International Journal of Business, Human and Social Sciences
ISSN: 2517-9411
Vol:5, No:8, 2011

The Relationship between Students' Socio-Economic Backgrounds and Student Residential Satisfaction

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***Abstract*—**Debates on residential satisfaction topic have been vigorously discussed in family house setting. Nonetheless, less or lack of attention was given to survey on student residential satisfaction in the campus house setting. This study, however, tried to fill in the gap by focusing more on the relationship between students' socio-economic backgrounds and student residential satisfaction with their on-campus student housing facilities. Two-stage cluster sampling method was employed to classify the respondents. Then, self-administered questionnaires were distributed face-to-face to the students. In general, it was confirmed that the students' socio-economic backgrounds have significantly influence the students' satisfaction with their on-campus student housing facilities. The main influential factors were revealed as the economic status, sense of sharing, and the ethnicity of roommates. Likewise, this study could also provide some useful feedback for the universities administration in order to improve their student housing facilities.

***Keywords*—**Malaysia, Socio-economic, Student housing, Student residential satisfaction

I. Introduction

DEBATES or arguments on residential satisfaction (RS) topics have vibrantly become as an eminent discussion among the built environment researchers and scholars since years ago. Most of the debates seem to focus and seek the RS perceptions from the adults' stance (i.e., family residents), who lived in either public or private and landed or high-rise housing scheme. Nevertheless, there are still less or limited discussions on RS perceptions from young-adults' viewpoint (i.e., students) especially in Southeast Asia region particularly in Malaysia. A few examples of studies in this area from Southeast Asia are undertaken by Luckanavanich [1], conducted a study in Thailand; Susilawati [2], conducted a study in Indonesia; and Dahlan *et al.* [3] and Khozaei *et al.* [4]-[5], conducted studies in Malaysia.

In Malaysia, the government is now struggling to achieve her objectives of becoming a new contender in global Higher Education Institutions and having a competent workforce with knowledge and skills for the future human resources. Therefore, all of the Malaysian youths are very important to bear with this nation's vision. As reference to the universities' scenario, those Malaysia aims are closely related to the student residential satisfaction (SRS) with the student housing which is believed that higher SRS will encourage students to perform the best in their studies [6]-[8]. By getting good academic, living, and social goals during residency in student housing, thus these accomplishments can contribute to successfully attain Malaysia visions as well.

In collegiate life, majority of students will experience to temporarily living away from their parental house. With this, students can only best express their SRS perceptions towards their on-campus or off-campus student housing. Students from different family backgrounds will enjoy to live independently in either on-campus or off-campus house with their friends. Despite the fact, there are a number of studies have been conducted to testify that difference in students' socio-economic backgrounds do effect difference perceptions on SRS. For example, Frank and Enkawa [9] revealed that wealthy people usually choose to reside in the luxurious house and affluent area. Amole [10] and Kaya and Erkip [11] found that genders also effect different perceptions in conveying the SRS. Moreover, Foubert *et al.* [12] exemplified that relationships among households too had an influence on overall SRS. These issues give raise to our research question; do difference socio-economic backgrounds influence students' satisfaction with the provided student housing facilities (SHFs) among Malaysian students?

Consequently, the main aim of this paper is to explore the influence of different students' socio-economic backgrounds towards their satisfaction with the university-owned SHFs; focusing on students who stayed in the on-campus student housing at Malaysian Research Universities (RUs). The first part of this paper will detail in-depth the SHFs and affect of different socio-economic backgrounds towards SRS. This will be followed by the discussion on study's findings. Lastly, the paper will conclude with some limitations of the current study and provide a few recommendations for future research. The results revealed in this study will give valuable insights for the facilities managers as well as student housing departments towards the improvement of much better SHFs in the near future.

II. Student Satisfaction With Housing Facilities

What is student housing? Student housing is a supervised living-learning hostel consisting of shared housing facilities and amenities for the community of residents who use it that is built on-campus, owned by the university, provided for inexpensive chargeable rooms, and administered to accommodate the undergraduate or postgraduate students. Student housing is much more familiar with the term "hostel"

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among Malaysian signifies that the house being built with some institutional or formal characteristics [4], [13]. The provision of providing on-campus student housing is to cater for students' housing needs in accomplishing academic, living, and social goals during their study life span at the university [7], [14].

Therefore, the idea of building the student housing draws upon the model of building the conventional family housing. Hassanain [7], Bland and Schoenauer [15], Amole [16], and Najib *et al.* [17] postulated that there are five types of SHFs available in typical and conventional student housing namely study-bedroom, washroom, pantry, common and recreation room, and support services. Bland and Schoenauer [15] and Amole [16] specified washroom as bathroom and laundry room; whereas, common and recreation room as study room, television room, meeting room, computer room, and lobby. Since Malaysia is an Islamic country, Najib *et al.* [17] asserted that built in musolla in student housing is compulsory for Muslims convenience and this facility fall also under common and recreation room category. Moreover, Hassanain [7], Radder and Han [18], and Abramson [19] classified support services as parking lots; cafeteria, mini market, bookshop, and banking system (automated-teller machines); conveying systems (lift and/or stairs), electrical wiring, water supply, garbage disposal, fire safety, and pipe repairs; and 24-hours security guards. Having all these facilities inside the student housing will ensure that the students can happily living away from the parental house. Otherwise, Amole [16], Najib *et al.* [17], and Abramson [19] encountered that these SHFs have become as the basic living necessities in the on-campus life.

Furthermore, human beings always need happiness, gratification and fulfillments in their lives. One of the basic human's needs which are very important is a house. Thus, it is very vital to care about students' satisfaction towards their SHFs in ensuring that these students can really enjoy while studying and living on-campus. Students' satisfaction with their housing facilities is a contentment expression after perceiving good house environment in the residential area [17]. Amole [10] argued that students defined their SRS as "less crowded" and "high privacy in a room". Besides, Amole [20] claimed that SRS was a process where young-adults tried to communicate or adapt with in their new independent houses and lifestyles and this satisfaction was hierarchical for the experience of satisfaction which was different at every level (from bedroom to whole residential block) of environments.

III. Influence of Socio-economic on Student Residential Satisfaction

Most of the previous scholars have argued and tended to concentrate that physical attributes of the house as the main determinant of SRS. Therefore, overall SRS does not only depend on physical attributes alone. There are also some other potential factors from social attributes aspect can be identified as the influential sources in determining the overall SRS. Social attributes are the demographic characteristics of an individual [16], [21]-[22]. A few studies declared that variability of students' social attributes, for instance, gender, economic status, duration of staying, sense of sharing, ethnicity, relationship with friends, and individual's home experience are also important and could not be ignored which will obviously reflect (clarification of the satisfaction level) in the daily used of the SHFs [16], [21], [23]-[24].

Gender: Females are more talkative than male. They like to make friends and entertain people in their rooms while males just use the rooms as the place for them to sleep and relax. As Li *et al.* [25] opined that the tendency to feel greater satisfaction with the overall campus student housing experiences is higher among the female students if compared to male students. Likewise, Meir *et al.* [26] encountered also that male students cared much about the privacy in their rooms by less operating the shutters in promising the territory. In the other context, Foubert *et al.* [12] recovered that higher level of SRS for male students was determined by those who stayed in the coeducational housing type but for female, equal satisfaction level was reported by who stayed either in coeducational or single sex housing.

Economic status: Personal income level or economic status is also important in determining SRS. As we all know, good economic backgrounds will ensure that we can conquer everything that we wish and aspire and hence we can live enjoyable lives. As stated by Frank and Enkawa [9], Parkes *et al.* [27], and Smets and Uyl [28], individuals with higher income can afford (have the power to choose) to live in the affluent residential areas. For students, economic status or income level can be judged through their family backgrounds or other financial supports such as scholarship, study loan or part-time work. Amole [16] and Thomsen and Eikemo [29] posited that students with higher or good economic status (family support or scholarship) could afford to rent rooms with better qualities provided in the student housing as they desire. In addition, Petruzzellis *et al.* [30] declared that students who did part-time jobs will be seeking on a better accomodation outside the campus rather than staying in the accommodation provided by the university's administration. Accordingly, Curtis and Klapper [31] said that students who come from wealthy families usually chose to stay in rented houses or flats rather than in the university's student housing. This scenario shows that students with good economic status have the choices to choose what they like.

Duration of staying: For temporary nature of occupancy at universities' student housing, SRS can also be judged through the period of staying in that particular house [11], [16]. Foubert *et al.* [12] affirmed that if students were satisfied with their provided on-campus living accommodation, they would stay again in that student housing in their next semester. The residents stayed longer probably because they had adapted with the living conditions [16], [32]. This fact can be proven with Li *et al.*'s [25] finding which indicated that as the enrollment years increased especially among senior students, they will perceive more satisfaction with the overall living experiences in student housing. However, Cleave [32] verified that freshmen were likely to stay longer in the student housing if compared to seniors eventhough the seniors have built strong friendships with their colleagues.

Sense of sharing: Amole [10] configured that female students were most likely to live in shared facilities while male students usually preferred to live in more private spaces. In contrast, Kaya and Erkip [11] recognized in their study that female students would feel more stressful in a crowded space compared to male students. In general, a good community can be described as a group of residents who lived in a friendly and supportive environment in their neighbourhood [12], [23].

Ethnicity: Besides that, there were also studies predicting that ethnicity had positive and negative effects on individual's RS [28], [33]. Potter and Cantarero [24] testified that the discrimination of different races did contribute to residential dissatisfaction. While Musterd [34] reported that mixed communities were enabled to initiate a positive socialisation process as well as people who lived in a socially mixed environment will have good interactions with other residents. On the contrary, Parkes *et al.* [27] said that people who lived in the mix-tenure or had no relatives in their living areas would face difficulties in their social relationship with neighbours. This shows that it is good if students can live in ethnically mixed communities. Besides having the chance to know other cultures, it also ecourages the chances for them to study together.

Personal home experience and relationship with friends: Thomsen and Eikemo [29], Weidemann and Anderson [35], and Galster [36] and argued that residents' satisfaction perception neither from family persons nor students was also pertinent to their previous home experiences. Thomsen [13] professed that as much homey as parental home which students could experience in their student housing, good SRS would be responded to their institutional house. Kaya and Erkip [11] and Li *et al.* [25] explored that the lower the number of persons sharing a room unit at a time, the higher the level of SRS could be achieved. Foubert *et al.* [12] and Frank and Enkawa [9] also postulated that increasing SRS was really correlated with good relationships among households. While the people could enjoy much privacy when staying in their low-density residence, they would also try to avoid from having a stressful condition [37]. It can be said that students perhaps could enjoy their collegiate lives when they share rooms with small numbers of people at a time and this small community can encourage good friendships among them [12], [16].

IV. Research Methodology

A. Research Scope

The location chosen for this study is to cover all Malaysia's leading universities. The data were collected from the students who reside in the on-campus student housing representing three Malaysian RUs. University A consisted of eight clusters of residential blocks of three-storey to 10-storey in height with study-bedrooms catering for two or three persons at one time. University B consisted of nine clusters of residential blocks of two-storey to six-storey in height and University C consisted of 12 clusters of residential blocks of four-storey to nine-storey in height. Both Universities B and C provided study-bedrooms accommodating one or two persons at a time. In Malaysia, student housing were designed with female and male students residing in separate housing blocks.

B. Research Design

This study adopted quantitative research methodology and employed face-to-face survey technique for data accumulation. Using a simple random two-stage cluster sampling procedure, a sample of 600 respondents was drawn from the large residential population. The respondents were selected from every floor level in female and male housing blocks from every cluster. The number of respondents was determined appropriately using probability-proportional-to-size following the method used by Adamchak *et al.* [38] and Nasser *et al.* [39]. Nonetheless, only 495 responses were useful for further analysis given a response rate of 82.5%.

C. Instrument and Data Analysis

The questionnaire form consisted of three sections. Section A consisted of four items on students' demographic profile, Section B consisted of six items addressing socio-economic backgrounds of the students, and Section C consisted of 11 items on students' satisfaction with SHFs. A 4-point Likert scale with no neutral choice, ranging from 1 "Strongly Dissatisfied" to 4 "Strongly Satisfied" was used in Section C in order to force the respondents to show a preference in their answers. Questions in Section C have been used as the dependant variables of this study.

A reliability test was firstly performed to questions in Section C to measure the constructs reliability and validity. Next, to compute students' satisfaction with those SHFs, we calculated the mean response for each item in the housing facilities construct. Referring to Hassanain's [7] steps and calculations, we validated the mean results as follows:

- If the mean response is below 1.49, this indicates that students are "Strongly Dissatisfied".
- If the mean response is between 1.50 and 2.49, this indicates that students are "Dissatisfied".
- If the mean response is between 2.50 and 3.49, this indicates that students are "Satisfied".
- If the mean response is above 3.50, this indicates that students are "Strongly Satisfied".

Thereafter, from the observed satisfaction level of SHFs, further analysis of Multiple Regression Analysis was performed to determine which socio-economic backgrounds could make the strongest unique contribution to explain the satisfaction level of SHFs, following the works of Foubert *et al.* [12] and Amole [16].

V. Data Analysis and Findings

A. Respondents Profile

From the 495 valid and useful responses, 94.1% were undergraduate students while 5.9% were postgraduate students. There were 47.3% males and 52.7% females, with the ethnicity of 75.6% Malays, 18.6% Chinese, 3.6% Indians, and 2.2% international students. Majority of the students were between the ages of 22-25 (53.7%). Most of the gathered

respondents were undergraduate students because postgraduate students usually preferred to reside in the off-campus house.

B. Socio-economic Characteristics

A descriptive analysis was performed to validate the different backgrounds of students' socio-economic. Firstly found that students confirmed that they had sufficient financial support (74.5%). Most of them got the allowance from study loan (27.1%), parents and study loan (23.4%), scholarship (21.6%), parents only (15.2%), and others (12.7%). About 41.6% of the students have stayed in the student housing for a (1) year, 29.1% for two (2) years staying, 21.8% for three (3) years staying, and 7.5% for four (4) years staying. Furthermore, 44% of the students lived in a double study-bedroom, 32.7% lived in a triple study-bedroom, 14.5% lived in a quadruple study-bedroom, and only 8.7% lived in a single study-bedroom. Those provided shared study-bedrooms were also accommodated students with a mixed-ethnicity at a time with the percentage of 75.2% Malays, 19% Chinese, 4.4% Indians, and 1.3% others. For the home experience, majority of 67.1% of the students claimed that they used to share the bedroom at home and only 32.9% used to live in a single bedroom at home. Having an experience of sharing in the parental house have let the students to easily adapt or get along with their friends to stay in shared community at the campus student housing. About 91.8% of the students reported that they can make a good relationship with others and enjoy their students' life at the universities. In contrast, 8.2% of the students cannot get along with the living situation at campus student housing.

C. Analysis and Results

A reliability test was performed to check the consistency of the scale used in the Section C's questions of this study. Referring to Pallant [40] Cronbach's α coefficient of 0.7 and above as an acceptable minimum value, the following Table 1 depicts the details of the Cronbach's α coefficient for every SHF construct. To summarize the table, the α values of this study ranged between 0.855 to 0.978 indicating that the scale can be considered reliable given our sample, which measured the same satisfaction concept as the previous scholars (e.g., Khozaei *et al.* [5], Foubert *et al.* [12]).

TABLE I
RELIABILITY COEFFICIENTS FOR THE SHFS VARIABLE

No	Dimensions	No. of items	Cronbach α
1	Study-bedroom	17	0.903
2	Washroom	13	0.908
3	Pantry	9	0.926
4	Common & Recreation room	42	0.978
5	Support services	6	0.855

A descriptive analysis was then performed to quantify the level of students' satisfaction with the provided SHFs. Table 2 shows the mean scores and standard deviation (SD) of the SHFs respectively. As shown in Table 2, mean score for study-bedroom is 2.84, SD = 0.217; for common and recreation room is 2.65, SD = 0.175; and for washroom is 2.54, SD = 0.187. Mean scores of 2.84, 2.65, and 2.54 indicate that students were "Satisfied" with those facilities generally. In contrast, mean score for support services is 2.34, SD = 0.125; and for pantry is 2.31, SD = 0.185, these indicate that students were "Dissatisfied" with that facilities.

TABLE II
STUDENTS' SATISFACTION LEVEL OF SHFS

No	Dimensions	Mean Score	SD
1	Study-bedroom	2.84	0.217
2	Washroom	2.54	0.187
3	Pantry	2.31	0.185
4	Common & recreation room	2.65	0.175
5	Support services	2.34	0.125

Further analysis of multiple regression was then performed in order to identify which factors may predict a significant unique contribution to explain students' satisfaction or dissatisfaction with the SHFs. Table 3 tabulates the results of the first regression model. In this model, the students' socio-economic backgrounds and level of satisfaction with study-bedroom was examined. Regression analysis showed that the amount of variance explained by these variables was 8.6% (R^2 = 0.086, df = 7, F = 5.95, p < 0.000). This was a very low predictive strength although it was significant. From this model, the specific variables revealed to make a significant unique contribution to satisfaction with study-bedroom were *economic status, sense of sharing,* and *ethnicity of roommates*.

This finding is in agreement to Amole [16], Thomsen and Eikemo [29], Petruzzellis *et al.* [30], and Curtis and Klapper [31] who postulated that economic status can influence person's satisfaction. The finding also support Foubert *et al.* [12] and Musterd [34] that mixed-ethnicity and shared environment can stimulate positive SRS in student housing especially in study-bedroom.

TABLE III
REGRESSION MODEL 1

Variables	Beta	*p*
Gender	0.083	0.080
Economic status	**0.171**	**0.000**
Duration of staying in student housing	0.004	0.930
Sense of sharing	**-0.171**	**0.000**
Ethnicity of roommates	**-0.103**	**0.024**
Relationship with roommates	0.088	0.060
Home experience (share bedroom)	0.052	0.272

R = 0.293, R^2 = 0.086, df = 7, F = 5.95, p < 0.000

Table IV tabulates the results of the second regression model. In this model, the students' socio-economic backgrounds and level of satisfaction with washroom was examined. Regression analysis showed that the amount of variance explained by these variables was 3.7% (R^2 = 0.037, df = 7, F = 2.06, p = 0.047). This was a very low predictive strength although it was significant. From this model, the specific variable revealed to make a significant unique contribution to satisfaction with washroom was only *economic status*. Table V tabulates the results of the third regression model. In this model, the students' socio-economic backgrounds and level of dissatisfaction with pantry was examined.

TABLE IV
REGRESSION MODEL 2

Variables	Beta	*p*
Gender	0.026	0.622
Economic status	**0.166**	**0.002**
Duration of staying in student housing	0.042	0.415
Sense of sharing	-0.015	0.774
Ethnicity of roommates	-0.017	0.740
Relationship with roommates	-0.019	0.717
Home experience (share bedroom)	0.079	0.137

$R = 0.193$, $R^2 = 0.037$, df = 7, $F = 2.06$, $p = 0.047$

Regression analysis showed that the amount of variance explained by these variables was 3% ($R^2 = 0.030$, df = 7, $F = 1.21$, $p = 0.298$). This was a very low predictive strength and it even was not significant. From this model, the specific variable revealed to make a significant unique contribution to dissatisfaction with pantry was only *economic status*.

TABLE V
REGRESSION MODEL 3

Variables	Beta	*p*
Gender	-0.040	0.521
Economic status	**0.131**	**0.032**
Duration of staying in student housing	0.024	0.689
Sense of sharing	0.064	0.302
Ethnicity of roommates	0.006	0.915
Relationship with roommates	0.017	0.787
Home experience (share bedroom)	0.082	0.185

$R = 0.174$, $R^2 = 0.030$, df = 7, $F = 1.21$, $p = 0.298$

Table VI tabulates the results of the fourth regression model. In this model, the students' socio-economic backgrounds and level of satisfaction with common and recreation room was examined. Regression analysis showed that the amount of variance explained by these variables was 7.5% ($R^2 = 0.075$, df = 7, $F = 1.34$, $p = 0.239$). This was a very low predictive strength and it even was not significant. From this model, the specific variable revealed to make a significant unique contribution to satisfaction with common and recreation room was only *economic status*.

TABLE VI
REGRESSION MODEL 4

Variables	Beta	*p*
Gender	-0.024	0.794
Economic status	**0.202**	**0.029**
Duration of staying in student housing	-0.010	0.909
Sense of sharing	0.121	0.194
Ethnicity of roommates	0.054	0.554
Relationship with roommates	-0.064	0.490
Home experience (share bedroom)	0.111	0.238

$R = 0.274$, $R^2 = 0.075$, df = 7, $F = 1.34$, $p = 0.239$

Table VII tabulates the results of the fifth regression model. In this model, the students' socio-economic backgrounds and level of dissatisfaction with support services was examined. Regression analysis showed that the amount of variance explained by these variables was 2.2% ($R^2 = 0.022$, df = 7, $F = 1.40$, $p = 0.202$). This was a very low predictive strength and it even was not significant. From this model, the specific variable revealed to make a significant unique contribution to dissatisfaction with support services was only *economic status*.

TABLE VII
REGRESSION MODEL 5

Variables	Beta	*p*
Gender	0.022	0.650
Economic status	**0.116**	**0.016**
Duration of staying in student housing	-0.001	0.981
Sense of sharing	0.011	0.826
Ethnicity of roommates	-0.066	0.165
Relationship with roommates	0.006	0.909
Home experience (share bedroom)	0.047	0.340

$R = 0.147$, $R^2 = 0.022$, df = 7, $F = 1.40$, $p = 0.202$

Results from Tables IV, V, VI, and VII indicate that economic status is very important in predicting the satisfaction level of the students with SHFs. As been claimed by Parkes *et al.* [27], Smets and Uyl [28] and Frank and Enkawa [9] that higher income will let someone to have a chance to choose. With this revealed results, it shows that students have wisely chosen the house according to their preferences. Good house management usually will provide good housekeeping too especially on the maintenance of washroom and common and recreation room. However, in dealing with the dissatisfaction of the pantry and support services, housing administration perhaps has failed to provide standard facilities according to students' housing needs. When these students are well-off or moneyed, their demands are also high. Thus, this reason has influence the dissatisfaction level with both facilities (pantry and support services).

VI. CONCLUSION

In conclusion, this study has proved that different socio-economic backgrounds of students have influence their satisfaction with SHFs among the Malaysian RUs students. The students' economic status, sense of sharing, and ethnicity of roommates have contributed significantly to satisfaction or dissatisfaction of SHFs. The results imply that the residential program being practiced by the Malaysian universities is good and does contributes to the social cohesion and tolerance even though students used to stay with friends in mixed socio-economic backgrounds. But, more care should be given by the housing administrator to improve the delivery of pantry and support services in order to increase the level of SRS among students. On the other hand, the results also provide further understanding on SRS theory that students with good economic status and have higher sense of sharing will easily adapt with the shared community, live in mixed-ethnicity and have a chance to improve personal social communications. Satisfaction with the social attributes later promoting higher level of SRS. However, the limitation of this study is that it focuses only on the social attributes of the students but omits the physical attributes that also influence the level of satisfaction with SHFs. Variance explained by these variables is very small (which is the average of 5%) in predicting the satisfaction of SHFs. This means that the other 95% are explained by other factors. Physical factors such as bedroom size, density, building layout, and floor level are believed to influence satisfaction as well [11], [16]. Further study should explore these factors. In addition, this paper presents the

factors affecting students' satisfaction with SHFs but omits the relationship between SRS and students' learning experience [8], [18]. Future research that investigates this relationship should add more values to the current knowledge on SRS.

ACKNOWLEDGMENT

The researchers wish to convey their sincere thanks to the Postgraduate Research Grant Scheme (Grant Number: 1001/PPBGN/834037) and USM Fellowship for the financial support to undertake the study.

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