

Overview of the Case Studies' Area

The housing complex chosen for the case study was situated in Central Jakarta, constructed by *Perum Perumnas* and are identified as *Kebon Kacang* housing complex (KKA), built in 1982. The KKA housing complex is built on a small piece of land. The KKA housing complex covers

Table 3.
Housing Needs, Stocks and demands in Jakarta in the year of 2000 and Prediction for 2010

No	Areas	Housing Needs	Housing Stocks	Housing demands (2000)	Housing demands (2005)	Housing demands (2010)
1	Central Jakarta	227.827	166.214	61.613	65.691	70.039
2	North Jakarta	298.970	195.108	103.862	110.736	118.065
3	West Jakarta	380.201	303.978	76.223	81.268	86.647
4	South Jakarta	428.177	297.031	131.146	139.826	149.080
5	East Jakarta	508.763	354.451	154.321	164.525	175.414
	DKI Jakarta	1.843.938	1.316.782	527.156	562.046	599.246

Source: Jakarta City Council (2001)

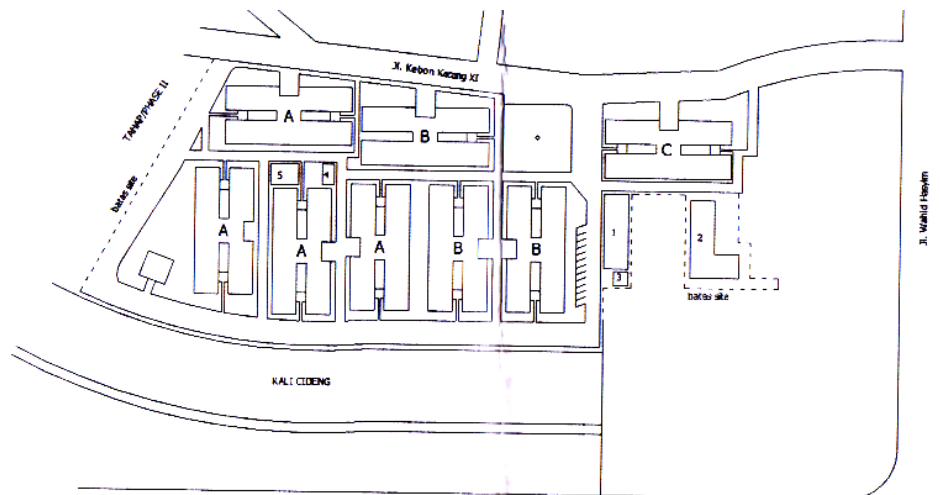
18,208sqm with 600 units of 21, 42 and 51sqm type. There are 368 units of 21 sqm, 166 of 42 sqm, 66 of 51 sqm (*Direktorat Perumahan dan Perum-Perumnas Ditjen Cipta Karya Departemen Pekerjaan Umum & Kantor Menteri Negara Perumahan Rakyat* 1980). The resident population of KKA housing complex is 1083 (Resident Association for Kebon Kacang Housing Complex 2003).

Living Environments of the High-density Housing Complex

This section addresses some specific features of the living environments of the case study housing

complex. The KKA residential areas selected for the study were built in the 1980's. KKA complex are four storey buildings, with housing units on all four floors. Unit sizes in KKA are 21 sqm, 42 sqm and 51 sqm,.

The 21 sqm unit type in KKA is 3.00 by 7.10m in width. It consists of a single open-plan multipurpose space for sleeping, living and dining. There is also an open-plan space for kitchen, bathroom and balcony within the unit. The 42 sqm unit type includes one living room, one dining room, two bedrooms, an open-plan space for the kitchen, bathroom and a balcony. The layout of the 21 and 42 sqm units are detailed in Figure 4 and Figure 5.



Notes:

A : Flat Type F.42

B : Flat Type F.21/F.42

C : Flat Type F.21/F.42/F.51

1. Multi-Purpose Building
2. Elementary School
3. Main Electric Control House
4. Water Pump House
5. Ground Reservoir

6. Kindergarten
7. Main Garbage Disposal Area
8. Motor Car Parking Area
9. Motorcycle Parking Area
10. Open Space

Figure 3.

Site plan of Kebon Kacang HC

Source: Direktorat Perumahan dan Perum-Perumnas Ditjen Cipta Karya Departemen Pekerjaan Umum & Kantor Menteri Negara Perumahan Rakyat (1980)

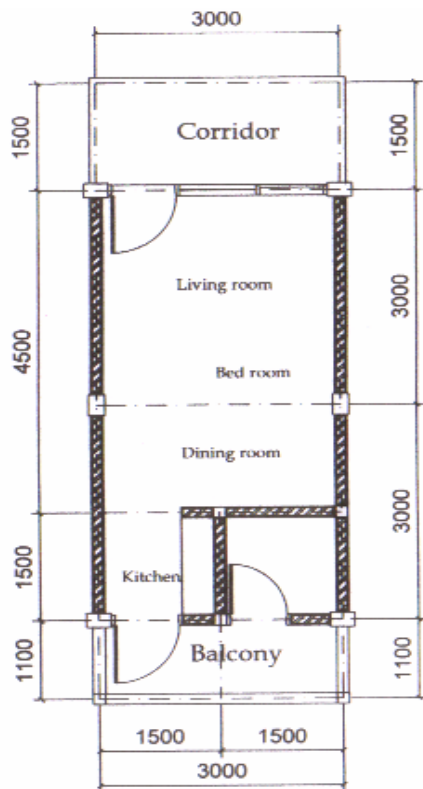


Figure 4.
Floor plan of 21sqm units (KKA)

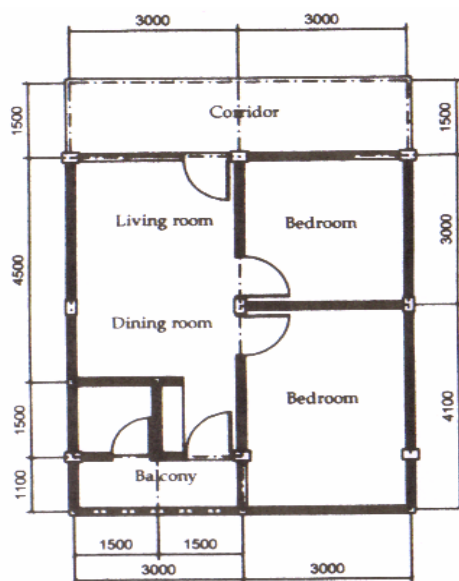


Figure 5.
Floor plan for 42sqm units (KKA)

The 51sqm units in KKA complex have three bedrooms. As in the 42 sqm unit, there is one living room, a dining room, a small kitchen area, a bathroom and a balcony. For details of the 51 sqm unit, see Figure 6.

For the community of the KKA complex, public, social and commercial facilities are provided within

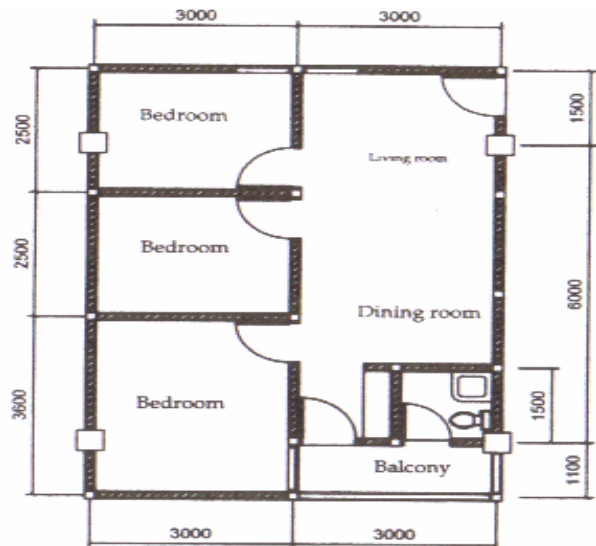


Figure 6.
Floor plan of 51sqm units Kebon Kacang HC (KKA)

the complex. There are 39 facilities in all, of which the most common are mini-markets of various types. The mini-markets (*warung kelontong*) are located within the blocks of units, but the public and social facilities areas are situated throughout the complex. The latter include community halls, small mosques (*musholla*), a kindergarten, a primary school and open space for sports (volley, badminton). Public facilities include the Neighbourhood Economic Enterprise (*Koperasi Warga Rumah Susun*), car parks and a Resident Association Office (*Kantor Persatuan Penghuni Rumah Susun*) and *Perumnas Office*. Commercial facilities include hair salons, laundries and commercial public telephone outlets. Other commercial business include offices, a canteen (cafeteria), cheap food stalls (Warteg), tailors, fish shops and a vegetable market (see Figures 7 and 8).



Figure 7.
Small mosque (*musholla*) & auditorium
Photograph taken by author



Figure 8.
One of the mini-markets (warung)
Photograph taken by author

This housing complex is also characterised by extensions built on the ground floors. Compared to the residents upstairs, the occupants of ground-floor units have the advantage of adjacent land next to their units for expansion of dwelling space. The extensions range from permanent to semi-permanent and include rooms for private use (terraces, balconies and gardens with fences) or for their own commercial business operations (see Figure 9). The nature of this situation offers clear economic advantages to those on the ground floor over those living in upper floor units.

A smaller number of ground-floor unit of extensions are to be found in the newer KKA complex, only eight out of 151 or 5% ground-floor units have been extended. This data suggests that a better situation has been achieved where the extensions made are found little percentage. For an example of the type of ground-floor unit extensions found in KKA for commercial purposes. Using the experience obtained where the ground floor is designed for the dwelling units in the this housing complexes, later efforts were made to eliminate the extensions to ground floor housing units.



Figure 9.
Extensions to ground-floor units for private use
Photograph taken by author

As well as commercial extensions to the ground-floor units in KKA complex, many informal cheap food-stalls and small mixed shops or *warung*, of both permanent and temporary construction, are to be found in this case study location. The temporary stalls and shops in KKA are mostly situated on the periphery of the complex.

Socio-Demography Condition

The households living in units of KKA Housing Complex which consist of those are living in 21 sqm, 42 sqm and 51 sqm units type represented diverse socio-demographic and economic groups. Within a few zones, there was an average of KKA has 3.59 pp/hhs (21 sqm), 4.76 pp/hhs (42 sqm) and 4.71 pp/hhs (51 sqm). Thus, the floor space for person of KKA is 5.85 sqm/pp (21 sqm), 8.83 sqm/pp (42 sqm) and 10.83 sqm/pp (51 sqm).

The residents of the complex were equally distributed by gender, with an average age of 21 sqm occupants between 28 and 31 years, with the most frequent age group between the range of 25 and 55.9 years old (the productive age). For 42 sqm has shown the characteristic that Female residents were found more prevalent at 63.9%. The average age of KKA occupants between 31.53 years old. The distribution of gender in this unit type disclosed a greater number of females than males at 58.3% of females to 41.7% of males with the average age of 31.27 years old. No occupants were found within the age range of 12–17.99 years old. The dominant ages of those living in this unit was found within the range of 25 and 55.9 years old.

The focus of religious belief in the units were Moslem, Christian (including Catholic) and Buddhist. Moslems were the most prevalent in the complex, except those are living in the biggest unit type (51 sqm), indicating Moslems in KKA constituted 87.4% (21 sqm), 75.4% (42 sqm). The majority of the complex's residents were from Jakarta.

The majority of residents had an education level between Junior and Senior High School, although Diploma and University degrees were also found in small numbers (21 sqm). The majority of 42 sqm occupants were found to have reached Senior High School level. Primary school was the second most common level in the complex. Those in 51 sqm unit tyoes has shown that Education level equally from Senior High School or University. Diploma graduates

were also evident, though in smaller numbers. Typical occupation in the complex were cited as “Housewife”, “student”, “entrepreneur”, “private driver” and “private employee”. The occupations of private employee and student were significant in all the locations.

The average total family income of residents was above the Provincial minimum wage per month in 2002–2004, at about Rp671,600,-, (A\$103.33) (*Badan Pusat Statistik* 2004, p. 26). 44.4% to 75.6% of households commanded an average monthly income above that figure. Only a very small number of households living in this complex were below this income level. In addition, the highest income group, earning above two million rupiah per month (A\$308 in 2004), were found in higher numbers within 37.8%. The average total family income of this category of 42 sqm’s residents was above the Provincial minimum wage per month in 2002–2004, which is about Rp671,600,-, (A\$103.33) (*Badan Pusat Statistik* 2004: 26). The highest income group, earning above two million rupiah per month (A\$308 in the year 2004), was found at 23.5%. The total family income of the 51sqm’s residents extended beyond the minimum monthly income for the Provincial minimum wage per month in 2002–2004 which is about Rp671,600,- (A\$103.33) (*Badan Pusat Statistik* 2004: 26). The majority of occupants, 28% of households visited, had an income within the range of Rp1,000,000–1,499,999 (A\$153.8–230.77), and of Rp 2,000,000 above (A\$307.7).

Findings: Adaptation Behaviours of KKA Occupants

Adaptation is another way in which individuals change their behaviour to fit environmental demands (Bell, Fisher & Loomis Ross 1978:224). Adaptation is a dynamic and continuous process, and can be to the physical, socio-cultural or community, and to the individuals’ environment (Mahfuzh 2003:15). In most cases, the conditions of high-density housing developments require occupants to adapt their behaviour and adjust to the space provided.

The occupants not only have to do some space adjustment for them to live. They also have to adapt themselves with the physical setting given to them. Another way in which residents coped with their environment is through the way they have adapted to the space, called adaptation to the space. Adaptation is another way in which individuals change their behaviour to fit environmental demands (Bell, Fisher & Loomis Ross 1978:224). Adaptation is a dynamic

and continuous process, and can be to the physical, socio-cultural or community, and to the individuals’ environment (Mahfuzh 2003: 15). In most cases, the conditions of high-density housing developments require occupants to adapt their behaviour and adjust to the space provided. Their efforts to adapt with the environment are not always perceived improving their life. Some adaptation behaviour they need to manage making them worsen than the previous living condition they ever had.

This section will discuss the types of behavioural adaptation made by occupants in comparison with where they live, between each different unit type within one location. The forms of behavioural adaptation of occupants of all unit types in the high-density housing complexes were experienced as improving their lives in some respects, and less so in others (*As seen in Figures 10*).

The study has identified typical behavioural adaptation in the various unit types. Analysis of typical behavioural adaptation presented in this Article has shown the typical forms of adaptation particular to each different unit type –21 sqm, 42 sqm and 51 sqm. This was done in order to identify the types of typical adaptation especially to each unit type.

This study supports the findings of previous research on low-cost housing in Jakarta that occupants of high-density housing use coping behaviour to adjust to various situations (Subroto 1984). This study has presented information about the adaptation behaviour of occupants of various types of high-density housing in Jakarta – Kebon Kacang (KKA).

The study has revealed that the occupants have had to modify their behaviour to adapt to the environment. The occupants reported that living in any unit type in the complex required them to make changes in their behaviour, and that they perceived these changes as improving their quality of life more than reducing it. The Finding reveals those living in the smallest units in KKA complex (21 sqm) considered their adaptation to the environment had brought changes for the better. However, some of the adaptations needed by the occupants of the smallest unit type in this location were found to have reduced their quality of life.

This study confirms that from the socio-cultural perspective, as stated in the report by the Ministry of Public Works and State Ministry of Housing and Human Settlements of the Republic Indonesia (2004), for most Indonesians, living in multi-storey buildings is a new way of life. This style of living requires

people to reorient their way of life. This is true as found from the study that living in all unit types of high-density housing was perceived as having improved their quality of life more than reducing. They benefited from living in the complexes by having better social conditions. The complex, with its public facilities, offered a good atmosphere to have more friends. They were busy earning their livelihood and enjoyed the improved atmosphere of the neighbourhood. The daily shopping habits were more efficient, such as purchasing from the “vegetable man” visiting the complex. The residents also benefited from closer locations in the city centre. They were able to leave home not too early in the morning to reach either their workplace or the school for children. These were all seen as improving the behaviour of residents, and benefiting their living in the complexes and reorienting their way of life compared with their previous housing conditions. However, negative behavioural changes were also present, the greatest for those occupants living in the smaller unit type - 21 sqm. Their limited unit space led them to extend the space to the corridor for several function like eating. Sharing cooking space with other households were inconvenient. Housing programmes are more effective when they take into account the different social and cultural roles and needs of the targeted population of both sexes and all ages (United Nations Centre for Human Settlements 1996). The availability of communal cooking area would need to be reconsidered for future development. Appropriate design, size and use of the corridor will also need to be redefined. To ignore such issues will lead to the failure to prioritise the needs for desirable housing and provision of social services.

Occupants living in the three different unit types of the KKA housing complex – 21 sqm, 42 sqm and 51 sqm – had improved their quality of life rather than worsened it. The 21sqm unit residents showed 12 types of behavioural change which were perceived as improving their life in comparison with 9 seen to have worsened it. Residents of the 42 sqm units reported 9 types of adaptation behaviour which had improved their quality of life compared with 5 which had worsened it. Residents living in the larger unit types in this complex (51 sqm) had fewer changes, of which four types were perceived as improving their quality of life and only two to have worsened it.

The findings show that residents of the smallest unit type in this complex (21 sqm) reported the most benefits from the adaptations they had made for the better to live in this complex. The 21 sqm unit

residents were happy with the introduction of the use of gas for cooking instead of oil stoves and were able to live better in healthier housing conditions. They also found daily shopping for food was efficient, with the “vegetable man” visiting the complex. They also felt they had better living habits as they were busy earning their livelihood, and enjoyed the improved atmosphere and cultural values of the neighbourhood. The occupants felt that they were becoming more religious, as religious facilities were provided within the complex and also had more recreational opportunities close by.

However, while those living in the smallest units experienced more benefits in adapting to the environment, the occupants of the 42 sqm units found benefits in not having to leave home so early for work, as their workplaces were now located closer than before. The availability of public facilities and sporting facilities within the complex allowed them more time for socialisation, especially for residents of the the largest unit type (51 sqm).

Apart from the beneficial changes experienced by residents, some changes were found to have negatively impacted upon their quality of life, this was unfortunately more so for the occupants of the smaller unit types, 21 sqm, compared to the larger unit types. The occupants found they had to get up earlier to go to work or school, as homes were now located further from either school or workplace. Other negative changes were sleeping later because of night time noise, fewer social activities to attend within the neighbourhood, less home cooking as many fast foods were available in the *warung* or small shops and cheap food stalls on the ground floor, and no space for gardening activities. The occupants found the space in the units too limited for having guests visit. Though residents of the smallest unit type (21 sqm) experienced more disadvantages from the adaptations they had to make, residents of the largest unit type (51 sqm) reported that they never socialized, because of the bad neighbourhood conditions and they felt they had no privacy, as the distance between units were too small.

Conclusion

This research has proven that the coping conducted for adaptation. Adaptation behaviours are made by the occupants, which make the occupants' lifestyle have changed for the betterment on one hand and worsen on the other hands. The occupants reported that living in any unit type in the complex required them to make changes to their behaviour

and they perceived these changes as improving their quality of life more than reducing it. The findings thus clearly demonstrate that space and behaviour are interrelated in high-density housing, and that occupants of high-density housing have to cope with their physical setting in various ways, one expressed by conducting adaption behaviors.

This study has confirmed the observation stated in the report by the Ministry of Public Works and State Ministry of Housing and Human Settlements Republic of Indonesia that, for most Indonesians, living in multi-storey buildings is the new way of life in socio-cultural terms. The challenge for low-income people living in high-rise buildings is to reorient their way of life (Ministry of Public Works and State Ministry of Housing and Human Settlements Republic of Indonesia 2004). Despite other previous research has proven that the efforts were made by occupants to adapt to the environment by space adjustments, this current research just reported another perspective that reveals that occupants also had to cope with the physical setting available to them. The occupants have adapted to their new environment by changing their behaviour, which from their perspective has contributed to improving rather than worsening their quality of life. Housing design should consider the social and cultural roles of the user. Housing programmes are more effective when they take into account the different roles and needs of their targeted beneficiaries. Ignoring these needs and roles of building users has led to the failure

to provide desirable housing and social services.

The existing high-density housing provision, which should be suitable for physical occupation, has not adequately met desirable standards. The trend to minimal standards for spatial housing is in response to the demand to house as many people as possible. The standard of floor space provision has been gradually reduced, neglecting psychological, social and cultural needs of the users. The multiple roles assigned to occupants both within and outside the home in the modern city create special requirements for living and working spaces as well as basic services. The unfortunate situation in which policy makers have failed to identify priorities has led to the failure to provide desirable housing and social services. As a result of this deficiency, the physical conditions require occupants to adapt and cope with the space made available to them by making space adjustment both functionally and physically. This represents a failure of architecture, as the rooms do not function according to the conception of the design and the architectural standards of design.

The implications of these findings suggest that architects should be encouraged to develop new design ideas based on a knowledge of users' behaviour and activities, particularly in the case of users who are not involved in the process of designing, as in the case to most public housing for low-income people. The new concepts of programming for behavioural concerns should be developed and individually produced for each project according to different

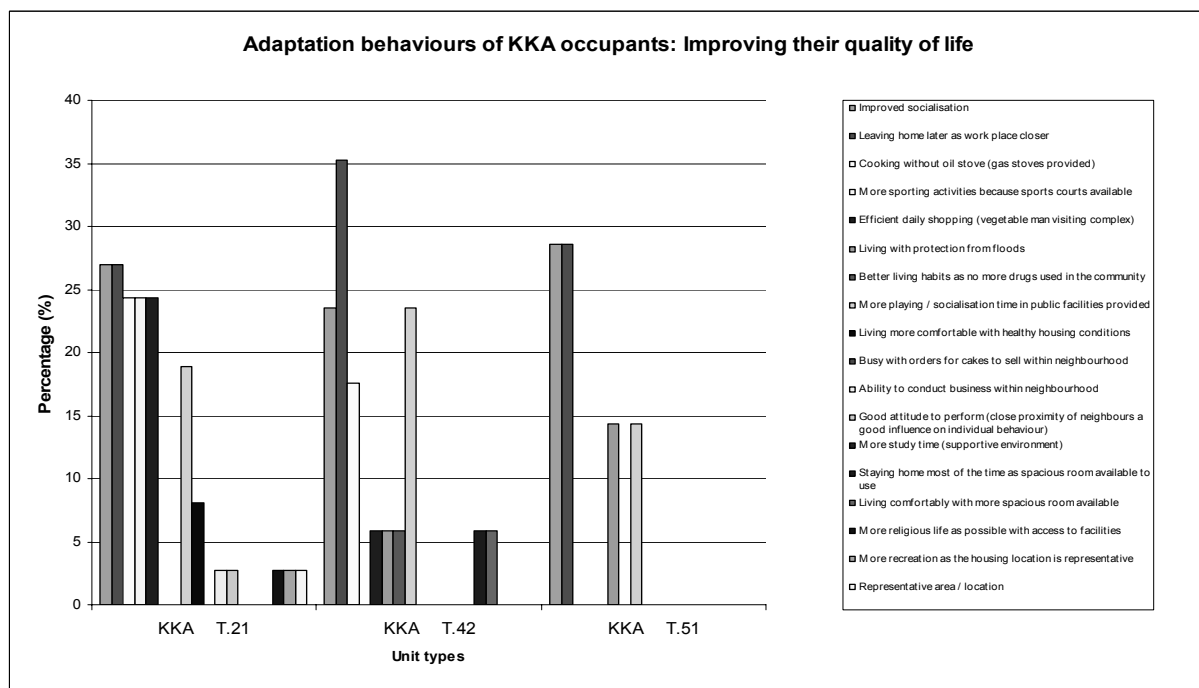


Figure 10.

users' characteristics

References

- Altman, IW & Wandersman, A (1987) *Neighbourhood and Community Environments*. New York: Plenum Press.
- Bell, PA, Fisher, JD & Loomis, RJ (1978) *Environmental Psychology*. Philadelphia: WB Saunders Company.
- Boutourline, S (1970) The human dimension in architecture. In: CJ Holahan (ed). *Environment and Behaviour: A Dynamic Perspective*. New York: Plenum Press.
- BPS DKI Jakarta (1998) *Jakarta In Figures (Jakarta Dalam Angka)*. Jakarta: Statistics DKI Jakarta.
- Earls, M & Nelson, G (1988) The relationship between long-term psychiatric clients' psychological well-being and their perceptions of housing and social support. *American Journal of Community Psychology* vol. 16: 279–93.
- Fisher, JD (1984) *Environmental Psychology*. 2nd edn. Holt, Rinehart and Winston: New York.
- Fried, M & Gleicher, G (1972) Molding behaviour to fit the environment: Adaptation to the familiar and unfamiliar. In: PA Bell, JD Fisher & RJ Loomis (eds). *Environmental Psychology*. Philadelphia: WB Saunders Company. Pp. 221–264.
- Harris, M (1980) *Culture, People, Nature*. New York: Harper & Row Publishers.
- Heimsath, C (1977) *Behavioural Architecture: Toward an Accountable Design Process*. New York: McGraw-Hill Book Company.
- Holahan, CJ (1978) *Environment and Behaviour: A Dynamic Perspective*. New York: Plenum Press.
- Ittelson, WH (1978) Environmental perception, cognition, and attitudes. In: JD Fisher, PA Bell & A Baum. *Environmental Psychology*. New York: Holt, Rinehart and Winston. Pp. 18–57.
- Jakarta City Council (1991) *Jakarta Master Plan for 2005*. Jakarta: Jakarta City Council.
- Jakarta City Council (2001) *Final report on Development Planning for Housing and Settlement in Jakarta (Pemantapan Rencana Pembangunan dan Pengembangan Perumahan dan Permukiman)*. Jakarta: Jakarta City Council.
- Komarudin (1997) *Development of Housing and Settlement: An Investigation (Menelusuri Pembangunan Perumahan dan Permukiman)*. Jakarta: PT Rakasindo, Yayasan Realestat Indonesia.
- Mahfuzh, SMJ (2003) *Psikologi Anak dan Remaja Muslim*, 2 edition, Pustaka Al-Kautsar, Jakarta.
- Ministry of Public Works and State Ministry of Housing and Human Settlements Republic of Indonesia 2004. *Multi-Storey Rental Apartment for the Low-Income Population*, Ministry of Public Works and State Ministry of Housing and Human Settlements Republic of Indonesia, Jakarta, Indonesia. from <http://www.pu.go.id/public/kerjasama%20regional/apec/html/eng/multi.htm>.
- Proshansky, HM, Ittelson, WH & Rivlin, LG (1978) The human dimension in architecture. In: CJ Holahan (ed). *Environmental and Behaviour: A Dynamic Perspective*. New York: Plenum Press. Pp. 3–4.
- Resident Association for Kebon Kacang Housing Complex (2003) *Demography Data of Kebon Kacang Housing Complex*, Resident Association Office for Kebon Kacang Housing Complex, Jakarta..
- Sarwono, S (1992) *Environmental Psychology (Psikologi Lingkungan)*. Jakarta: P.T. Gramedia.
- Subroto, EP (1984) Aspek sosial-psikologis pada pemukiman masyarakat berpenghasilan rendah, in sejumlah masalah permukiman kota. In Eko Budiardjo (ed), *Alumni*, Bandung, p. 58.
- United Nations Centre for Human Settlements (1996) *Women, Homes and Communities*. Retrieved: 31/05, from <http://www.un.org/cyberschoolbus/habitat/background/bg6.asp>.
- Yancey, W (1976) *Architecture, interaction, and social control: The case of large-scale public housing project*. In: HM Proshansky, WH Ittelson, & LG Rivlin (eds). *Environmental Psychology 2nd: People and Their Physical Setting*. New York: Rinehart and Winston. Pp. 449–459.