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Quality Of Life Among B40 Household Income Group During the Pandemic Covid –19

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Abstract

The novel coronavirus disease later designated as COVID-19 is an infectious disease and it is one of the major health crises that has changed the life of millions globally as well as population in Malaysia. Despite the significant impact of COVID-19 towards QoL of one individual, there is limited study and data regarding the QOL among group of B40 in Malaysia during the outbreak of pandemic COVID-19. Thus, this study aimed to study the QOL among group B40 during the outbreak of pandemic COVID-19 in Malaysia. This study was conducted by using convenience sampling method. A total of 387 target respondents that meet the criteria of the study were chosen. The Quality of Life Scale (QOLS) English version was used as the instrument for the study and was distributed online. Average score for QOLS among group B40 are 80, which is slightly lower than the average total score for healthy populations. Mode of occupation, monthly income (B40), number of households and type of occupation showed significant difference on QOL. This study concluded that increased COVID-19 experiences predicted lower quality of life, demonstrating a cumulative burden of chronic stress effect and the accumulation of pandemic-related stressors toward negative health outcomes.

Keywords: B40, Quality of Life, COVID-19

Introduction

COVID-19 is the clinical manifestation of infectious diseases and severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). The most frequently present symptoms are respiratory symptoms that can progress and lead to pneumonia and acute respiratory distress syndrome (Fried et al., 2020). The COVID-19 disease's horrific manifestation significantly affects numerous dimensions of the QoL of one individual globally. A recent study by Sajed and Amgain (2020) involving countries such as China, South Korea, Singapore, and Japan endorsed that government strategies such as social distancing effectively contain the further spread of the virus and transmission of COVID-19; however, it leads to moderate psychological distress. Hence, both psychological distress that comprises long and short-term may interfere with QoL of one individual (Panthee et al., 2020).

According to Carr (2001), there is no consensus on the definition of quality of life as it is affected by health. The definitions range from those with a holistic emphasis on patients' social, emotional, and physical well-being after treatment. It could also describe the impact of a person's health on his or her ability to lead a fulfilling life. QoL often serves as a important indicator of the government policies implemented, highlighting the population's health and psychosocial well-being issues. QoL encompasses many aspects, including the physical, social, environmental, and psychological domains.

A country will not be rated as a developed country only by its economic achievements and rapid development progress alone. However, the QoL and well-being of its population also play a significant role. Idris et al. (2016) stated that developed countries are those of higher incomes, better public health of one's individual, higher life expectancy, and also perceived better educational achievements. One of the many challenges for the Malaysian government is ensuring that there is no gap in QoL between various groups of population and communities, particularly between urban and rural communities.

The Malaysian government has divided household income into three categories which are B40, M40, and T20. According to the Department of Statistics Malaysia in 2019, B40 are the bottom 40% of Malaysian households with income below RM4,850. M40 is the middle 40% of the Malaysian population earning between RM4,850- RM10,959. T20 is the top 20% of the Malaysian population group that earned more than RM10,960.

The household groups B40, M40, and T20 are categorised into ten clusters based on ten percentiles. The B40 is further classified into B1, B2, B3, and B4, while M40 to M1, M2, M3, M4, and T20 to T1 and T2. The lowest decile group among the B40 group is B1, followed by B2, B3, and B4. B1 comprises the lowest income threshold, which is less than RM2,500. The income threshold for B2 is within the range of RM2,500 to RM3,169. Afterward, the income threshold for B3 is from RM3,170 to RM3,969. In summation, the highest decile group among the B40 group is B4, which comprises an income threshold of RM3,970 to RM4,849. Based on the definitions of B40, M40 and T20 nationally, the number of B40 households is 2.91 million, M40 households are 2.91 million, and T20 are as many as 1.46 million.

QoL is perceived as an efficient appraisal of an individual's life satisfaction, desire, needs, and aspirations within the context of an individual's culture and values systems. (Thangiah et al., 2020). The authors investigated whether income played a role in the QoL of rural residents within emerging economies using an extensive survey of Malaysian adults above 18 years old. The study extracted data from a sample of 18,607 health and demographic surveillance system survey respondents using a validated Malay version of the abbreviated World Health Organization Quality of Life (WHOQOL-BREF) self-reported questionnaire. This looked into the impact of three income groups comprising the bottom 40%, middle 40%, and top 20% on perceived QoL, controlling for sociodemographic, chronic disease co-morbidities, and mental health status. Results of the study showed a statistically significant association between income and the physical, psychological, social, and environmental QOL domains. The evidence produced from this study proved the income inequality of QOL among rural residents. The M40 and T20 income groups had a better QOL in all domains (physical, psychological, social, and environmental) than the B40 community; thus, M40 and T20 income groups enjoy a better perceived QoL than the B40 in rural areas.

A study conducted by Algahtani et al. (2021) was aimed at identifying predictors of the QoL during the first wave of the COVID- 19 pandemic in Saudi Arabia. This cross-sectional online survey questionnaire was used to gather data on the participants regarding their socio demographic backgrounds, physical health status, psychological reactions, and QoL. There are 12 items adapted from the World Health Organization Quality of Life Instruments (WHOQOL-BREF) to assess the QoL. In addition, the Depression, Anxiety, and Stress Scale–21(DASS-21) was used to assess the depression, anxiety, and stress of the participants. The study demonstrated that some population segments were more vulnerable to poor QoL during the

COVID-19 pandemic due to their demographic backgrounds. Some of them are due to job losses, experiencing chronic medical conditions, and psychological factors. Furthermore, the findings stated that male and middle-aged participants were more at risk of lower QoL scores in the context of the COVID-19 pandemic and lockdown.

According to Al Dhaheri et al. (2021), in response to the COVID-19 global health crisis, quarantine and lockdown measures were implemented by international and government health organisations in Malaysia to avoid the rapid spread of the virus. Further measures being implemented include avoiding large gatherings, suspension of flights, and mandatory use of face masks in many countries, social distancing, and home-schooling children to stay at home. While active steps are being taken by the authorities to contain the outbreak, the pandemic has affected health and well-being, where psychological distress and related symptoms such as stress, anxiety, and panic among the general population.

In Malaysia, the massive and ongoing coronavirus outbreaks have become a serious threat with profound consequences for the economy and financial markets. Implementation of the Movement Control Order (MCO) by the Malaysian government put various sectors of the economy in jeopardy. According to Anthony Dass, the AmBank Group chief economist, direct damage caused by the coronavirus can be seen in numerous sectors such as tourism and travel, construction, manufacturing, mining, and agriculture. Hence, many workers are laid off, and others are placed on unpaid leave, thus affecting people's income and causing economic chaos in the country (Shah et al., 2020).

Ismail et al. (2021) stated that the effects of MCO due to COVID-19 affected both macro and micro levels, especially for those group of households that were expected to face high economic risk. Moreover, Thinagar et al. (2021) stated that the population of the B40 income group is a group of households that are expected to face higher economic risk during the implementation of the MCO. The evidence produced from this study is used to understand how income inequality affects the QoL among rural residents in Malaysia. The researchers further asserted that the household group of M40 and T20 income groups had a better QoL in all domains, including physical, social, psychological, and environmental, compared to the B40 community. Therefore, this study is aimed to study the QoL among B40 populations during the COVID-19 outbreak.

This study contributes knowledge regarding the impact of COVID-19 on QoL among the B40 household income group in Malaysia. In addition, this study investigates the effect of

five conceptual domains: material and physical well-being, relationships with other people, social, community, and civic activities, personal development and fulfillment, and recreation among the B40 household income group in Malaysia. This finding is crucial to facilitate occupational therapists in providing proper intervention for the client from the B40 household income group. Furthermore, it is essential to find out the association between demographic variables and the QoL among B40 populations during the COVID-19 outbreak in Malaysia.

Materials and Methods

This research employs quantitative method. In agreement with Apuke (2017), quantitative research method deals with the quantifying and analysis of the variables in order to obtain the results. This method requires the utilisation and analysis of the numerical data using the specific statistical techniques. In addition, (Williams, 2011) stated that quantitative research starts with a statement of a problem, followed by generating of hypothesis or research questions, reviewing related literature, and a quantitative analysis of data.

This study used simple random sampling method. Through this method, every individual has an equal chance of being selected from the population chosen. Data is chosen using the random number table or by computer generated list of random numbers. (Acharya et al., 2013). Besides, Taherdoost (2016) supports that simple random sampling is also beneficial to be used as it is easily understood and the results and outcome are projectable.

This research had determined that the sample size required for data gathering will be referred to the table sample required from a given population to be representative provided by Krejcie and Morgan (1970). Thus, the sample size appropriate for this study is 381 respondents as the population of the B40 in Malaysia is >75,000 people.

The inclusion criteria of this study are the participants must come from the population of Malaysian B40 households which is households that earn an income below than RM4,850. Participants must be able to understand the English language as the questionnaire is in the English language.

Self-administered questionnaires had been adopted from previous study as a main instrument for this study. The self-administered questionnaire chosen is the Quality-Of-Life Scale (QOLS). Burckhardt and Anderson (2003) stated that QOLS consists of 16 items that measure five conceptual domains of quality of life including material and physical well-being,

relationships with other people, social, community and civic activities, personal development and fulfillment, and recreation. Moreover, QOLS is suitable to use in this study as it has been used in studies of healthy adults and patients with diseases including rheumatic diseases, fibromyalgia, chronic obstructive pulmonary disease, gastrointestinal disorders, cardiac disease and spinal cord injury. Other than the QOLS questionnaire, basic demographic data also will be asked from the respondents including their age, gender, marital status, categorical group of B40 either B1, B2, B3, B4 and number of households. The questionnaire was distributed to participants online.

The Statistical Package for Social Sciences (SPSS) was used to analyse the data. Independent t-test was use in this study, where according to Mishra et al. (2019) used to compares the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. One Way ANOVA was used to determine whether there are any statistically significant differences between the means of three or more independent.

Result

The questionnaires were distributed to 417 respondents. However, only 387 responses were usable and were used in obtaining the data to measure the Quality of Life within B40 household group. The response rate has reached the minimum size of the sample for this study as stated by Krejcie and Morgan (1970) the sample size appropriate for this study is 381 respondents as the population of the B40 in Malaysia is >75,000 people.

The demographic analysis section presents the respondent's demographic profile which includes age, gender, ethnicity, marital status, education level, employment status, monthly income (B40), current residential area, with whom they reside with, number of households, mode of occupation and type of occupation. Table 1 shows the respondent's profile.

Items	Variables	Response	Frequency	Percentage (%)

1	**Age**	27.02		
2	**Gender**	Male	103	26.6%
		Female	284	73.4%
3	**Ethnicity**	Malay	366	94.6%
		Chinese	4	1.0%
		Indian	1	0.3%
		Others	16	4.1%
4	**Marital Status**	Single	291	75.2%
		Married	93	24.0
		Divorced	3	0.8%
5	**Education**	Ujian Pencapaian Sekolah Rendah (UPSR)	1	0.3%
		Penilaian Menengah Rendah (PMR)	-	-
		Sijil Pelajaran Malaysia (SPM)	33	8.5%
		Sijil Vokasional Malaysia (SVM)	3	0.8%
		Sijil Tinggi Agama Malaysia (STAM)	2	0.5%
		Sijil Tinggi Persekolahan Malaysia (STPM)	8	2.1%
		Diploma	83	21.4%
		Degree	225	58.1%
		Master	26	6.7%
		PhD	1	0.3%
		Aircraft Engineering License	2	0.5%
		Professional Certificate	1	0.3%
		Foundation	1	0.3%
		SKM LEVEL 3	1	0.3%
6	**Employment Status**	Employed	276	71.3%
		Unemployed	111	28.7%
7		B1 - Less than RM2, 500	234	60.5%

	Monthly Income	B2 - RM2,500 - RM3, 169	79	20.4%
		B3 - RM3, 170 - RM3, 969	36	9.3%
		B4 - RM3, 970 - RM4, 849	38	9.8%
8	**Residential Area**	Urban	263	68.0%
		Rural	124	32.0%
9	**With whom the respondents reside with**	Spouse	66	17.1%
		Family	250	64.6%
		Alone	60	15.5
		Friends	11	2.8%
10	**Number of Household**	1	87	22.5%
		2	69	17.8%
		3	60	15.5%
		4	60	15.5%
		5	46	11.9%
		6	32	8.3%
		7	19	4.9%
		8	7	1.8%
		9	4	1.0%
		10	1	0.3%
		11	-	-
		12	2	0.5%
11	**Mode of Occupation**	Part- time	98	25.3%
		Full – time	289	74.7%
12	**Type of Occupation**	Government servant	65	16.8%
		Private servant	284	73.4%
		Self employed	3	0.8%
		GLC	17	4.4%
		Housewife	4	1.0%
		Unemployed	12	3.1%
		Pensioner	2	0.5%

Table 1 : Respondents' Demographic Information

It can be concluded that almost all respondents were mostly satisfied with their material and physical well-being, which included comforts home, food, conveniences and financial security. The statement on 'Health - being physically fit and vigorous' was slightly lower than the former to be at the second highest mean of 4.89.

'Relationship with parents, siblings & other relatives communication & visiting, helping' recorded the highest mean score for perceived Relationships with other People with a total of 5.32. This implies that Relationships with other People which were parents, siblings and other relative communication and visiting, helping is better during covid-19 pandemic.

Items	**Statements**	**Mean**	**Standard Deviation**
Domain Material and Physical Well- being			
1	Material comforts home, food, conveniences, financial security	5.07	1.151
2	Health - being physically fit and vigorous	4.89	1.414
	Overall Average Mean	**4.98**	
Domain Relationships with Other People			
1	Relationship with parents, siblings & other relatives communication & visiting, helping	5.32	1.296
2	Having rearing children	4.63	1.396
3	Close relationship with spouse or significant other	5.10	1.358
4	Close friends	5.16	1.265
	Overall Average Mean	**4.98**	
Domain Social, Community, and Civic Activities			
1	Helping and encouraging others, volunteering, giving advice	5.17	1.113
2	Participants in organizations and public affairs	4.56	1.412
	Overall Average Mean	**4.865**	
Domain Personal Development and Fulfilment			
1	Learning attending school, improving understanding, getting additional knowledge	4.98	1.261

2	Understanding yourself- knowing your assets and limitations - knowing what life is about	5.01	1.314
3	Work - job or in home	4.98	1.262
4	Expressing yourself creatively	4.87	1.325
	Overall Average Mean	**4.96**	
Domain Recreation			
1	Socializing - meeting other people, doing things, parties,	4.68	1.468
2	Reading, listening to music, or observing entertainment	5.53	1.129
3	Participating in active recreation	4.86	1.405
4	Independence, doing for yourself	5.48	1.243
	Overall Average Mean	**5.1375**	

Table 2: Domains of QOLS Based on Samples' Responses

In domains of Social, Community, and Civic Activities, the result implies that respondents saw helping and encouraging others, volunteering, giving advice during covid-19 pandemic as crucial. Participating in activities related to public and organisations ranked the second-highest.

Personal Development and Fulfilment domain had recorded 'Understanding yourself-knowing your assets and limitations - knowing what life is about' as the highest. This is followed by the second and third highest mean are based on the statements 'Learning attending school, improving understanding, getting additional knowledge' and 'Work - job or in home'. The sub-domain 'Expressing yourself creatively' in recreation had the lowest score.

Domain Recreation represents one of the independent variables in measuring QoL among B40 household income group. 'Reading, listening to music, or observing entertainment' recorded the highest mean for recreation activities. 'Independence, doing for yourself' ranked the second highest, whereas 'Participating in active recreation' ranked at third.

Comparing Respondents' Information with QoL

The t-test and One-Way ANOVA test was conducted to compare the effect between the demographic data with QoL. Mishra et al. (2019) stated that the t-test is used to compare the

means between two groups, whereas ANOVA is used to compare the means among three or more groups.

Variables	Category	N	Mean ± SD	p-value	Stat (t)
Monthly Income (B40)	B1 - Less than RM2, 500	234	4.91 ± 0.93	0.009	3.913 (3;283)
	B2 - RM2,500 - RM3, 169	79	5.09 ± 0.736		
	B3 - RM3, 170 - RM3, 969	36	5.31 ± 0.78		
	B4 - RM3, 970 - RM4, 849	38	5.27 ± 0.67		
Type of Occupation	Government servant	65	5.12 ± 0.80	0.032	2.32 (6;380)
	Private servant	284	5.01 ± 0.87		
	GLC	17	4.71 ± 0.98		
	Unemployed	12	4.47 ± 0.84		
	Housewife	4	5.60 ± 1.20		
	Pensioner	2	5.16 ± 0.49		
	Self employed	3	6.02 ± 0.34		

Table 3: Comparison between Demographic Information with QOLS

Independent t-test revealed that the scores between part-time (M=4.82, SD = 0.92) and rural area (M=5.09, SD = 0.84) with QOLS p =0.009, t(385) = -2.60. Therefore, there is statistically significant difference between mode of occupation and QOLS. The significance value of monthly income (B40) is 0.009 indicated that that there is significant difference in the mean of QOLS on monthly income (B40).

Discussion

QoL Among B40 Household Income Group

QoL scores are summed so that a higher score indicates higher quality of life. Average total score for healthy populations is about 90 (Burckhardt & Anderson, 2003). However, this study found that mean average score for QOLS among group B40 household income group is 80.30, which indicates slightly lower than the average total score for healthy populations. Recent research by Thangiah et al. (2020) also argued that there is income inequality of QoL among rural residents. In comparison to the B40 population, the M40 and T20 income groups reported higher QoL across all categories (physical, psychological, social, and environmental). This was in the agreement with other research on rural areas conducted in Malaysia, China, India, and several other emerging nations, including Russia, China and India. The lack of income also prevents rural residents from acquiring health-related supplies, services, and knowledge that would otherwise improve their physical fitness, mobility, and health status. A higher quality of life can help ensure equal opportunities for all segments of the population, including rural B40 households.

Association between Demographic Characteristic and QoL

In this study, the result shown that there is no significant difference between QoL and age. This result contrasted a study by Villa-Boas et al. (2019) which found that age is associated with QoL, meaning that as people age, their perception of QoL becomes more negative.

The current findings revealed that there is no significant difference between the QoL on gender. This however, contradicts with an earlier study where the researchers concluded that there are gender differences related to better QoL. Women with good physical and psychosocial health are more likely to have a better QoL. For men, the best QoL was associated with high socioeconomic conditions and good physical and psychosocial health (Campos et al., 2014)

No significant difference was found between the QoL on employment status in this study. Graves et al. (2017) had studied working and non-working students from public school in Washington State in 8th,10th and 12th grades. The authors found that that working students and increased work intensity was significantly associated with lower QoL scores compared to non-working students. Whilst this study had found no association between QoL and residential area, a study by Oguzturk (2008) argued that psychological distress in subjects in rural areas

may account for the poorer scores of the QoL in rural areas. Hence, socioeconomic status and quality of life are poorer in rural areas than urban areas

During the present study, result shown that there is no significant difference between the QoL on mode of occupation. This is followed by ethnicity, where the result also shown no significant difference. However, in another study by Stein et al. (2020) involving a prospective nationwide cohort of Chinese (62.3%), Malay (26.7%) and Indian (10.9%) ethnicities from Singapore who experiences heart failure (HF), QoL was assessed using the Minnesota Living with HF Questionnaire (MLHFQ) and it was found that ethnic differences in QoL was seen between Chinese, Malay, and Indian patients.

Result from this study also indicate that there is no significant difference between the QoL and marital status. However, this result showed disparity with a study by Han et al. (2014). The authors argued that there was significant relationship between marital status and QoL, and this relationship appeared to differ by gender and age. The multilevel analysis by marital status showed that single men had significantly worse QoL than married men. On the other hand, the QoL was measured to be better in single women than in married, and separated or divorced women.

In term of education level, present study found out that there is no significant difference between the QoL on education level of the respondents, which differ from recent research which agreed that higher levels of education were associated with a higher perception of QoL (Ran et al., 2018).

Apart from that, present study found out that there is significant difference between the QoL on monthly income of the respondents. This result is aligned with a study conducted by Rizal et al. (2022) which stated that globally, a lower income is associated with poorer health status and reduced QoL. In addition, the authors agreed that lower-income older adults had poorer QoL compared to their younger counterparts.

It is also found that there is no significant difference between the QoL and whom respondents reside with, as well as the number of household respectively. However, a study by Song et al. (2018) noted that that middle-aged people in single households had low QoL than those in multi-person households. The trend was significantly observable in men than in women.

This study had showed that there is significant difference between the QoL and type of occupation of the participants. This result is in line with a study conducted by Kim and Cho

(2003), who found that QoL of government employees is significantly lower than that of private sector employees. The researchers also found that the level of satisfaction with one's work environment is the most influential determinant of the overall QoL of Korean government employees.

Conclusion

A study conducted by Hansel et al. (2022) demonstrated that individuals that recovering from COVID-19 who experienced socially isolated reported personal health effect. As a consequence, individuals who suspected or diagnosed by COVID-19 also reported lower quality of life. Study by Azleuta et al. (2021) agreed that the number of experiences related to COVID-19 played a role in overall well-being. Researcher also found that increased COVID-19 experiences predicted lower quality of life, demonstrating an allostatic load effect and the accumulation of pandemic-related stressors toward negative health outcomes. Therefore, this study reported that B40 population in Malaysia also experiences lower Quality Of Life (QOL) during COVID-19 pandemic.

Several limitations had been identified in this study. Data collection was conducted at the end phase of endemic; thus, it might not accurately resemble the quality of life of B40 household income group during pandemic phase. During the period of the data collection, Malaysia has been lifted from the Movement Control Order (MCO) which allow people to cross border across the country.

For future study, selection of participants for recruitment should involve larger sample and ensure equality distributed of participants to represent greater effect on average. It strongly recommended to study the post-pandemic Quality of Life within B40 households. There should be another study conducted for B40 household income during the endemic phase to ensure continuity of this study.

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