e-Bangi Faculty of Social Sciences and Humanities Universiti Kebangsaan Malaysia
Journal of Social Sciences and Humanities

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

SOCIO-DEMOGRAPHIC FACTORS AND STRUCTURAL BARRIER IN ACCESSING PUBLIC CLINICS AMONG THE URBAN POOR IN MALAYSIA

Siti Norasikin Abd Wahab, NurulHuda Mohd Satar & Makmor Tumin

ABSTRACT

One of the dimensions of multidimensional poverty as well as quality of life is access to healthcare services. Lower income households are often associated with poorer health conditions, making accessibility to healthcare even more important. Nonetheless, in accessing healthcare services, this group of households often faces more significant personal, financial and structural barriers compared to families from higher income groups. This study focuses on structural barrier from socio-demographic factors that affects access to public clinics among the urban poor. The respondents of this study were residents of *Projek Perumahan Rakyat (PPR)* in Kuala Lumpur. Questionnaires were distributed to 585 respondents selected systematically from 30 PPRs. The results from the regression estimates that urban poor who are married, divorced, the spouse has passed away with monthly income less than RM 1000 are facing higher structural barrier in accessing the public clinics. Government is suggested to increase the operation hour of the public clinics as well as making effort to set up mobile kiosk clinic for urban poor live far and cannot reach the public clinics in their areas.

Keywords: Access to Healthcare, Public Clinic, Structural Barrier, Urban Poor, *Projek Perumahan Rakyat*

INTRODUCTION

In Malaysia's healthcare ecosystem, public and private sector providers play a pivotal role in delivering healthcare services throughout the country (Latifa Bibi, 2014). The public health sector is subsidised, making it of high dependency for the public. Primary healthcare, is normally provided by public clinics for free to the general public, as the government aims at providing the services efficiently and accessible without any charge (Hazrin et al., 2013). People just need to pay RM 1 for registration, and this RM 1 covers the consultation fee and medication. Coast and Aikins (2011) argued on the importance of healthcare accessibility for the urban poor as they normally reside in congested areas and are exposed to many problems like improper sanitation system, contaminated water and polluted air. Living in such areas where hygiene is usually not a priority often resulted in numerous health problems. However, public healthcare is still not satisfying the needs of the growing population. There are issues regarding access to healthcare reported by previous study, which includes unprofessional attitudes and poor treatment given by public clinics' staff, location of the clinics that are not strategic as well as longer waiting time in the clinics (Aspen, Shah, Wilson & Bell, 2012; Mattson, 2011; Moroka & Tshimanga, 2010; Hoffman et al., 2008).

Other than that, transportation and estimated travelling times to clinics are other contributing factors that influenced the ability of people especially the urban poor to easily gain access to healthcare services (Syed, Gerber & Sharp, 2013). To further understand the

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

context, the problems above can be viewed mainly from the perspective of Institute of Medicine (Millman, 1993). According to this institution, these problems are determinants of the structural barriers in accessing healthcare. Poor people face significantly greater structural barriers compared to individuals from higher income groups. The objective of this study is to know the socio-demographic factors that decisively influence the urban poor community and make them face more structural barriers to access public clinics.

LITERATURE REVIEW

Structural barrier is one of the three primary types of barrier that could hinder access to healthcare as outlined by the Institute of Medicine (Millman, 1993). Based on previous research on structural barriers, in general it covers issues associated to transportation, the system and staff of the healthcare facilities and accessibility to the healthcare resources. Institute of Medicine (IOM) had defined structural barriers as impediments to medical care that consist of three dimensions, which are availability, the system and organisation of the healthcare facilities as well as transportation. For instance, Millman (1993) and Freed, Hansberry and Arrienta (2013) stated in their study that structural barrier includes issues related to number of healthcare facilities, location of the clinic, type or organizational configuration of healthcare providers, transportation, the ambience and conditions of the clinic, the process of making appointments and consultations as well as the waiting time. Hawthorne and Kwan (2013) found that, location and geographic aspect, the distance, time constraint as well as the intricate relationship between doctor and patient in clinics are among the perceived barriers experienced by low-income residents. Meanwhile, Sanders, Solberg and Gauger (2013) listed down costs that relate to pharmaceutical supplies, lack of time for follow-up appointments, lack of health education and transportation as the barriers to healthcare that patients with chronic diseases in poorer neighborhoods bear. The study also leads to the formation of Chronic Disease Management Programme which is fully supervised by the partnership between Medical College of Wisconsin and Columbia St' Mary's Hospital. This programme is a community-based service which aims to better serve the underserved neighborhoods. Good health outcomes obtained at lower costs, together with better acquaintances with providers, churches as well as the other important groups show the successfulness of the programme which broaden the accessibility to healthcare for the people.

In addition to that, Halwindi, Siziya, Magnussen and Olsen (2013) found in their study that poor quality of health services, unavailability of medicines, weak outreach programmes, bad scheduling of health programmes, poor communication, long distances to health centres and low levels of awareness on the importance of health are other prominent structural barriers to get access to healthcare that is so called 'limited'. The government and even NGOs are becoming more selective in providing healthcare services to the people. Shetty (2011) argued that, the poor living in slums in urban settlements in India have difficulties to access these services. They were often ignored and left behind. To further explain the issues of structural barrier, Coast and Aikins (2011) talked about the structure and system of healthcare services. In poor countries for example, higher demands as well as the increasing number of the people particularly in urban areas exceed the capacity provided by the healthcare system. Duah, Peprah and Peprah (2019) added that, poor management of the facilities and transportation lead to inaccessibility and underutilisation of healthcare services among the elderly in Ghana. Speaking about the system and structure of the healthcare system, Schepper et al. (2006) explained that ethnic minorities were the most affected by the

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

issue. They also mentioned about unskilled staff and poor attitudes shown by the staff in healthcare facilities made these minorities feel bad.

RESEARCH METHODOLOGY

To achieve the study's objective, a survey was conducted among *Projek Perumahan Rakyat's* residents in Kuala Lumpur. *Projek Perumahan Rakyat*, generally known as PPR is a residential project for those of low-income and poor households. Those with monthly household income of less than RM 3000 are eligible to rent out PPR units. For this study, PPR residents are the representation of the urban poor. The urban poor are operationally defined as those who live in urban areas with a monthly household income less than RM 4000. According to *Kementerian Perumahan dan Kerajaan Tempatan* (KPKT), a household with monthly income of less than RM 4000 is categorised as bottom 40% group of income (B40). Under the management of *Dewan Bandaraya Kuala Lumpur* (DBKL), there are about 31 PPRs in Kuala Lumpur. However, only 30 PPRs were sampled for this study. The total numbers of 585 respondents were selected from these 30 PPRs. The number of respondents from each PPR was determined through a calculation using the total number of residents in each PPR. Thus, every PPR will have a different number of respondents. In order to ensure the respondents were well-engaged with research procedure and understand the issues discussed in the questionnaire properly, the researchers were there throughout the data collection process to attend to any question by the respondents. The main variable discussed in this study is structural barrier. It consists of 16 four-values-Likert-scale-items extracted from different sources (Millman, 1993; Carillo et al., 2011). To run the test, all 16-Likert-scale-items were first computed as a new variable and the mean value score was calculated. The socio-demographic factors used were gender, age, marital status, ethnicity, education level, employment status as well as household income. The data were analysed using Statistical Package in the Social Science Software (SPSS) version 22. This study was approved by University of Malaya Research Ethics Committee (Reference Number: UM.TNC2/UMREC-588). All respondents that participated in this study gave their informed consent and were clear about the objective this study. Finally, multiple linear regression was conducted to answer the objective of this study and the model as follows:

$$\textit{Structural Barrier} = f(\textit{gender, age, marital status, ethnicity, education level, employment status, household income})$$

To further understand the analysis, every socio-demographic factor used in the multiple linear regressions was grouped and discussed in table 1 as below;

Table 1: Socio-Demographic factors' Category

Socio-Demographic factors	Category
Gender	= Male, = female (reference group)
Age	= 21 – 30 years old (reference group), = 31 – 40 years old, = 41 – 50 years old, = 51 – 60 years old, = 61 – 70 years old,

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

	= 71 years old and above
Marital Status	= Single (reference group), = Married, = Divorced, = Spouse has passed away
Ethnicity	= Malay, = Chinese, = Indian (reference group)
Education Level	= No education, = Primary school, = Secondary school, = Tertiary education (reference group)
Employment Status	=Unemployed (reference group), = Self-employed, = Private Worker, = Others
Household Income	= Less than RM 1000, = RM 1000 – RM 2000, = RM 2001 – RM 3000, = RM 3001 – RM 4000 (reference group)

i. Reliability Analysis

Reliability analysis was performed to assess the structural barrier variable. The test was to ensure internal consistency as well as to ensure that the factor scores formed a reliable scale. Thus, a reliability test using Cronbach Alpha values was conducted prior to further analysis. The result indicates the alpha values for the structural barrier to be .710 (see table 2). As a rule of thumb, Goerge and Mallery (2003) interprets Cronbach Alpha as follows: a>0.9 (excellent), a>0.8 (good), a>0.7 (acceptable), a>0.6 (questionable), a>0.5 (poor), a>0.4 (unacceptable). However, recommended by Nunnally and Bernstein (1994), the cut-off values of Cronbach Alpha that are greater than 0.7 indicates the items measured to have high internal consistency. Hence, for 16 items tested, the structural barrier variable is reliable to be measured in this study.

Table 2: Cronbach Alpha Value for Structural Barrier

Variable	Number of Items	Cronbach Alpha Value
Structural Barrier	16	.710

ii. Normality Analysis

A normality test was also included on the assumption of the correlational analysis. Thus, the data were tested for normality in order to identify the shape of its distribution. The shape of its distribution should be normally distributed for the predicted dependent variable scores, and the dependent variable tested for this study is structural barrier. According to Hair et al, (2006), the normal distribution is acceptable when the skewness and kurtosis value is in the range of +/- 3. As presented in table 3, it shows that the data was determined as normally distributed, since the values of skewness and kurtosis were in the range of +/- 3 for structural barrier variable.

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

Table 3: Skewness and Kurtosis Value for Structural Barrier

Variable	Skewness	Kurtosis
Structural Barrier	-.504	.178

RESEARCH FINDINGS

This part discusses the socio-demographic profile of the respondents involved and the results of the empirical estimation conducted in this study.

i. Socio-Demographic Profile

Table 4 illustrates the socio-demographic factors of the respondents. 66.0 percent (386) of the respondents were female whereas the remaining 34.0 percent (199) were male. The largest fraction of respondents (28.2 percent) was aged between 51 to 60 years old. Another 25.8 percent were respondents aged 41 to 50 years old, 21.2 percent respondents were between 31 to 40 years old, and 16.2 percent of the respondents were of age 61 to 70 years old. Only a small portion of the respondents, (6.2 percent and 2.4 percent) were 71 years old and above and between 21 to 30 years old, respectively. In this study, majority of the respondents were Malays, 59.8 percent (350), Chinese made up about 23.1 percent (135) whereas Indian made up 17.1 percent (147). As for marital status, 62.9 percent (368) were married and 25.1 percent (147) were widower. Many of the respondents only had secondary school education (41.5 percent) whereas another 37.5 percent had primary school education. 18.3 percent of them had no education at all. Other than that, in regard to employment status, 52.6 percent were employed whereas the remaining 47.4 percent were unemployed. The other characteristic that was analysed was their household income. 46.5 percent of the respondents had a monthly household income in between RM 1000 to RM 2000. 25.3 percent only earned RM 2001 to RM 3000 per month and the remaining 22.6 percent earned a monthly household income of less than RM 1000.

Table 4: Socio-Demographic Factors

Socio-Demographic Factors		Analysis	
		Frequency	%
Gender	Male	199	34.0
	Female	386	66.0
Age	21-30 years	14	2.4
	31-40 years	124	21.2
	41-50 years	151	25.8
	51-60 years	165	28.2
	61-70 years	95	16.2
	71 years and above	36	6.2
Marital Status	Single	18	3.1
	Married	368	62.9
	Divorced	52	8.9
	Widow/Widower	147	25.1
Ethnicity	Malay	350	59.8
	Chinese	135	23.1
	Indian	100	17.1
Education Level	Primary	218	37.3
	Secondary	243	41.5

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

	Tertiary	17	2.9
	No Education	107	18.3
Employment Status	Working	308	52.6
	Not Working	277	47.4
Total Household Income (Per Month)	Less than RM1000	132	22.6
	RM1000-RM2000	272	46.5
	RM2001-RM3000	148	25.3
	RM3001-RM4000	33	5.6
Total		**595**	**100.0**

ii. Multiple Regression Analysis

Before the multiple linear regression test was run, bivariate analysis such as the independent sample t-test and ANOVA were conducted for each socio-demographic factors and structural barrier. The results indicate that, educational level and household income factors show a statistically significant difference at the p value < .05 in the structural barrier scores. For the other socio-demographic factors, no significant values were observed.

Multiple linear regression was then performed in order to know the relationship between all the socio-demographic factors used in this study and structural barrier in accessing public clinics. Table 5 below presents the result of the analysis. The result shows that the urban poor community, who were married, divorced, with spouses that had passed away and those with household income of less than RM 1000 per month encountered structural barrier to access public clinics. The urban poor community with household income of less than RM 1000 per month faced more structural barrier (beta = -.29) than the urban poor of RM 3000 to RM 4000 monthly household income. Other than that, those who were divorced (beta = -.28), married (beta = -.25) and the spouse has gone (beta = -.23) experienced more structural barrier than those who were still single.

Table 5: Multiple Regression result of Gender, Age, Education, Marital Status, Ethnicity, Employment Status and Household Income

Socio-Demographic Factors	**Structural Barrier**		
	β	**SE**	**Sig.**
Gender	-.019	.047	.690
Age			
31 – 40 years old	-.074	.133	.579
41 – 50 years old	-.030	.134	.820
51 – 60 years old	.014	.138	.920
61 – 70 years old	.079	.145	.586
71 years and above	.110	.162	.497
Educational Level			
No Education	-.063	.137	.644
Primary School	-.115	.128	.372
Secondary School	.053	.123	.666
Marital Status			
Married	-.250	.116	**.031**
Divorced	-.276	.129	**.032**
Spouse has Passed Away	-.237	.119	**.047**
Ethnicity			
Malay	.003	.055	.549
Chinese	-.108	.064	.092
Employment Status			

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

Self-Employed	-.004	.053	.937
Private Worker	-.069	.058	.236
Others	-.058	.080	.472
Household Income			
Less than RM 1000	-.293	.101	**.004**
RM 1000 – RM 2000	-.095	.094	.308
RM 2001 – RM 3000	-.162	.094	.088

*p-value is significant at the 0.05

DISCUSSION

A survey was conducted on 585 urban poor households living in low-income residential areas with the objective of pointing out significant factors related to structural barrier in accessing healthcare. This study indicates that marital status and household income were the prominent socio-demographic factors that lead to structural barrier in accessing public clinics. This barrier includes issues such as; the location and operating time of the clinic, the waiting time for appointments, transportation problems, attitude of the clinics' staffs, and etc. The urban poor, who are married, divorced and those whose spouse had already passed away experienced a larger barrier compared to single individuals. The barrier is also significantly higher among households from the lowest income group. The access barriers to public clinic may have worsened their health as majority of the respondents reported of having chronic diseases and average health status, 57.8% and 65 % respectively.

In line with recent findings, Bojovic et al. (2018) discussed about marital status as a factor in seeking treatment for patient with tuberculosis. Being married was associated with health system delay. Additionally, it was also an issue for those who were much older than 47 years old. However, a noteworthy finding from another study shows that marital status and income level were not significant factors (Murata et al., 2010). The study which was carried out in Georgia found that the factor contributing to barrier to healthcare was gender. Gender plays a greater role in explaining the situation there where women reported barriers to healthcare. Speaking about gender, and age, a study by Lau et al. (2016) argued that men were more likely encounter more structural problems compared to women. The problems are also higher among people coming from 16 to 19 years old age group. According to Lau et al. (2016), these people were majority living in the areas of greater socio-economic disadvantage. For this reason, it is understandable that the respondents shared the same criterion with this study. Other than that, speaking about low household incomes, a study by Lin et al. (2009) confirmed that having lower income makes the situation worse. The elderly in Japan postponed undergoing healthcare services because of the little money that they had, which was needed for other purposes. Problems in seeking healthcare were also associated with distance towards clinics. The further the clinics, the more expensive it is to reach them. According to Corscadden et al. (2018), vulnerable groups which mostly with lower income were prone to experience multiple barriers to reach and to be in the primary care facilities.

The same problem also occurred to indigenous communities in Malaysia (Ismail & Norhayati, 2016). These communities with lower income cannot afford having private vehicles to travel to healthcare facilities. The long distances to the nearest healthcare facilities also lead to more problems. Moreover, this current study is also in line with the finding presented by Horton and Johnson (1990), where low socio-economic status is one of the primary factors that leads to barriers faced by the elderly in the studied area. However, Horton and Johnson (1990) also mentioned that ethnicity and racial sentiment were among

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

the hidden factors that contribute to more problems in accessing healthcare. Race and ethnicity were not significant socio-demographic factor in this study. This is in contrast to some of previous research which suggested these factors are focal contributor to healthcare barriers. For example, Cornelius and Smith (2002) found that race and ethnicity is perceived as one of the discrimination elements particularly for women of colour. Being coloured means more barriers to care. As discussed by Smedley, Stith and Nelson (2003), race and ethnicities are associated with health disparities. It is because, when people found barrier to get access to healthcare services, they are in the greater risk for illness. In the case of Malaysia, where it consists of multiracial citizen, legally every citizen in the country is eligible to access to public clinic. The only thing that makes accessibility problem differ among the Malaysian citizen could possibly be the different barriers that they encounter.

Furthermore, a recent study on access to public clinics indicated that, the elderly group, gender, ethnicity, and those with lower household income as well as those working in the private sector were more likely to have problems in accessing public clinics (Makmor, Khaled, Ahmad & NurulHuda, 2018). Sun et al. (2019) also mentioned about several socio-demographic predictors associated to access to healthcare in their study. The predictors were race, educational level, age and also employment status. Mohamad Yunus et al. (2017) found factors like age, education level, income level and the needs for care were determinants for healthcare engagement for the elderly in Malaysia. Prior to these studies, Chun, Hwang, Park and Shin (2012) had also mentioned about some socio-demographic factors that hinder disabled persons from getting health services. People coming from age group of 30 to 39 years as well as reporting had no spouse to assist them presented many issues to access the services. However, these studies focus only on the access to healthcare facilities without the attendance of so-called structural barrier which is the main issue discussed here. The findings of this study are useful to better understand public clinic's accessibility and the barriers encountered by the urban poor. It can be used as an insight for the development and implementation of new policies required to mitigate the crisis in accessing healthcare for the people. The government should focus on after-hour operations for public clinics, not only at selected clinics but to all public clinics as many of the families work during normal hour and do not have time to get access to these clinics. Having low income make them struggle to fulfill financial requirements, even when they are not in a good state of health. It is also advisable to set up mobile kiosk clinic equipped with junior doctors assisted by nurses in a weekly basis in problematic areas so that families that have no access to transportation could get treatments with ease.

CONCLUSION

Even though the public primary healthcare in Malaysia is heavily subsidised, the issue of accessibility remains important. There are different kinds of barriers that hinder people's accessibility to public clinics particularly the poor. The aim of this study is to examine whether barriers differ based on socio-demographic characteristics among urban poor households. The estimation results suggest that urban poor households face different level of structural barriers based on their marital status and household income level. Those with the lowest household income level seem to face a significantly higher structural barrier. On the other hand, married, divorced and spouse has passed away respondents reported higher structural barriers as compared to those who are single. These findings are in line with the study done by Bojovic et al. (2018) for marital status and Ismail and Norhayati (2016) for

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

lower household income level. The clinic's situation as well as transportation issue can be among the most important structural barriers facing the urban poor households. These issues which are related to a large number of patient in the clinic, longer waiting times, no transportation to go to the clinic, longer journey to reach the clinic, limited operation hours and longer times to be treated achieved high scores for the structural barriers items. Speaking about the issue of transportation, 54% of the urban poor households had no private vehicles where they can use to go to the clinic. They basically rely on public transports and paid individuals (neighbours or relatives) to send them to the clinic. This is apparently evident when those from the lowest income group are the only group that faces significantly higher structural barriers (households earning less than RM 1000 monthly). Additionally, when it comes to the clinics' distance, 64 % of the clinics are within 1 to 5 kilometres away and another 34% are more than 6 kilometres far. To these urban poor households, even though the clinic can be reach within 1 to 2 kilometres distance, its neighbourhood which is not located in the public transports main routes may be bigger problem to them when they posses no private vehicles. The larger number of patient in the clinic as well as longer waiting times could lead to more difficulties to the non single respondents, as they also have other responsibilities need to be fulfilled in their households. This study highlights potential target groups if the accessibility issue is to be tackled by the government. The government needs to deal with the barriers based on the needs of the people.

REFERENCES

Agyemang-Duah, W., Peprah, C. & Peprah, P. (2019). Barriers to formal healthcare utilization among poor older people under the livelihood empowerment against poverty programme in the Atwima Nwabiagya District of Ghana. BMC Public Health, 19 **(**1185). https://doi.org/10.1186/s12889-019-7437-2

Aspen, L., Shah, T. I., Wilson, K., & Bell, S. (2012). Does location matter: Effects of distance & practice size on consumer preferences for seeking primary healthcare. Paper presented at the Proceedings of the First ACM SIGSPATIAL International Workshop on Use of GIS in Public Health.

Bojovic, O., Medenica, M., Zivkovic, D., Rakocevic, B., Trajkovic, G., Kisic-Tepavcevic, D. & Grgurevic, A. (2018). Factors associated with patient and health system delays in diagnosis and treatment of tuberculosis in Montenegro 2015-2016. PLoS ONE, 13, 3: e0193997.

Carrillo, E. J., Carrillo. A. V., Perez, R. H., Lopez, S. D., Pereira, N. A. & Byron, T. A. (2011). Defining and targeting health care access barriers. Journal of Health Care for the Poor and Underserved, 22, 562-575.

Chun, S. M., Hwang, B., Park, J-H. & Shin, H-I. (2012). Implications of sociodemographic factors and health examination rate for people with disabilities. Archives of Physical Medicine and Rehabilitation, 93.

Coast, E. & Aikins, A. d.-G. (2011). Health for the urban poor. Cities, Health and Well Being.

Cornelius, L. & Smith, P. (2002). What factors hinder women of color from obtaining preventive health care?. American Journal of Public Health, 92 (4), 535-539.

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

Corscadden, L., Levesque, J. F., Lewis, V., Strumpf, E., Breton, M. & Russell, G. (2018). Factors associated with multiple barriers to access to primary care: An international analysis. International Journal of Equity in Health, 17 (28).

Freed, R. C., Hansberry, T. S. & Arrienta, I. M. (2013). Structural and hidden barriers to a local primary health care infrastructure: Autonomy, decisions about primary health care, and the centrality and significance of power. Research in the Sociology of Health Care, 31, 57-81. https://doi.org/10.1108/S0275-4959(2013)0000031006

George, D., & Mallery, P. (2003). Using SPSS for windows step by step: a simple guide and reference (4th ed.). London: Pearson Education.

Halwindi, H., Siziya, S., Magnussen, P. & Olsen, A. (2013). Factor perceived by the caretakers as barriers to health care for under-five children in Mazabuka district, Zambia. ISRN Tropical Medicine.

Hawthorne, T. L. & Kwan, M. P. (2013). Exploring the unequal landscapes of healthcare accessibility in lower-income urban neighborhoods through qualitative inquiry. Geoforum, 50, 97-106.

Hazrin, H., Fadhli, Y., Tahir, A., Safurah, J., Kamaliah, M. & Noraini, M. (2013). Spatial patterns of health clinic in Malaysia. Health, 5, 2104-2109. doi: 10.4236/health.2013.512287.

Hoffmann, R. L., Rohrer III, W. M., South-Paul, J. E., Burdett, R. & Watzlaf, V. J. (2008). The effects of barriers on health related quality of life (HRQL) and compliance in adult asthmatics who are followed in an urban community health care facility. Journal of Community Health, 33 (6), 374-383.

Horton, S. & Johnson, J. R. (1990). Improving access to health care for uninsured elderly patients. Public Health Nursing, 27 (4), 362-370.

Millman, M. (1993). Access to health care in America. Washington (DC), US: National Academic Press.

Ismail, A. & Norhayati, M. (2016). Barriers to health promotion for indigenous communities: Lessons for Malaysia. Malaysian Journal of Public Health Medicine, 16 (1), 6-14.

Latifa Bibi Musafar Hameed. (2014). An inuiry in privatisation's impact on healthcare services in Malaysia. (Unpublished doctoral thesis). Kuala Lumpur: University of Malaya.

Lau, A., Spark, S., Smith, T. M., Fairley, K. C., Guy, J. R., Donovan, B. & Hocking, S. J. (2016). Socio-demographic and structural barriers to being tested for Chlamydia in general practice. The Medical Journal of Australia, 204 (3), 112.

Lin, J. M., Brimmer, D. J., Boneva, R. S., Jones, J. F., & Reeves, W. C. (2009). Barriers to healthcare utilization in fatiguing illness: A population-based study in Georgia. BMC Health Services Research, 9 (13). Doi:10.1186/1472-6963-9-13.

Makmor, T., Khaled T., Ahmad, F. O. & NurulHuda, MS. (2018). Demographic and socioeconomic factors associated with access to public clinics. Journal of Health and Translational Medicine, 21 (1).

Mattson, J. (2011). Transportation, distance, and health care utilization for older adults in rural and small urban areas. Transportation Research Record: Journal of the Transportation Research Board, 2265, 192-199.

Mohamad Yunus, N., Abd Manaf, N., Omar, A., Omar, M. & Salleh, M. (2017). Determinants of healthcare utilisation among the elderly in Malaysia. Institutions and Economies, 115-140.

Vol. 17. No.3 (2020), 71-81. ISSN: 1823-884x

Moroka, T. & Tshimanga, M. (2010). Barriers to and use of health care services among cross border migrants in Botswana: Implications for public health. International Journal of Migration, Health and Social Care, 5 (4), 33-42.

Murata, C., Yamada, T., Chen, C. C., Ojima, T., Hirai, H., & Kondo, K. (2010). Barriers to health care among the elderly in Japan. International Journal of Environmental Research and Public Health, 7, 1330- 1341.

Sanders, J., Solberg, B., & Gauger, M. (2013). Breaking barriers to care: A community of solution for chronic disease management. The Journal of the American Board of Family Medicine, 26 (3), 311-315.

Scheppers, E., Van Dongen, E., Dekker, J., Geertzen, J. & Dekker. J. (2006). Potential barriers to the use of health services among ethnic minorities: A review. Family Practice, 23 (3).

Shetty, P. (2011). Health care for urban poor falls through the gap. World Report, 377 (9766).

Smedley, B., Stith, A. & Nelson, A. (2003). Unequal treatment: Confronting racial and ethnic disparities in health care. Washington, DC: The National Academic Press.

Syed, S. T., Gerber, B. S., & Sharp, L. K. (2013). Traveling towards disease: Transportation barriers to health care access. Journal of Community Health, 38 (5), 976-993.

Sun, R., Wu, L., Barnett, S., Deyo, P. & Swartwout, E. (2019). Socio-demographic predictors associated with capacity to engage in health care. Patient Experience Journal, 6 (2).

ABOUT THE AUTHORS

SITI NORASIKIN ABD WAHAB
Department of Administrative Studies and Politics,
Faculty of Economics and Administration,
University of Malaya,
Kuala Lumpur, Malaysia
asikinwahab88@gmail.com

NURULHUDA MOHD SATAR
Department of Economics,
Faculty of Economics and Administration,
University of Malaya,
Kuala Lumpur, Malaysia
nurulhuda@um.edu.my

MAKMOR TUMIN
Department of Administrative Studies and Politics,
Faculty of Economics and Administration,
University of Malaya,
Kuala Lumpur, Malaysia
makmor@um.edu.my