Assessing Quality of Life of the Residents of a Community in Manila Using the WHOQOL-BREF Tool

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ABSTRACT

The purpose of this study was to describe the quality of life of the residents of Barangay 738, Zone 80, San Andres Bukid, Manila. Descriptive research was employed and the sample size was determined through the online version of OpenEpi software which marked three hundred sixty-two (362) respondents. Cluster sampling was utilized in the selection of respondents using the houses as clusters. A spot map and a copy of the population census were obtained from the barangay chairman and city health physician in the community. The brief version of the World Health Organization Quality of Life Instrument (WHOQOL-BREF) was used for the survey. Results marked high values of scores in the WHOQOL-BREF and indicated an improvement in the quality of life among the residents of Barangay 738 after receiving health projects from Emilio Aguinaldo College (EAC) School of Physical, Occupational and Respiratory Therapy. The study also noted that the community residents were prone to quality of life dissatisfaction because of daily exposure to various intrinsic and extrinsic factors in their everyday living. The health literacy provided by EAC School of Physical, Occupational and Respiratory to its partner community for nine years, Barangay 738, has addressed such dissatisfaction and has improved the quality of life of the residents.

Keywords: *quality of life, health, public health, community, perception*

INTRODUCTION

The World Health Organization (WHO) (1996) defined the term "quality of life" as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns." Being a broader term encompassing an individual's health condition in social, cultural and environmental contexts, this term emphasizes the need to assess health and well-being using a holistic approach.

One of the tools in assessing quality of life is the WHOQOL-100. WHO developed this tool in order to target quality of life per se, instead of focusing on the presence or absence of disease, and its impact. However, WHOQOL-100 may be too long for use because of its 100 items. Because of this, WHO developed a shortened version of WHOQOL-100, which is named WHOQOL-BREF. The WHOQOL-BREF has 26 facets, covering 4 domains: physical health, psychological health, social relationships, and environment. The physical health domain has 7 facets, which focus on activities of daily living, mobility, substance dependence, energy and fatigue, sleep, and pain and discomfort. The psychological health domain has 6 facets, which are bodily image and appearance, presence of negative and positive feelings, self-esteem, spirituality and religion, and cognitive functions such as thinking, learning, memory, and concentration. The social relationships domain revolves around personal relationships and sexual activity. Lastly, the environmental domain has the following facets: home and physical environment; transport; financial resources; accessibility and quality of health and social care; freedom, physical safety and security; opportunities to participate in activities for leisure and recreation; and opportunities for educational activities (WHO, 1996).

Emilio Aguinaldo College-Manila together with the collaboration with faculty and students under the School of Physical, Occupational, and Respiratory Therapy conducted health projects for nine years in its partner community, Barangay 738 Zone 80, San Andres Bukid, Manila. Application of concepts and theories about public health, health promotion and disease prevention at community level were done through implementation of approved health projects based on the identified health problems listed from the results of tallying during the initial phase of community immersion. All health programs were conducted as teaching-learning strategies for the course, these activities were also organized for the benefit of the partner community. It is important to note that the partner community is also considered here as a stakeholder in health promotion and education, and therefore, should contribute to evaluating these projects. Thus, there is a need to determine the quality of life by the residents by impact on these interventions using WHO-QOL tool.

Determining quality of life of members of the community is vital in planning, implementing, and continuing community health programs. However, despite the prevalence of community health promotion and education programs and projects conducted by different sectors and organizations, there is still a lack of local published studies documenting assessment of quality of life of Filipinos. Further published studies on the use of WHOQOL-BREF in assessing quality of life of residents in urban communities are also warranted. Thus, this study aims to assess the quality of life using WHOQOL-BREF according to four domains among residents of an urban community in Manila. Results of this study would provide a basis for community health workers in planning and implementing health promotion and disease prevention programs that will improve the quality of life of people residing in the community. Furthermore, these would also serve as a basis in moving to a new community and for community partner in the future.

MATERIALS AND METHODS

Study design. This study is descriptive and survey was conducted in Barangay 738 Zone 80, San Andres Bukid, Manila. Barangay 738 Zone 80, San Andres Bukid, Manila which has been a partner community of the college since 2007.

Participants. San Andres Bukid is second to the most populated community in the City of Manila, aside from Tondo. This area covers both commercial and residential districts with private and public housing, and with people with low socioeconomic status. According to the City of Manila census last March 2015, there were about 6,000 people living in the area. Three hundred sixty-two (362) residents were involved in the study. The online version of OpenEpi software (http://www.openepi.com/SampleSize/SSPropor.htm) was used in determining sample size. Cluster sampling was used in the selection of respondents using the houses as clusters. A spot map and a copy of the population census was acquired from the barangay captain and city health physician assigned in the community. However, to participate in the study, the resident should have the following inclusion criteria:

1. Able to communicate in either English or Tagalog;
2. Should be at least 18-65 y/o; and
3. Attended at least one of the health education projects conducted by the students.

Instrumentation. The brief version of the World Health Organization Quality of Life Instrument (WHOQOL-BREF), an abridged version of WHOQOL-100 assessment, was the tool for the survey. This tool was deemed as excellent in evaluating community-based interventions in a study of Dronavalli and Thompson (2015). Although they noted a concern on the tool's internal consistency, the tool having the Cronbach's α 0.68-0.82 in all domains, the authors considered its good test-retest reliability and good criterion, content, and construct validity. They also considered WHOQOL-BREF as ideal for a detailed assessment, especially of the person and his role in the community.

Procedures. The researchers sent a communication to WHO representative Sibel Volkan under WHOQOL - Information, Evidence, and Research (IER) Department on permission to use WHOQOL-Bref. Mrs. Volkan gave the researchers and EAC-Manila the permission to use the questionnaires at no cost. The researchers signed a user-agreement form and submitted the signed copy at WHO. Part of the agreement was that the researchers must provide WHO a copy of the data collected at the end of the study. WHO sent the researchers of English and Filipino versions of the WHOQOL - Bref, along with related materials. The proposal of this study was submitted at Research Center for review and approval for implementation.

The English version of the WHOQOL-BREF tool was pilot-tested in the community from April to May 2016 prior to implementation. Pilot-testing of the tool was conducted by one of the researchers and her students enrolled in Healthcare 1 from April to May 2016. Feedback given on the use of the tool focused more on how to ask the questions stated in the tool. Both the interviewer and interviewee could easily understand the questions stated in the tool. After receiving the Filipino version of the tool, the researchers administered it through an interview, with the assistance of physical and occupational therapy students enrolled in the second-year community introductory course. These students were trained by the researchers prior to deployment. The researchers also supervised these students in the community.

All data, including the pilot tested and actual data gathered from the informants of the study, were stored safely in the researcher's laptop computer, Windows 10 Home version which is encrypted with a password and can only be accessed by the researcher herself. The identity of the informants was concealed for the purpose of the study and their fortification.

Data analysis. Instructions on scoring the WHOQOL-BREF were followed in checking and computing domain scores. Microsoft Excel version 10 data analysis was used in computing and analyzing data. The Receiver-Operating Characteristic curve (ROC) was also utilized for assessing the perceived quality of life and satisfaction with health. This tool was created and published by Silva et al (2014) that evaluate the diagnostic capacity of a different cut of points of quality of life (QoL) to predict good QoL/ satisfied or poor QoL/dissatisfied among the participants.

RESULTS

The analysis of HR-QOL was interpreted using WHOQOL-BREF instructions, World Health Organization (1996). There were three hundred-twenty-six (326) ambulatory community-dwelling adults who were successfully interviewed from December 2016 to March 2017. Three hundred twenty-four (324) participants remained in the study after data encoding, checking and cleaning was accomplished in Microsoft Office Excel version 10.

Table 1 Socio-Demographic Characteristics of the Residents in Barangay 738 Zone 80 San Andres Bukid Manila, Philippines, March 2017

Category	No.	(%)
Mean Sex		
Male	228	70
Female	96	30
Mean Age	42.09	--
SD	14.17	
Civil Status		
Single	41	13
Married	148	46
Partner	88	27
Separated	23	7.1
Widow/Widower	16	4.9
No answer	8	2.5
Education		
Elementary	26	8
High School	186	57
College	88	27
Vocational	17	5.2
Out of school	4	1.2
Others	3	0.9
No answer		
Employment		
Employed	132	41
Unemployed	187	58
No answer	5	1.5
Occupational Classification		
Household personnel	147	45
Small scale business	57	18
Service crew	14	4.3
Skilled worker	27	8.3
Office worker	11	3.4
Safety officer	6	1.9
Professional	7	2.2
Others	6	1.9
No answer	49	15
Income Source		
Pension	19	5.9
Savings	78	24
Support form partner	105	32
Support from children	39	12
Support from grandchildren	0	0
Others	48	15
Multiple sources	22	6.8
No answer	10	3.1

As shown in Table 1, respondents that marked high number in the different categories were: male with 228 (70%), mean age with 42.09, married with 148 (46%), high school graduate with 186 (57%), unemployed with 187 (58%), household personnel with 147 (45%), and income source from support of their partners with 105 (32%).

The method for converting raw scores into transformed scores stated in the manual published by WHO (1996) was used in order to determine the quality of life profile. According to WHO, higher scores mean higher QOL. These determined scores are shown in Table 2.

Table 2. Satisfaction with Domains of QOL

Domains of QOL	n = 324	
	Mean Raw Scores (SD)	Transformed Scores*
Domain 1 Physical Health QOL	26 (4.01)	69
Domain 2 Psychological QOL	24 (3.55)	75
Domain 3 Social relationships QOL	11 (2.23)	69
Domain 4 Environment QOL	27 (4.95)	63

*Transformed scores were derived by encoding mean raw scores per domain in the Excel sheet calculator to transform WHOQOL-BREF domain scores into the 0-100 scores. This was retrieved from http://www.who.int/mental_health/media/en/76.pdf.

Based on the table, the highest transformed score was 75, which is found in the psychological domain. The second highest transformed score (69) is found in the physical health, and social relationships domains. The environmental domain, on the other hand, has the lowest transformed score, which is 63.

Table 3. Responses of Residents of Barangay 738 Zone 80 to the Question "Anu-ano ang mga bagay na makakadagdag ng kalidad sa inyong buhay?"

Responses	Freq.	%
Better finances/ source of income	118	33
Changes in behavior (e.g. striving harder)	47	13
Health	31	9
Relationships	31	9
Having new material possessions (e.g., house and lot)	15	4
Education	14	4
Faith/ Religion	7	2
Environment	7	2
Having enough and better government services	3	1
Nothing can improve quality of life.	32	9
No specific answer	53	15
Total	358	100

Tables 3 and 4 show the responses of residents of Barangay 738 Zone 80 to the open-ended questions located at the last page of the Filipino version of the tool. These questions are not available in the original English version of the tool. Responses for the question “Anu-ano ang mga bagay na makakadagdag ng kalidad sa inyong buhay?” (“What are the things that can add up to the quality of your life?”) are shown in Table 3. Based on the results in Table 3, one hundred-eighteen responses stated that they have better finances followed by unspecified answers that accounts 53 responses.

Table 4. Responses of Residents of Barangay 738 Zone 80, San Andres Bukid, Manila to the Question “Paano sa inyong palagay maitataas ang kalidad ng inyong buhay?"

Responses	Freq.	%
Getting a better source of income	89	26
Change in behavior (e.g., persevering)	97	28
Engaging with the government	5	1
Prioritizing education	14	4
Improving relationships with family members	13	4
Saving up money	9	3
Having good health and nutrition	19	5
Having good shelter and new possessions	7	2
Nothing needed to improve quality of life	28	8
No specific answer	67	19
Total	348	100

Responses for the question “Paano sa inyong palagay maitataas ang kalidad ng inyong buhay?” (“How do you think can you improve the quality of your life?”) are shown in Table 4. Ninety-seven responses involve change in behavior, meaning that a person should strive harder or be more knowledgeable and eighty-nine responses stated that they should have better source of income in order to improve quality of life.

One of the open-ended questions at the last page of the tool asked for the amount of time and assistance taken in order to finish the tool. One hundred forty-six (146) respondents (45%) did not need any assistance in finishing the tool, while one hundred seventy-eight (178) respondents (55%) needed assistance. The mean time needed to finish the tool is 12.5 minutes ± 6.1 minutes.

Table 5. Frequency for the General Questions Excluded in the WHOQOL- BREF Analysis

Self-perceived quality of Life Questions	Category of Responses					Mean SD
	Lubhang Hindi Kontento (n)	Hindi Kontento (n)	Medyo Kontento (n)	Kontento (n)	Sobrang Kontento (n)	
Q1 Gaano kayo ka kontento sa kalidad ng inyong buhay?	6	21	145	107	45	3.5 (0.88)
Q2 Gaano po kayo kakontento sa inyong kalusugan?	6	26	125	109	58	3.5 (0.94)
Q27 Gaano kayo ka kontento sa ganda ng iyong buhay?	5	16	118	105	79	3.7 (0.94)

Table 5 shows the frequency, mean scores, and SD of the WHOQOL-BREF overall scores. These are the general questions that are excluded in the WHOQOL-BREF analysis, specifically Q1, Q2, and Q27. Q1 and Q2 are questions that are also available in the original English version of the tool. Q1 asks for the respondent's perceived overall quality of life, while Q2 asks for the respondent's satisfaction with his or her health. Q27, however, is not available in the original English version of the tool, but is available in its Filipino translation. It asks, "*Gaano kayo ka-kontento sa ganda ng iyong buhay*?" (How satisfied are you with your life?)

As shown in Table 5, 44.8% of the respondents stated that they are neither satisfied nor dissatisfied with their overall quality of life. Meanwhile, the mean score for overall quality of life is 3.5, which means that the respondents may be slightly satisfied with their overall quality of life. More than thirty-eight percent (38.6%) of the respondents stated that they are also neither satisfied nor dissatisfied with their health. The mean score for health satisfaction is also 3.5, which means that the respondents may be slightly satisfied with their health. One-hundred eighteen respondents (36.4%) stated that they are also neither satisfied nor dissatisfied with their life. The mean score for life satisfaction (Q27), which is 3.7, is slightly higher than the mean scores for overall quality of life and health satisfaction.

DISCUSSION

The main finding of this study showed that the participants has an overall rating of 69 perceived quality of life. According to the World Health Organization, higher domain scores in WHOQOL-BREF indicate a higher quality of life. Based on the transformed scores in Table 2, the participants generally have a good quality of life, using the cutoff stated in a study conducted by Silva et al (2014) on Receiver-Operating Characteristics Curve (ROC). According to Silva et al (2014), a diagnostic cut off <60 for the overall quality of life obtained is an excellent sensitivity and negative predictive value for tracking the worse quality of life and dissatisfied with health. Silva et al stated that the higher the score obtained by the respondents of the study, the better the quality of life these respondents have. Using this cutoff as the basis for this study in comparing the transformed scores

for each domain, the respondents had a better quality of life. The responses of the respondents to the open-ended questions at the last page of WHOQOL-BREF may validate the transformed scores, especially the number of unspecified responses. Some respondents even mentioned that they are contented with what they have, hence the lack of a specific response.

Having the good quality of life among the respondents in Barangay 738 Zone 80, San Andres Bukid, Manila may be attributed to higher health literacy as an effect of undergoing health promotion and education activities conducted by the local government. According to a survey conducted by Wang, et al. (2013) among mothers in a Chinese poor minority area, poor health-related quality of life was associated with low health literacy. They also suggested that health literacy can be improved through health promotion interventions such as disseminating new knowledge and skills, and standardizing and simplifying health-related information. This is also suggested by the study of Gough, et al (2018) showed that there were improvements of knowledge transfer on mental health through application of this information using the following means, sharing evidence, lifestyle coaching, and goal setting to both individual and group settings on health behaviors and outcomes. Baghianimoghadam, et al. (2009), Tappenden, et al. (2012), and Ekwaru, Ohinmaa, & Veugelers (2016) stated the effect of health promotion and education on improving quality of life. This study was also supported by Sefcik, et al. (2016) that healthcare professionals working in the community setting plays a vital role in client engagement in care coordination program especially in changing the quality of life among older adults.

Despite the low score for the environmental domain, the results showed that the participants had generally positive responses on their self-reported quality of life and health satisfaction. These findings were anchored in the study of Pocnet et al (2017) stated that specific personality traits have significant direct and indirect effects on QoL, mediated by emotion regulation and self-efficacy. This is the first study to demonstrate that both emotion regulation and self-efficacy are important mechanisms that link specific personality traits to QoL, suggesting that they channel and modulate the personality effects. Thus, giving the positive responses of the participants even if they have low scores for the environmental domain. These results of this study are comparable with the study of Purba, et al (2018) on the quality of life of people living in an urban community along one of the major rivers in Jakarta, Indonesia. This study reported positive outcomes on their self-reported quality of life and health satisfaction despite that the respondents had poor living conditions. However, the respondents in the study of Purba, et al reported a low score in the physical domain.

Although the environmental domain scored the lowest among the four domains, the respondents did not state that moving out from the barangay would help them improve their quality of life. In fact, 2% of the responses to the question “How do you think can you improve your quality of life?” focused on having good shelter and new possessions. In this question, they were more focused on the need in changing their behaviors or their outlook in life. Considering that 58% of the respondents were unemployed, they were also focused on the need for better sources of income.

CONCLUSION

Community residents are more predisposed to the quality of life dissatisfaction because of daily exposure to various intrinsic and extrinsic factors in their community and everyday life undertakings. Addressing daily life challenges and prevention of dissatisfaction may include health literacy that focuses on knowledge transfer on mental health, acquiring knowledge and skills in managing one’s own health and, lifestyle coaching, and goal setting to both individual and group settings on health behaviors and outcomes. Health literacy as being provided by Emilio Aguinaldo

College – School of Physical, Occupational and Respiratory to Barangay 738 Zone 80, as its partner community for nine years resulted in perceived good quality of life.

RECOMMENDATIONS

For research

1. It is recommended to explore the association of the domains of WHOQOL-BREF in this study.
2. Conduct of needs analysis could also be done to address the specific needs of community health workers and barangay officials
3. Conduct a study that would identify the factors that affect the quality of life of the residents of Barangay 738, Zone 80.

For community health workers/ faculty members

1. Awareness and feasible program on environmental health such as educational and training programs for community workers, local government officials and residents regarding disaster, waste and population management.
2. Education of community members that focuses on health-related behavior.
3. Proper training on community health workers that will improve the skills and delivery of health services in the community.
4. Personal drive for health and wellness is also important to prevent the occurrence of diseases.

For industry partners and developers

1. Encourage other stakeholders to develop projects that will enhance the functional capabilities of the citizen to effectively pursue their self-defined wellbeing.

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