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Quality of Life of Malaysian Older Adults of Indian Community: A Pilot Study

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Abstract

Background: Quality of life (QOL) among the geriatric population is a global concern as it reflects the status of health and of wellbeing.

Aims: Aims of this pilot study to assess the quality of life and its associated factors among older adults of Malaysian Indian community living in urban areas.

Settings and Design: A community based cross sectional pilot study, using convenience sampling technique was conducted from April 2024 to May 2024, among 30 older adults in a urban town, Sungai Petani, Kedah, Malaysia.

Materials and Methods: Quality of life scale developed through the World Health Organization (WHOQOL-BREF) questionnaire was used to collect data, about quality of life and socio-demographic details were also collected.

Statistical Analysis: The collected data were analyzed by SPSS version 21 and $p < 0.05$ was considered statistically significant.

Results: The highest average quality of life score, 3.6762±1.10, was in the psychological health domain and the lowest was in the physical health domain, 3.3714±0.31. The scores of the other two domains were moderate, that is, the social relationship score was 3.5111±0.48 and the environment score was 3.4000±0.83.

Conclusion: The quality of life score among the elderly was moderate, while in the domain of psychological health, the quality of life score was found to be high. The quality of life scores of the social relations and environmental domains were moderate while the quality of life scores of the physical health domain were the lowest. Lifelong education that includes, the importance of understanding physical health activities, and environmental changes and improvements in social relationships can help in improving the quality of life among the elderly of the Indian community in the city of Sungai Petani, Kedah, Malaysia.

Keywords: Quality of life, Older adults, Urban Indian population

Introduction

A pilot is a small scale version of the major study. This usually conducted to guide the researcher to evaluate the appropriateness of the recruitment strategy; appropriateness of the instruments; estimating the needed sample size; identifying confounding variables that need to be controlled; and adequacy of the researcher's skills and required training before the main study is carried out (Polit and Beck 2017). A pilot

study is also a trial run to provide information regarding a measurement's validity, reliability and the cross cultural adaptation of a translated instrument in order to reveal problems relating to the measurement's content, administration and scoring (Walker and Czajkowski, 2019).

Furthermore, conducting a pilot study of survey instruments is an essential step to assess the practical issues that may affect the study's validity, such as problems with the wording of the instructions or items of the questionnaire and the length of the interviews (Chan, Leyrat, & Eldridge, 2017; Fowler 1995; Waltz et al. 2010). The pilot study will also give the researcher a chance to find any unexpected errors, to avoid bias when collecting the main study data and to allow correction or redesigning of the study in advance before expending too much time or other resources (Medical Research Council, 2019).

This pilot study was conducted among randomly selected 24 older adult of Malaysian Indian community in my home town, Sungai Petani, Kedah, who were not included in main study sample. All the participants fulfilled the criteria of sample selection with regard to the setting, with the co-operation of the participants and the availability of the samples, the study was found to be feasible.

Objective

Objective of this pilot study is to assess the quality of life and factor associated with it in older adults of Malaysian Indian community in a urban town, Sungai Petani, Kedah, Malaysian.

Materials and Methods

Study Design

A community based cross sectional pilot study, using convenience sampling technique.

Study Setting and Study Period

This study was conducted from April 2024 to May 2024, among 30 older adults in a urban town, Sungai Petani, Kedah, Malaysia.

Sample Size

The primary purpose of pilot studies is not hypothesis testing and therefore sample size is often not calculated. Some studies recommend over 50 samples per group while some suggest 20 per group. The acceptable sample size for a pilot study focusing on process outcomes, could be around n = 30 for 90% power and one-sided 5% alpha.(Martyn, et al. 2021). For this study, 30 older adults of the quality of life of a representative sample were selected.

Sampling Technique

This was a cross-sectional study using a convenience sampling method to recruit around 30 potential participants.

Study Population

Inclusion criteria: (1) Aged 60 years or older adults from Indian community in urban town Sungai Petani, Kedah. (2) Males and females of all status of life. (3) Consented to take part in the study.

Exclusion criteria

Other than aged 60 years or older adults from Indian community in urban town Sungai Petani, Kedah.

Software Used

The collected data were entered into a Microsoft Excel 2010 and were analyzed using Statistical Package for Social Sciences (SPSS) version 23 (IBM SPSS software, USA). for window was used to analyze the collected data. The results of continuous variables were expressed as propositions and frequencies.

Statistical Methods Used

Mean, standard deviation and proportions were used for descriptive data was used to find the association between socio-demographic variables and various domains of WHOQOL-BREF instrument.

Study Tool and Data Collection Instrument

Data was collected using WHOQOL- BREF scale (WHO, 1998b) instrument after obtaining the permission from the Institutions Ethics Committee. The first part of questionnaire included questions on socio-demographic variables such as age, gender, marital status, number of children, level of education, previous employment sector, pension, economic status, outdoor leisure activity and overall health condition. Outdoor leisure activity was defined as activities outside the home such as a visit to park, movie theatre among others at least twice a month. For self-rated health, participants were asked whether they perceived their general health as good or poor. Economic status was determined by asking participants to rate their current economic status as poor, intermediate or good. This method was used since participants were currently unemployed. It has been used in many previous studies (Ryan, 2023). This known to be a reliable means of obtaining such information as people can correctly grade their economic status with reference to standard of living in their community and compare themselves with others.

Quality of life was measured with the validated World Health Organization Quality of Life Instrument-Brief Version (WHOQOL-BREF). It evaluates perceived quality of life using 26-item questionnaire is designed to assess individual perceptions on their positions in life in the context of four domains; Physical health domain, 7 items (Q3, Q4, Q10, Q15, Q16, Q17, Q18), Psychological health domain, 6 items (Q5, Q6, Q7, Q11, Q19, Q25, Q26), Social relationships domain, 3 items (Q20, Q21, Q22), and Environment domain, 8 items (Q8, Q9, Q12, Q13, Q14, Q22, Q23, Q24). Each item is ranked on the 5 point Likert scale. Higher scores indicate higher quality of life [WHO, 2014]. Item 1 (Q1) and item 2 (Q2) of the scale measure the overall perceived QOL and health perception of the participants, respectively. For questions 1 and 15, the scale ranges from 1 (Very poor) to 5 (Very good). For question 2 and 16 to 24, the scale ranges from 1 (Very dissatisfied) to 5 (Very satisfied). For question 3 to 6, the scale ranges from 1 (Not at all) to 5 (An extreme amount). For question 7 to 9, the scale ranges from 1 (Not at all) to 5 (Extremely). For question 10 to 14, the scale ranges from 1 (Not at all) to 5 (Completely). For question 25, the scale ranges from 1 (Never) to 5 (Always). Higher scores indicate higher QOL (Gibbons et al. 2018)

Method of Data Collection

A descriptive exploratory study was carried out by face-to-face interview with structured standard questionnaire. After confirming the eligibility of participation, the purpose of the questionnaire survey was explained. If the potential participants were in a group, only one family member from each household was allowed to answer the questionnaire. A verbal consent was obtained from each of the participants. A total of 30 respondents were selected by using systematic random sampling in order to meet the estimated sample size. A bullpen and note pad was given as a token of appreciation to those who completed the questionnaires.

Ethical Considerations

All of the participants were well informed about the content and the aim of the questionnaire. The study was an anonymous survey, and the results remain confidential. The questionnaire did not contain any identifying information about the individual subjects. Participation in the study was totally voluntary, and participants had the option of declining to answer specific questions or leaving the entire questionnaire blank if they did not wish to participate. All subjects provided written consent before participating in the study. All data remain confidential, and data protection was observed at all stages of the study.

Results

Table 1: Demographic profile of the participants (N=30)

Demographic Profile		Frequency	Percent	Valid Percent	Cumulative Percent
Age	60-69	13	43.3	43.3	43.3
	70-79	11	36.7	36.7	80.0
	80-89	6	20.0	20.0	100.0
	Total	30	100.0	100.0	
Gender	Male	17	56.7	56.7	56.7
	Female	13	43.3	43.3	100.0
	Total	30	100.0	100.0	
Marital Status	Married	14	46.7	46.7	46.7
	Single	12	40.0	40.0	86.7
	Widowed	4	13.3	13.3	100.0
	Total	30	100.0	100.0	
Number of Children	0	18	60.0	60.0	60.0
	1	10	33.3	33.3	93.3
	≥2	2	6.7	6.7	100.0
	Total	30	100.0	100.0	
Level of Education	None	7	23.3	23.3	23.3
	Primary	8	26.7	26.7	50.0
	Secondary	9	30.0	30.0	80.0
	Tertiary	6	20.0	20.0	100.0
	Total	30	100.0	100.0	
Previous Employment	Government	8	26.7	26.7	26.7
	Private	10	33.3	33.3	60.0

Sector	Self-employed	9	30.0	30.0	90.0
	Unemployed	3	10.0	10.0	100.0
	Total	30	100.0	100.0	
Pension	Yes	11	36.7	36.7	36.7
	No	19	63.3	63.3	100.0
	Total	30	100.0	100.0	
Economic Status	Poor	5	16.7	16.7	16.7
	Intermediate	16	53.3	53.3	70.0
	Good	9	30.0	30.0	100.0
	Total	30	100.0	100.0	
Outdoor Leisure Activity	Yes	16	53.3	53.3	53.3
	No	14	46.7	46.7	100.0
	Total	30	100.0	100.0	
Present Health Status	Yes	6	20.0	20.0	20.0
	No	24	80.0	80.0	100.0
	Total	30	100.0	100.0	

As shown in Table 1, the age of the 30 study participants ranged from 60 to 89, 43.3 % were aged were aged 60 to 69 years, 36.7 % were aged 70 to 79 years and 20.0 % were 80 to 89 years. 56.7 % were male and 43.3 % were females. 46.7 % of the respondents were married, 40.0 % were single and 13.3 % were widowed. 60.0 % of respondents no child, 33.3 % had 1 child and 6.7 % had 2 children or more. 30.0 % of the respondents had secondary education, while 26.7 % had primary education, 23.3% no education and 20.0 % had tertiary education. 26.3 % of the respondents previously worked in the government and 33.3 % had worked in private sector, while 30.0 % were self-employed, and 10.0 % were unemployed. 36.7 % of the respondents were receiving pension and 63.3 % were not receiving pension. 30.0 % perceived their economic status as good, 53.3 % reported an intermediate, and 16.7 % reported poor economic status. The respondents engaged in outdoor leisure activities were 53.3 % and 46.7 % were none. Present health status, 80.0 % were in good and 20.0 % were in bad health conditions.

Table 2: Comparison of WHOQOL-BREF domains score with socio-demographic factors (n = 30, p < 0.05 significant)

Socio-demographic characteristic	Physical Health Mean ± SD	Psychological Health Mean ± SD	Environmental Mean ± SD	Social Relationship Mean ± SD
Age				
60-69	3.4505±0.26	3.5495±0.44	3.6264±0.84	3.5641±0.50
70-79	3.3247±0.31	3.7662±1.29	3.3377±0.85	3.5455±0.54
80-89	3.2857±0.43	3.7857±1.76	3.0238±0.76	3.3333±0.30
P	0.24	0.62	0.14	0.39
Gender				
Male	3.3782±0.56	3.2605±085	3.4118±0.45	3.3613±0.34
Female	4.0659±1.48	3.5824±0.81	3.6410±0.50	3.3846±0.28
P	0.84	0.99	0.31	0.20
Marital Status				
Married	3.5000±0.24	3.5816±0.38	3.7551±0.62	3.5476±0.48
Single	3.3452±0.33	3.7024±1.26	3.3214±0.92	3.5556±0.52
Widowed	3.0000±0.20	3.9286±2.26	2.3929±0.21	3.2500±0.32
P	**0.04**	0.59	**0.00**	0.40
Number of Children				
0	3.3730± 0.33	3.5635±1.07	3.3413±0.89	3.5741±0.48
1	3.3571±0.31	3.9143±1.27	3.5000±0.86	3.4667±0.50
>2	3.4286±0.40	3.5000±0.10	3.4286±0.00	3.1667±0.24
P	0.94	0.66	0.70	0.27
Level of Education				
None	3.4898±0.33	4.0204±1.58	3.3673±0.93	3.6667±0.51
Primary	3.1786±0.36	3.1786±0.41	2.9464±0.74	3.2917±0.28
Secondary	3.4286±0.25	3.9365±1.29	3.6349±0.75	3.5926±0.52
Tertiary	3.4048±0.25	3.5476±0.64	3.6905±0.90	3.5000±0.59
P	0.96	0.81	0.24	0.86
Previous Employment Sector				
Government	3.4643±0.24	3.5893±0.55	3.8750±0.80	3.7917±0.53
Private	3.3429±0.35	4.3143±1.62	3.2286±0.72	3.4000±0.52
Self-employed	3.3175±0.36	3.1746±0.41	3.0952±0.83	3.3333±0.37

Unemployed	3.3810±0.33	3.2857±0.74	3.6190±1.15	3.6667±0.00
P	0.48	0.29	0.24	0.25
Pension Status				
Yes	3.4026±0.23	3.3896±0.59	3.5974±0.83	3.5455±0.50
No	3.3534±0.36	3.8421±1.29	3.2857±0.84	3.4912±0.48
P	0.69	0.28	0.23	0.77
Economic Status				
Poor	3.3143±0.27	3.8857±1.96	2.9714±0.80	3.4000±0.43
Intermediate	3.4375±0.28	3.6339±1.05	3.4643±0.73	3.5208±0.47
Good	3.2857±0.39	3.6349±0.60	3.5238±1.04	3.5556±0.55
P	0.68	0.73	0.30	0.59
Outdoor Leisure Activity				
Yes	3.4286±0.33	3.8304±1.05	3.6429±0.84	3.7083±0.50
No	3.3061±0.29	3.5000±1.16	3.1224±0.77	3.2857±0.34
P	0.29	0.42	0.09	**0.01**
Illness				
Yes	3.3571±0.31	3.0476±0.49	3.2381±0.89	3.3889±0.44
No	3.3750±0.32	3.8333±1.15	3.4405±0.83	3.5417±0.49
P	0.70	0.43	0.93	0.76

Table 2 shows the association between socio-demographic factors and WHOQOL-BREF score of various domains.

Older adults, 60 to 69 years, better QOL scores in physical health, environmental and social relationship but not psychological health. Older adults, 70 to 79 years QOL scores, only moderate in all domains but older adults, 80 to 89 years, QOL scores better in psychology health and lower in other three domains. Not even one domain in QOL scores significantly associated with independent variable age.

Female gender showed better QOL score in all domains when compared to male. No domain scores were significantly associated with independent variable gender.

Married older adults were showed better QOL scores in physical health and environmental domains, psychological health and social relationship were moderate. Single older adults showed better QOL scores in psychological health and social relationship and physical health and environmental were moderate. Widowed older adults showed highest QOL scores in psychological domains but lowest QOL scores in other three domains. The physical health and environmental domains scores were significantly associated with independent variable marital status but not psychological health and social relationship domains scores.

Older adults without children, showed better QOL scores in social relationship domain and moderate scores in physical health, psychological health and environmental. Older adults with single child showed better QOL scores in psychological health and environmental domains but moderate scores in social relationship domain and also lowest scores in physical health domain. Older adults with two and more children showed better QOL scores in physical health domain, moderate scores in environmental domain and lowest score in psychological health and social relationship domains. No domain scores were significantly associated with independent variable number of children.

Older adults without education, showed highest QOL scores in physical health, psychological health and social relationship domains but lower scores in environmental domain. Older adults with primary education, showed lowest QOL scores in all domains but older adults with secondary education showed second highest QOL scores in all domains. Older adults with tertiary education, showed moderate QOL scores in all domains. No domain scores were significantly associated with independent variable level of education.

Older adults' previous employment in government sector, showed highest QOL scores in physical health, environmental health and social relationship but moderate scores in psychological health. Older adults' previous employment in private sector highest QOL scores in psychological domain and lower scores in physical health, environmental and social relationship domains. Self- employed older adults showed lowest QOL scores in all domains but unemployed older adults showed moderate QOL scores in physical health and environmental health and social relationship domains and lower scores in psychological health domain. No domain scores were significantly associated with independent variable previous employment sector.

Older adults with pension showed better QOL scores in all domains scores except in psychological health domain scores. Older adults without pension showed better QOL scores only in psychological health domain scores. No domain scores were significantly associated with independent variable pension.

Older adults with poor economic status showed higher QOL scores in psychological health domain, moderate scores in physical health and lower scores in environmental and social relationship domains. Older adults with intermediate economic status showed higher scores in physical health domain, moderate scores in environmental and social relationship domains and lower scores in psychological domain. Older adults with good economic status showed better QOL scores in environmental health and social relationship domains, moderate scores in psychological health domain and lower score in physical health domain. No domain scores were significantly associated with independent variable economic status.

Older adults those involved in outdoor leisure activity showed higher QOL scores in all domains. The social relationship domain scores were significantly associated with independent variable outdoor leisure activity but not psychological health, physical health and environmental domains scores.

Older adults without illness showed better QOL scores in all domains. No domain scores were significantly associated with independent variable illness.

Table 3: Overall WHOQOL-BREF score in all domains

Domains	Mean ± SD
Physical	3.3714±0.31
Psychological	3.6762±1.10
Environment	3.4000±0.83

Social	3.5111±0.48

Table 3 shows the overall mean score in all domains. The highest mean QOL score, 3.6762±1.10, was in psychological health domain and lowest was in physical health domain, 3.3714±0.31. The two other domains scores were, social relationship score was 3.5111±0.48 and environmental score was 3.4000±0.83.

Discussion

This study highlighted the fact that overall QOL. The highest mean QOL score, 3.6762±1.10, was in psychological health domain and lowest was in physical health domain, 3.3714±0.31. The two other domains scores were, social relationship score was 3.5111±0.48 and environmental score was 3.4000±0.83. A study conducted by Apidechkul (2011) in semi-urban area of Thailand found that subjects had a higher QOL score in aspect to physical health, mental health and social relationships compared to rural area.]. A study by Vitorino (2012) showed that older adults in long stay care facilities had higher social relationship score. A study among epilepsy subjects found that the mean total score of the QOL scale was higher than this study (Rakesh et al. 2012).

Older adults, 60 to 69 years, better QOL scores in physical health, environmental and social relationship but not psychological health. Older adults, 70 to 79 years QOL scores, only moderate in all domains but older adults, 80 to 89 years, QOL scores better in psychology health and lower in other three domains. Not even one domain in QOL scores significantly associated with independent variable age. According to Marzo et al., (2022) and Converso et al., (2023) Aging also increases physical and financial dependencies as older adults lose their ability to work, lose their jobs, and, most importantly, their primary income sources. Pan et al (2017) claimed, having a secondary income source becomes a necessity to cover daily expenses and the high cost of medical and nursing care during the stage of older adulthood. A study by Barua, A (2007) found that age independently, influence the QOL score with older age-group had lesser QOL score similar to another study.

Female gender showed better QOL score in all domains when compared to male. No domain scores were significantly associated with independent variable gender. In a study conducted by Qadri *et al*. (2013) in Ambala district, Haryana, it was found that either gender had statistically significant different scores with higher scores for males. In a study by Thadathil *et al*. (2015) conducted in Kerala in a rural setup, it was observed that males had statistically significant higher scores for QOL as compared to female participants. In a study by Shekhar *et al*. (2017), a similar pattern was again observed when the elderlies were assessed in Jammu. According to Call et al. (2018), men prefer to self-medicate and engage in risk-taking behaviors to cope with their problems. Griffith, D.M., et al.,(2019), claimed, aside from physical well-being, psychological and social well-being are important aspects of men's health.

In the present study, participants living with their spouses had higher mean scores in each domain when compared with those who lived alone. Married older adults were showed better QOL scores in physical health and environmental domains, psychological health and social relationship were moderate. Single older adults showed better QOL scores in psychological health and social relationship and physical health and environmental were moderate. Widowed older adults showed highest QOL scores in psychological domains but lowest QOL scores in other three domains. The physical health and environmental domains scores were significantly associated with independent variable marital status but not psychological health

and social relationship domains scores. In a study conducted by Sowmiya and Nagarani (2012), was found that the married elderly living with their spouses had better QOL scores as compared to others for the physical, social, and environmental domains. In a study by Kumar *et al*. (2014), on the geriatric population from urban areas of Puducherry, it was observed that those elderlies who lived with their partners had higher mean scores in all the domains as compared to the singles, widowers, widows or separated. A study conducted by Limbers, C.A.et al., (2020) showed that married individuals were more likely to have better quality social relationships than single individuals. Another study conducted in the Netherlands found that better social relationship quality among married individuals was associated with intimacy and social relationships between partners (Gobbens, R.J.J., 2019). The findings of this study are particularly important for older women, who tend to have higher life expectancies than men and may experience reduced social relationship quality when living alone in later years. Also a study by Barua et al (2007) overall well-being was significantly affected for those who were not living with spouse similar to another study. A study by Kowalska et al (2013), showed that the best qualities of life in the environmental domain were those of married people, white collars, and persons who declared their health status to be the best. Finally, Alexandre et al (2009) claimed, studies have shown that psychological factors and socio-demographic characteristics such as marital status and others had an impact on QOL of elderly population.

Older adults without children, showed better QOL scores in social relationship domain and moderate scores in physical health, psychological health and environmental. Older adults with single child showed better QOL scores in psychological health and environmental domains but moderate scores in social relationship domain and also lowest scores in physical health domain. Older adults with two and more children showed better QOL scores in physical health domain, moderate scores in environmental domain and lowest score in psychological health and social relationship domains. No domain scores were significantly associated with independent variable number of children. Beridze et al (2020) and Woolf et al (2019) claimed, loneliness and social isolation can ultimately reduce the psychological health quality of older men, which may contribute to their higher mortality rate and lower life expectancy compared with women.

Older adults without education, showed highest QOL scores in physical health, psychological health and social relationship domains but lower scores in environmental domain. Older adults with primary education, showed lowest QOL scores in all domains but older adults with secondary education showed second highest QOL scores in all domains. Older adults with tertiary education, showed moderate QOL scores in all domains. No domain scores were significantly associated with independent variable level of education. A study by Crandall, R. (2020), revealed that that better education provides career opportunities with higher salaries, and this is often related to higher levels of occupational stress and poorer workplace relationships. In a study by Sowmiya and Nagarani (2012), it was observed that literate elderlies had a better QOL domain score when compared with illiterates. In a study conducted by Qadri *et al* (2013), in rural Haryana, the researchers concluded that the educational status of their study population was associated significantly with a higher mean score for every QOL domain. Thadathil *et al*. (2015), observed a similar pattern where, as the level of education increased among the study participants, the mean score for QOL increased. Vitorino et al (2012) found that older adults who are younger with higher levels of schooling had better perceptions of their QOL. Crandall (2020) claimed that better education provides career opportunities with higher salaries, and this is often related to higher levels of occupational stress and poorer workplace relationships.

Older adults' previous employment in government sector, showed highest QOL scores in physical health, environmental health and social relationship but moderate scores in psychological health. Older adults' previous employment in private sector highest QOL scores in psychological domain and lower scores in physical health, environmental and social relationship domains. Self- employed older adults showed lowest QOL scores in all domains but unemployed older adults showed moderate QOL scores in physical health and environmental health and social relationship domains and lower scores in psychological health domain. No domain scores were significantly associated with independent variable previous employment sector. Thadathil *et al.* (2015) showed that the employed participants from their study too had higher mean scores as compared to the unemployed participants. In their study, this association between the domains and the employment status was found to be statistically significant. In a study conducted by Soni *et al* (2016), it was observed that the employed participants had higher mean scores for QOL in each domain.

Older adults with pension showed better QOL scores in all domains scores except in psychological health domain scores. Older adults without pension showed better QOL scores only in psychological health domain scores. No domain scores were significantly associated with independent variable pension. The Civil Service Pension Scheme only covers workers in public sectors, or around 11% of the elderly. The pensioner's health status and standard of living depend on good financial conditions. Adequate pension assistance decreases the mental anxiety for the elderly and improves their health and QOL (Tey et al., 2016). Older adults with poor economic status showed higher QOL scores in psychological health domain, moderate scores in physical health and lower scores in environmental and social relationship domains. Older adults with intermediate economic status showed higher scores in physical health domain, moderate scores in environmental and social relationship domains and lower scores in psychological domain. Older adults with good economic status showed better QOL scores in environmental health and social relationship domains, moderate scores in psychological health domain and lower score in physical health domain. No domain scores were significantly associated with independent variable economic status. According to Marzo, R.R. et al., (2022) and Converso, D. et al., (2023) Aging also increases physical and financial dependencies as older adults lose their ability to work, lose their jobs, and, most importantly, their primary income sources. Pan, X. et al (2017) claimed, having a secondary income source becomes a necessity to cover daily expenses and the high cost of medical and nursing care during the stage of older adulthood. Masud et al (2012) observed that monetary contribution from children remained the main source of income for the majority of the older persons in Malaysia, which may explain the significant role of household income in determining the QOL in older persons. A study by Rathnayake et al (2015) concluded that insufficient or low household income was highly associated with poverty that would affect well-being and QOL, including economic, physical, psychological, and social well-being, and deprive older adults from proper care, particularly when the public programmers for old-age security were limited in Malaysia

Older adults those involved in outdoor leisure activity showed higher QOL scores in all domains. The social relationship domain scores were significantly associated with independent variable outdoor leisure activity but not psychological health, physical health and environmental domains scores. Raggi et al (2016) and Sajin et al (2016), observed that the positive effects of social relationships, including social network, resources, integration, and support, either from families, friends, and communities on QOL in old age was widely reported in numerous local and international studies.

In the present study, a higher score in each domain was found among participants without illness. The association of psychosocial and social domains with no illness was found to be higher scores. The association of the all domain with illness was also found to be statistically not significant. In a study conducted by Kumar et al (2014), in an urban setup in Puducherry, observed that the absence of illness was concurrent with a higher mean score for QOL among elderlies. Also in a study conducted by Thadathil *et al.* (2015), the participants who suffered from no other comorbidity had a higher mean score for QOL. This association was found to be statistically significant.

Limitation

The most important weakness of this study is the small sample size (a pilot study). Up-to-date data set acquired through a whole population survey of older adults that comprised a substantial variety of QOL factors. However, this small size sample, face-to-face survey can yield high-quality data amongst older adults. All returned questionnaires were filled out with great care.

Thus, this work also has some limitation. Firstly, the selection bias may have influenced the results, as the sample was predominantly composed of participants from specific demographic backgrounds and settings and may not have been representative of the entire population. Secondly, the validity and reproducibility of the tool used in this study merit further examination. Although the instrument has been used previously in similar research, it is essential to confirm its reliability and validity across different populations and settings'. Lastly, the external validity of the results and conclusions should be thoroughly assessed. The generalizability of the findings to other populations or settings may be limited due to the specific characteristics of the sample and the context in which the study was conducted.

Conclusion

The present study was conducted among older adults residing in urban areas of the Sungai Petani district of Kedah, Malaysia, using the English, Malay and Tamil versions of the WHOQOL- BREF questionnaire. The psychometric properties of this questionnaire were assessed by calculating the reliability and validity through Cronbach's alpha and factor analysis. This WHOQOL-BREF questionnaires was found to be reliable and valid.

This study highlighted the fact that overall QOL. The highest mean QOL score was in psychological health domain and lowest was in physical health domain. The two other domains scores were, social relationship score and environmental score were average. Social and physical recreational activities will help in building better QOL. Long life education and awareness with regard to activity and environmental changes and increase in social relationship may help in improving the QOL among the older adults population. Further analytical studies will help in understanding the association of factors influencing QOL scores.

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