PSYCHOSOCIAL CHARACTERISTICS OF SUCCESSFUL AGERS AMONG FILIPINO SENIOR CITIZENS IN SIX DISTRICTS OF QUEZON CITY FROM JUNE-OCTOBER 2017

Czarinah P. Pagay, MD, Pia Natalia Reyes- Sia, MD, FPPA

ABSTRACT

OBJECTIVES: To describe the socio-demographic and psychological characteristics of self-rated successful agers among seniors 60 years old above in Quezon City Philippines. **METHODOLOGY:** The sample (N=346) was obtained from a random sampling of voluntary attendees invited to a mental health screening program scheduled in six districts spanning from June to October of 2017. Proposed psychosocial factors of healthy aging were assessed through demographics and the following scales:1)-Montreal Cognitive Assessment Test in Pilipino (MOCA-P), 2) Hospital Anxiety and Depression scale in Pilipino (HADS-P), 3) Connor-Davidson Resilience Scale (CDR-10) and 4) World Health Organization Quality of Life using (WHOQOLBREF). Successful Agers were defined as participants who scored themselves seven or above (≥7) in the Self-Rated Successful Aging (SRSA) scale. **RESULTS:** Seventy percent (70%) of the respondents (N=238) considered themselves as successful agers. Among the demographic variables, being female and the frequency of social visits were related to successful aging. Self-reported successful agers (SRSA) had no dementia with (MOCA-P mean of 21). They were not depressed (HADS-D mean 1.8) or anxious (HADS-A mean 3.4); had good quality of life (WHOQOL mean 3.4) and positive perceived health (WHOQOL mean3.3). Successful Quezon City Filipino agers were not as resilient (CD-RISC) with a mean of 27. **CONCLUSION:** Like most studies in successful aging, quality of life and perceived health and strong family support were related to self-rated successful aging in this group of Filipino senior citizens. There was no relationship with cognitive function and resilience, which may be due to the exclusion of cognitively impaired participants and the lack of a validated cut-off score for the Filipino translated resilience scale used.

KEYWORDS: *Successful aging, healthy aging, quality of life, resilience*

INTRODUCTION

The global elderly population is estimated to double in the next 25 years. More than half are expected to come from Asian countries like the Philippines[1]. According to the Philippine National Statistics Office, elderly Filipinos currently comprise 6.8% of the population. This number is expected to increase by 2020 to 9.5%[2].

Rowe and Kahn in 1997 were the first to conceptualize "*successful agers,* defined as older adults who have minimal disease and disability, maintained good cognitive function and social engagement[3]. Other researchers later argued that Rowe and Kahn's definition may be limiting and fail to encompass other psychosocial factors and older persons' own subjective attitudes towards aging[4-5]. In 2006 Depp and Jeste reviewed studies done on successful aging and noted that most elders in spite of illness and disability, a third rated themselves as successful agers in terms of a having a higher quality of life and self-perceived health. They were also most likely to have more social connections and resilient[6]. Self-rated successful agers were mostly young old (in their 60s), physically active, with least medical conditions, independent and non-smokers. Demographics like age, gender, marital status and economic conditions were not related[7].

Other studies also indicated that successful agers reported high levels of contentment, self-acceptance, were optimistic, lived in the moment, coontinued to be curious about life and socially active[8]. Baltes in 1990 argued that older persons naturally adapt to aging by becoming selective in their goals, optimizing current functioning and compensating for disabilities[9-10]. Cheng et al explained unique cultural perspectives to successful agers in Asia[11]. The Confucian tradition translates to accepting aging with equanimity and wisdom. Compared to its more individualistic western counterparts, Asians have a deep sense of filial loyalty. The family unit therefore remains a primary source of emotional fulfillment for the Asian elderly[11]. Co-residence of elders with their children is common in most Asian countries. In Taiwan alone, 68.4% of older adults lived with their children and 42% relied to their children for financial support[11]. This filial ties are protective as most studies show that elders who get frequent visits from family or have many social contacts have better mental health. These social interactions are said to protect the elderly from loneliness, depression and give them a sense of purpose and self-esteem[11].

Whether these studies can be generalized in the Philippines remains to be seen considering its multicultural influences and the prevailing socioeconomic realities. A study on Filipino seniors revealed that as high as 60% had no access to healthcare[12]. This is a sharp contrast to its affluent Asian counterparts like Japan and Singapore, which have national policies for retirement and active aging. In the same spirit, this research study hopes to blaze the trail on studying Filipino successful aging and geriatric mental health.

METHODOLOGY

Research Design & Population

This was a cross-sectional study. Participants were recruited through convenient sampling from attendees in a free mental health screening program for Senior Citizens called *Lingap Diwa* from the six districts of Quezon City. The program was a partnership between a private pharmaceutical company (UNILAB) and a local government unit of Quezon City aimed at screening mental health conditions like dementia and depression in the community. The researcher collaborated and sought permission to conduct this study alongside the screening program. There were no financial or political obligations between the researcher and the organizing parties.

A total of 436, 6561 male and female registered senior citizens of the target urban community from 1993 to 2015 aged 60 years old and above were eligible for the study. The sample size was computed at 231 from the six districts, but a total of 346 consented and passed the inclusion criteria for the study.

Sample size computation[13]

Sample size was computed using the following formula:

$$n = \frac{\sum Nh^2PhQh/Wh}{N^2B^2/4 + \sum NhPhQh}$$

where N=total # of senior citizens in QC
Nh = # of senior citizens in each district
Ph = estimated proportion of healthy agers (assumed 50%)
Qh = 1-Ph
Wh = weight of district (Nh/N)
B=bound for error

The following were noted:

a. Stratum size ("Nh") was the QC data for number of senior citizens by district.
b. The formula required an initial estimate of healthy aging ("Ph") in each district. In the absence of data, we set this to be 0.50 or 50%, indicating there was a 50-50 chance of healthy aging.
c. The weights (Wh) attached were proportional to the size of the district in terms of # of senior citizens.
d. The sample size was computed and allocated given 5% bound for error (B).
e. Stratified sampling was the approach, treating each district as a stratum of the target population.

Four hundred respondents were selected and allocated accordingly. (Table 1)

Inclusion criteria were: 1) any registered senior citizen of target community who voluntarily attended the scheduled *Lingap Diwa* program that ran from June to October 2017 in the six districts of Quezon City; 2) those who consented to participate and were physically able to understand and complete the questionnaires; and 3) the participant could understand English and/or Filipino language used in the questionnaire.

Exclusion criteria were: 1) those who had more than 50% incomplete answers; 2) those with previously diagnosed or tested positive for cognitive impairment through MOCA-P and verified by the doctors present during the screening program; and 3) those with severe hearing and visual impairments that prevented them from completing the questionnaires.

TABLE 1. Distribution According to Gender

District	Sample	Male	Female
I	91	38	53
II	139	57	82
III	61	26	35
IV	75	33	42
V	15	7	8
VI	19	8	11
Total	400	169	231

Data Collection

From June to October of 2017 participants were random invitees from the six districts of Quezon City. They were asked to sign an informed consent should they agree to participate in the researcher's study during registration on site. Confidentiality was assured with an informed consent signed by each participant. During the *Lingap Diwa* program run, all attendees were routinely screened for dementia and depression using the Montreal Cognitive Assessment in Pilipino (MOCA-P) and Hospital Anxiety and Depression (HADS-P) by trained *Lingap Diwa* staff. A separate sheet for demographic information with the Self Rated Successful Aging (SRSA) scale translated to the vernacular was adapted from Depp and Jeste's study on successful aging[6]. (Appendix 1).

The instruments were based on the parameters used on the Depp and Jeste's study on successful aging (resilience, cognition and quality of life) however the author had to look for scales available with existing *Tagalog* translations for ease of administration. Both the Tagalog translated Connor-Davidson Resilience Scale 10(CD-RISC 10) and the World Health Organization Quality of Life Brief scale (WHOQOL BREF) were self-administered with corresponding written instructions. (Appendix 2 & 3)

Although SRSA, CD-RISC and WHOQOL BREF were translated in *Tagalog*, all have yet to be validated in the Philippine population.

Ethical Considerations

This study was approved by The Medical City Institutional Review Board. As per the *Lingap Diwa* program protocol, the screening results for dementia and depression were disclosed and discussed among the participants' and their families after the testing. Positive screens in MOCA and HADS were verified by neurologists and psychiatrists assessment during the program. Follow-up referrals to medical institutions were given to ensure continuity of care. The researcher obtained copies for the participants' MOCA-P and HADS-P scores for the purpose of data collection in this study. While the CD-RISC and WHOQOL BREF collected data remained confidential and in the researcher's safekeeping.

Instruments

The Self rated Successful Aging (SRSA) was adapted from Jeste's successful aging study[7]. It used a ten point Likert scale, from the lowest rate of 1 being least successful, to 10 being the highest or most successful. Participants were asked to rate themselves based on their subjective perception on how they felt they were aging successfully. To encompass "successful" in the local language, three operational definitions were used: *malusog* (healthy), *matiwasay* (well) and *matagumpay* (successful). Scores seven and above on the SRSA scale were considered successful agers. The correlation among the three concepts of *malusog*, *matiwasay* and *matagumpay* were as follows: *Malusog* and *Matiwasay* r= 0.410 (p=.000, sig) *Malusog* and *Matagumpay* r= 0.477 (p=.000, sig) *Matagumpay* and *Matiwasay* r = 0.279 (p=.000, sig).

The Connor-Davidson Resilience Scale (CD-RISC-10) is a ten item self-report on personal resilience and self-efficacy amidst adversity. The ten questions use a 0-4 Likert scale with a total score of 4014. CD-RISC scale has been validated in different cultures. A translated *Tagalog* version is available however there is no validated cut off score agreed for Filipinos. CD-RISC can be affected by factors like age and ethnicity. However a mean score of 31-32 was seen among community sample in the United States. A lower mean was seen in other countries like China (mean 22-26); Nigeria (mean 26), Singapore (mean 27.8) and Japan (mean 20.5)14. However for Depp and Jeste's study in successful aging, a mean score was 30.8- 32.1 was seen[6]. Hence this same cut off was used for this study's purpose. Permission to use the *Tagalog* CD-RISC was granted by one of its authors i.e. Jonathan Davidson. (Appendix 2)

The World Health Organization Quality of Life Questionnaire Brief (WHOQOL-BREF) in *Tagalog* measures the psychosocial and cultural factors that affect a person's well being. The 25 questions were divided into physical, psychological, social and environment domains. It also had two separate items pertaining to perceived health and overall quality of life. Score for the four separate domains were scored in a positive continuum according to the subjective level of contentment. There was no cut-off score but a higher score suggested a better quality of life. The WHOQOL-BREF in *Tagalog* was used with the permission of the WHOQOL group of the Program for Mental Health World Health Organization. Though a *Tagalog* version was available, it was yet to be validated in the Filipino setting[15]. (Appendix 3)

The Hospital Anxiety and Depression Scale in Pilipino (HADS-P) was composed of a 14 item questionnaire divided equally into depression (HADS-D) and anxiety (HADS-A) subsets. HADS-P was validated in 2011 amongst the Filipino population. Depression and anxiety questions were summed up to make a cut-off score of 8 in the original HADS. For Filipinos, 11 was the cut-off recommended with a sensitivity of 75% and a specificity of 70% and a positive predictive value of 75%[16]. Although HADS has been readily accessible online, the HADS-P version was accessed with permission from its author Rosanna De Guzman, MD[16]. (Appendix 4)

The Montreal Cognitive Assessment (MOCA) is an instrument to detect early cognitive impairment in most patients with dementia. However its international cut off score of 25/26 must be clinically correlated with symptoms and functional impairment in daily living. Two points from the total score was added for subjects with 4 - 9 years of education and 1 point for 10 - 12 years of education. The local adaptation - Montreal Cognitive Assessment Pilipino (MOCA-P) was validated in 2014 with a recommended cut off score of 20/21 with additional 2 points for those with less than seven years of education. MOCA-P has a sensitivity of 0.835 and a specificity of 0.723. A score of less than 20/21would signify the likelihood of cognitive impairment. MOCA-P can be downloaded for free access[17].

Statistical Analysis

Data was encoded using Microsoft Excel 2010 and analyzed using the SPSS software. Mean scores, standard deviation and percentages were computed for SRSA, demographic variables, MOCA-P, HADS-P, CD-RISC and WHOQOL BREF scales. The SRSA scores of successful agers were analyzed with independent variables of depression, resilience, cognitive function and quality of life using the student's T-test, while the demographic variables were tested for association with successful aging (SRSA) using the chi square-test.

TABLE 2. Association of Demographic Characteristics with SRSA

Demographic Characteristics		Self-Rated Successful Aging (SRSA)				
		Yes (n=238)		No (n=104)		
		Count	%	Count	%	p-value <0.05
Civil Status	Single	119	50.0	49	47.1	0.333
	Married	21	8.8	5	4.8	
	Separated	90	37.8	49	47.1	
	Widowed	4	1.7	1	1.0	
Education	No formal schooling	3	1.3	3	2.9	0.247
	Elementary	72	30.3	23	22.1	
	High School	91	38.2	44	42.3	
	College	55	23.1	22	21.2	
	Vocational	14	5.9	11	10.6	
Source of Money	Pension	74	31.1	36	34.6	0.723
	Savings	5	2.1	3	2.9	
	Spouse	28	11.8	8	7.7	
	Children	71	29.8	36	34.6	
	Grandchildren	4	1.7	1	1.0	
	Others	33	13.9	12	11.5	
	Pension & Children	7	2.9	0	0.0	
	Savings & Children	1	0.4	0	0.0	
	Spouse & Children	1	0.4	0	0.0	
	Children & Grandchildren	2	0.8	1	1.0	
	Children & Others	1	0.4	1	1.0	
Amount of Money Received (PhP)	NONE	113	47.5	43	41.3	0.368
	< 5,000	82	34.5	48	46.2	
	6,000-10,000	11	4.6	6	5.8	
	11,000-15,000	7	2.9	2	1.9	
	16,000-19,000	3	1.3	0	0.0	
	>20,000	11	4.6	3	2.9	
Sleep (hours/night)	Less 5	84	35.3	48	46.2	0.116
	6-7	132	55.5	45	43.3	
	>8	18	7.6	8	7.7	
Affected by traffic	Not Affected	63	26.5	22	21.2	0.555
	Slightly "	121	50.8	57	54.8	
	Very "	50	21.0	24	23.1	
Perceived Closeness to family	Not Close	3	1.3	3	2.9	0.166
	Slightly "	43	18.1	28	26.9	
	Very "	187	78.6	72	69.2	
Visits by family or friends per week	No visits	21	8.8	20	19.2	0.009
	1x/week	66	27.7	33	31.7	
	> 2x/ week	148	62.2	50	48.1	

RESULTS

Table 2 summarizes the demographic characteristics of the successful agers from the six districts. Majority of the self-rated successful agers were females (81.5 %); young old (mean 67.8 years old); single (50.8%) or separated (37.8%); were either retired or unemployed (73.9%) and registered senior citizen members (84.6%). Most reached only primary (30.3.1%) or secondary (38.2%) school. Financially, many relied on their children (29.8%) and pension (31.1%) for support with 30% receiving less than 5,000 pesos each month

Lifestyle characteristics of self-rated successful agers showed that majority were non-smokers (92.9%); non-alcoholic drinkers (96.2%); slept an average of 6-7 hours (55.5%); needed some assistance to ambulate (63.4%) but could travel alone (85.3%)and were minimally affected by traffic commute (50.8%). Half of them admitted to having some chronic illness but were mostly asymptomatic (56.7%). Most lived with a companion or a family member (85.7%) whom they considered as being close to them (78.6%) and were visited by friends or family more than twice in a week (62.2%).

TABLE 3. Comparison of SRSA Mean Scores for MOCA, HADS, CD-RISC & WHOQOL

	Successful Aging					
	Yes 70%		No 30%		T-test	
	Mean	Std. Deviation	Mean	Std. Deviation	p-value	Remark
MOCA	21.8	3.4	21.9	3.6	0.865	not sig
HADS_D	1.8	1.9	2.6	2.5	0.001	sig
Resilience	27.4	10.7	27.3	8.1	0.940	not sig
Health	3.3	1.0	2.8	1.0	0.000	sig
QOL	3.4	1.0	2.9	1.0	0.000	sig

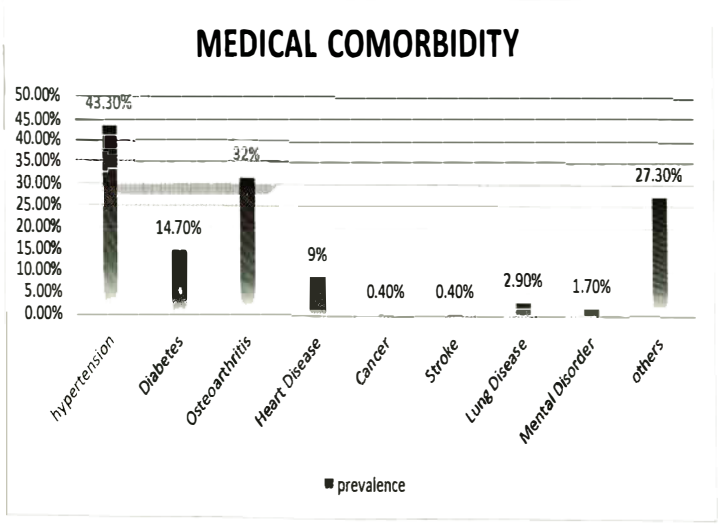

FIGURE 1. Percentage of Chronic Medical Illness among Successful Agers (N=238)

Among personal and lifestyle variables, only gender (p=.0032), subjective feeling of wellness (mean 0.009) and the frequency of social visits (mean= 0.009) were related to self-rated successful aging.

Table 3 shows little difference in the mean scores of MOCA-P and CD-RISC across self-rated successful and non-successful agers. Self-rated successful agers had higher mean scores in all domains regarding quality of life. They also had higher self-perceived and quality of life health compared to non-successful agers.

Figure 1 showed that majority of the participants' suffered from chronic illnesses such as hypertension, osteoarthritis and diabetes.

DISCUSSION

The sample population of our successful agers saw themselves as aging well, which was consistent to most international successful aging studies reviewed. Since most participants came from a poorer section of the city, the majority were unemployed and had limited academic attainment. With the present economic realities, it was no surprise that 30% of these Filipino senior citizens had no pension and were dependent on their spouses and children for financial sustenance. This was also reflected in an earlier study of Dela Vega on the Filipino elderly quality of life in 2009[18].

Majority of these self-rated successful Filipino agers did report good quality of life and better health despite of their less ideal economic conditions and existing medical illnesses. Demographic traits like education, marriage, financial status, income or occupation were not related to successful aging among these Quezon City seniors. This was similar to the findings of Depp and Jeste's systematic reviews, which found no consistent relationship between personal characteristics and successful aging[6]. This was contradictory to another study which suggested that among elderly American males, a higher educational attainment and having a warm supportive marriage were crucial for successful aging[19].

The reason gender was a significant contributor of successful aging, in our case, being female may signify that women were more active in their communities even at later stage in their life. However, gender could also have been a confounder since most of the attendees who participated in the study were women. Gender may have a protective factor as in one study for example where elderly males who were isolated were more likely to be depressed compared to their female counterparts[20]. Studies also suggested that women in general were more inclined to seek social networks for fulfillment and as a buffer to stress; while men solely depended on their spouses for emotional support and utilized social circles only

for shared activities[20].

This primacy in social networks was also consistent with the respondents' reporting a very close relationship with their families and frequent social visits. Like their Asian counterparts, most Filipino seniors lived with and were cared for by a family member, who also became a primary source of emotional support. This in turn contributed to successful agers physical and emotional wellbeing. A finding that was consistent with most studies showed that social engagement decreased loneliness and protected older adults from depression. Healthy lifestyles were influenced by these networks thereby decreasing overall mortality and morbidity[21-22].

The average mean CD-RISC scores of these Filipino seniors were 27.4 vis-a-vis 32.1 among community of Americans (n=764). It is difficult to conclude at this point that Filipinos are not as resilient as their foreign counterparts, since there was no cut off score for *Tagalog* CD-RISC validated in the Philippines. Reviewing cut off scores, it is worthy to note cultural differences. Asians neighbors like Korea, Singapore and Japan had lower cut off scores that fell in the range of our Filipino subjects. Healthy aging studies by Depp and Jeste's showed an average resilience score of 32.1 in elders 50-99 years old[6]. The lower resilience scores may reflect the Filipino's unique cultural values of self-pride (*amor propio*) and modesty (*hiya*), thus causing Filipino seniors to have higher expectations of themselves and underestimating their own resilience.

Cognitive function showed no strong relationship with this population of self rated successful agers, which was opposite to most worldwide studies. However due to exclusion of identified subjects with cognitive impairments using MOCA-P, it homogenized the participants and may have confounded the results.

Because of this study's limited sampling frame, which only included Quezon City indigent urban based seniors, the results cannot be generalized to the rest of the elder population of the Philippines. Moreover, volunteers were restricted to the invited attendees of the *Lingap Diwa* program. This automatically excluded the home bound, older seniors or the employed, highly educated and more affluent Filipino elders. In future studies, it is recommended that a larger population, including both urban and rural sectors and across social strata and all regions of the Philippines be used.

It would also be recommended that the translated *Tagalog* scales in resilience (CD-RISC) and quality of life (WHOQOL-BREF) be validated locally to increase sensitivity measures of successful aging among the Filipinos.

REFERENCES

1. World Health Organization, Non-communicable Diseases and Mental Health Cluster, Non-communicable Disease Prevention and Health Promotion Department. Ageing and Life Course. Active Ageing: A Policy Framework. Second United Nations World Assembly on Ageing; 2002 April; Madrid, Spain: WHO;2002.
2. Lucentales RG. The Philippine Response to the Challenges of Ageing. Department of Social Welfare and Development.[cited 2017 August 1]; Available from:https://www.mhlw.go.jp/bunya/kokusaigyomu/asean/asean/kokusai/siryou/dl/h16_philippines2.pdf
3. Rowe JW, Kahn RL. Successful Aging. The Gerontologist. 1997Aug 1; 37(4): 433-440. https: //doi.org/10.1093/geront/37.4.433.
4. Strawbridge WJ, Wallhagen MJ, Cohen RD, Successful Aging and Well-Being: Self-Rated Compared With Rowe and Kahn. The Gerontologist. 2002 Dec; 42(6): 727–733. doi:10.1093/geront/42.6.727. PMID:12451153.
5. Montross LP, Depp C, Daly J, Reichstadt J, Goldshan S, Moore D, et al. Correlates of self-rated successful aging among community-dwelling older adults. Am J Geriatr Psychiatry. 2006 Jan; 14(1):43-51. doi:10.1097101. JGP.0000192489.43179.31. PMID 16407581.
6. Depp CA, Jeste DV. Definitions and predictors of successful aging: a comprehensive review of larger quantitative studies. Am J Geriatr Psychiatry 2006 Jan; 14(1):6-20.
7. Jeste DV, Savia GN, Thompson WK, Vahia IV, Glorioso DK, Martin AS, et al. Association between older age and more successful aging: critical role of resilience and depression. Am J Psychiatry. 2013 February 1; 170(2): 188–196.
8. Reichstadt J, Sengupta G, Depp C, Palinkas LA, Jeste DV. Older Adults' Perspectives on Successful Aging: Qualitative Interviews. Am J Geriatr Psychiatry. 2010 July; 18(7): 567–575.
9. Baltes PB, Baltes MM. Psychological perspectives on successful aging: The model of selective optimization with compensation In: Baltes PB, Baltes MM, editors. Successful Aging: Perspectives From The Behavioral Sciences. New York: Cambridge University Press; 1990. p. 1-34. Available from:http://dx.doi.org/10.1017/CBO9780511665684
10. Ouwehand C, de Ridder DT, Bensing JM. A review of successful aging models: Proposing proactive coping as an important additional strategy. Clinical Psychology Review, 2007 Dec; 27(8): 873-884. doi:10.1016/J.cpr.2006.11.003. PMID:17328997.
11. Cheng S, Chi I, Fung H, Li L, Woo J, editors. Successful Aging: The Asian Perspective. New York: Springer; 2015. p.101-199
12. De la Vega SF. Policies on healthcare of Older Persons: Implications to Internal Medicine Training and Practice.

Phil. J. Internal Medicine. 2009 Jul- Aug; 47: xiii-xvii.
13. Scheaffer RL, Mendenhall W, Ott L.Elementary Survey Sampling. 4th ed. Boston: PWS-KENT Pub Co. Duxbury Series; 1990.
14. Davidson JRT, Connor KM. Connor-Davidson Resilience Scale (CD-RISC) Manual. Unpublished. 04-01-2016. mailto:mail@cd-risc.com or http://www.cd-risc.com
15. WHO. User Manual World Health Organization Quality of Life. 1998. Programme on Mental Health World Health Organization 1211 Geneva 27, Switzerland e-mail: whoqol@who.ch
16. De Guzman MLR. A Validation of the Hospital Anxiety and Depression Scale (HADS) in the Medically-Ill. Acta Medica Philippina. 2013; 47(3): 55-62 .
17. Dominguez JC, Soriano JR, Magpantay CD, Orquiza MGS, Solis WM, Reandelar MF Jr, et al. Early Detection of Mild Alzheimer's Disease in Filipino Elderly: Validation of the Montreal Cognitive Assessment-Philippines (MoCA-P).Advances in Alzheimers Disease. 2014 Dec; 3 (4):160-167.
18. De la Vega SF. Active Aging and the Filipino Older Person. 2009.Trans. Nail. Acad. Sci. Tech. Philippines. 2009;31:171-182 .
19. Vaillant GE, Mukamal K. Successful aging. Am J Psychiatry. 2001 Jun; 158 (6):839–847. doi:10.1176/appi.ajp.158.6.839. PMID:11384887.
20. Kendler KS, Myers J, Prescott CA. Sex Differences in the Relationship Between Social Support and Risk for Major Depression: A Longitudinal Study of Opposite-Sex Twin Pairs. Am J Psychiatry 2005 Feb; 162(2):250–256.
21. Giles LC, Glonek GFV, Luszcz MA, Andrews GR. Effect of social networks on 10 year survival in very old Australians: the Australian longitudinal study of aging. J Epidemiol& Community Health. 2004;59(7):574–579. Available from: http://dx.doi.org/10.1136/jech.2004.025429
22. Perissinotto CM, Cenzer IS, Covinsky KE. Loneliness in Older Persons: A predictor of functional decline and death. Arch Intern Med. 2012 July 23; 172(14): 1078–1083. doi:10.1001/archinternmed.2012.1993.

ACKNOWLEDGMENTS

Vice Mayor's office of Quezon City, National Capital Region, Philippines & Unilab Pharmaceuticals *Lingap Diwa*

APPENDIX 1. TUNGKOL SA IYO

Bago po tayo magsimula, nais po naming sagutin ninyo ang ilang katanungan tungkol sa inyong sarili. Bilugan po ninyo ang pinaka-angkop na sagot o isulat sa blanko

Kailan po kayo ipinanganak (birthday)?
_____ (araw) _____ (buwan) _____ (taon)
Ano ang iyong kasarian?
☐ (1) *Lalake* ☐ (2) *Babae*
Kayo po ba ay may asawa?
☐ (1) *May asawa* ☐ (2) *Hiwalay* ☐ (3) *Biyuda/biyudo*
☐ (4) *May nobyo/nobya*
Hanggang saan po ang inyong natapos sa pagaaral?
☐ (0) *Walang natapos* ☐ (1) *Elementarya*
☐ (2) *High school* ☐ (3) *Kolehiyo*
☐ (4)*Vocational*
Kayo po ba ay may trabaho o regular na gawa?
☐ (0) *Wala* ☐ (1) *Oo/Meron*
Ano po ang inyong trabaho o regular na gawain?
_____
Saan po kayo kumukuha ng inyong perang pang gastos?
☐ (1) *Sa Pension* ☐ (2) *Sa inipon na perang pansarili*
☐ (3) *Galing sa asawa*
☐ (4) *Galing sa anak* ☐ (5) *Galing sa apo*
☐ (6) *Sa sariling trabaho*
Ang sweldo/pension ko sa isang buwan ay
☐ (1) *Php 5,000 pababa*
☐ (2) *Php 6,000-10,000 pesos*
☐ (3) *Php 11,000-15,000 pesos*
☐ (4) *Php 16,000-19,000 pesos*
☐ (5) *Php 20,000 pesos pataas*
Kayo po ba ay miyembro ng grupo ng Senior Citizen?
☐ (0) *Hindi* ☐ (1) Oo
Pangalan ng Grupo ng Senior Citizen _____ _
Kayo po ba ay may Senior Citizen Card?
☐ (0) *Wala* ☐ (1) *Oo*
May sakit / karamdaman po ba kayo ngayon?
☐ *OO/ may sakit* ☐ *HINDI/Walang sakit*
☐ *May sakit pero normal ang pakiramdam*
Kailangan mo ba ng tulong upang makalakad o sa iyong araw-araw na gawain?
☐ (0) *Hindi* ☐ (1) *Oo*
Kung ikaw ay may sakit o masama ang inyong pakiramdam, ano kaya ito sa inyong palagay?
☐ *Cancer* ☐ *high blood* ☐ *sakit sa puso* ☐ *stroke*
☐ *sakit sa baga* ☐ *diabetes* ☐ *rayuma* ☐ *sakit sa isip*
☐ *iba pa* _____
Gaano kahaba ang iyong tulog tuwing gabi?
☐ *mas mababa sa limang oras* ☐ *6-7 hours*
☐ *lagpas 8 oras*
Kayo po ba ay malayang nakakalakad o nakakapunta sa nais ninyong puntahan?
☐ (0) *Oo kaya kong mag-isa*
☐ (1) *Hindi, kailangan ko ng tulong*

Gaano kayo apektado sa trapik sa pagbyahe?
☐ (0) *Hindi apektado* ☐ (1) *medyo apektado*
☐ (2) *sobrang apektado*
Kayo po ba ay araw-araw naninigarilyo?
☐ (0) *Hindi* ☐ (1) *Oo*
Kayo po ba ay araw-araw umiinom ng alak?
☐ (0) *Hindi* ☐ (1) *Oo*
Kayo po ba ay may pamilya o tao na kasamang nakatira sa bahay?
☐ (0) *Wala* ☐ (1) *Oo/meron*
Paano ninyo maituturing ang inyong relasyon sa taong pinakalapit inyo?
☐ (0) *Hindi malapit* ☐ (1) *medyo malapit*
☐ (2) *sobrang malapit*
Ilang beses sa isang lingo ka bumisita o bisitahin ng inyong pamilya o kaibigan?
☐ (0) *Wala* ☐ (1) *isang beses*
☐ (2) *dalawa o mahigit pa*

Base SA inyong palagay at pakiramdam ukol sa inyong katandaan: Bigyan ng marka o grado ang sarili *(mula sa bilang na isa, na pinaka-mababang halaga, hanggang sampu na pinaka-mataas nahalaga)*
Sa aking pananaw:

Ako ay malusog na tumatanda

1 2 3 4 5

6 7 8 9 10

Ako ay matiwasay na tumatanda

1 2 3 4 5

6 7 8 9 10

Ako ay matagumpay na tumatanda

1 2 3 4 5

6 7 8 9 10

APPENDIX 2. Connor-Davidson Resilience Scale (CD-RISC-10)
Markahan ng ekis o "x" ang mga kahon na tumutugma sa antas ng pagsang-ayon mo sa mga sumusunod na tanong o salaysay. Ukol ito sa mga nangyari sa inyo noong nakalipas na buwan. Kung hindi mo pa nararanas ang sitwasyon, isipin po lamang ang isasagot po ninyo, base sa mararamdaman mo kung mangyari man ito.

	Hindi totoo (0)	*Bihirang totoo (1)*	*Totoo minsan (2)*	*Kadalang totoo (3)*	*Palaging totoo (4)*
1. Kaya kong umangkop kung may pagbabagong nangyari.					
2. Kahit anong mangyari, nakakayanan ko.					
3. Sinusubukan kong tignan ang nakakatawa sa halip na pasakit.					
4. Ang kakayanan sa stress ang siyang nakakatulong na patibayin ang loob ko.					
5. Bumabangon ako muli kahit masugatan, magkasakit, o mahirapan ako.					
6. Naniniwala ako na kaya kong abutin ang aking mga tunguhin, kahit may paghihirap.					
7. Kahit nagigipit, nakatutok ako sa kailangang gawin, at klaro ang aking isipan.					
8. Hindi ako madaling madismaya.					
9. Iniisip ko na ako'y isang malakas na tao kapag hinaharap ang mga kahirapan ng buhay.					
10. Kaya kong mamahala ng nakayayamot o masasakit na damdamin tulad ng lungkot, takot, at galit.					

APPENDIX 3. WHO Quality Of life (WHO QOL-BREF)
Ang mga sumusunod na tanong ay tungkol sa inyong mga pakiramdam, kalidad ng inyong buhay, kalusugan, o iba pang aspeto ng inyong buhay. Pakisagot po ang lahat ng mga tanong. Kung hindi po kayo sigurado sa inyong sagot, piliin po lamang ang sa tingin ninyo ang siyang pinaka-angkop. Isipin po ninyong mabuti ang inyong mga pamantayan (standards), pangarap, kasiyahan at mga problema sa buhay. Isipin po ninyo ang inyong buhay nitong nakalipas na dalawang linggo.

Halimbawa, habang iniisip ang mga nangyari sa inyo nitong nakalipas na dalawang linggo, kayo ay tatanungin ng ganito: Dapat niyong bilugan ang numero na nagsasaad kung

gaanong tulong o suporta ang nakuha ninyo mula sa ibang tao, nitong nakalipas na dalawang linggo. Inyong bibilugan and numerong 4 kung maraming suporta ang nakuha ninyo mula sa ibang tao, katulad ng ganito:

Nakukuha niyo ba mula sa ibang tao ang tulong o suporta na kailangan ninyo?	*Hindi kailanman 1*	*Hindi gaano 2*	*Katam-taman 3*	*Marami 4*	*Kompleto 5*

	Nakaraang 2 Linggo	***Lubhang Hindi Kontento***	***Hindi Kontento***	***Medyo Kontento***	***Kontento***	***Laging Kontento***
1 (G.1)	*1. Gaano kayo ka kontento sa kalidad ng inyong buhay*	***1***	***2***	***3***	***4***	***5***
2 (G4)	*2. Gaano po kayo kakontento sa inyong kalusugan?*	***1***	***2***	***3***	***4***	***5***

	Nakaraang 2 Linggo	***Hindi Naranasan***	***Naranasan nangkonti***	***Naranasan***	***Narana-sang madalas***	***Lubhang madalas na nara-nasan***
3 (F1.4)	*3. Gaano mo naranasan na ang pananakit ng katawan ay naging sagabal sa iyong mga pang araw-araw na gawain*	***1***	***2***	***3***	***4***	***5***
4 (F11.3)	*4. Gaano niyo kinailangan ang magpagamot, upang inyong magampanan ang pang-araw-araw na gawain?*	***1***	***2***	***3***	***4***	***5***
5 (F4.1)	*5. Gaano niyo naranasan ang kasiyahan (enjoy) sa inyong buhay?*	***1***	***2***	***3***	***4***	***5***
6 (F24.2)	*6. Gaano niyo naranasan na may saysay o kabuluhun ang inyong buhay?*	***1***	***2***	***3***	***4***	***5***

	Nakaraang 2 Linggo	***Lubhang Walang Kakayahan/ Hinding hindi***	***Konti***	***Medyo***	***May kakayahan Nararam-daman***	***Mahusay nakakayahan at nararam-daman***
7 (F5.3)	*7. Gaano ang iyong kakayahang mag concentrate?*	***1***	***2***	***3***	***4***	***5***
8 (F16.1)	*8. Gaano niyo naramdaman na ikaw ay ligtas sa anumang kapahamakan sa inyong pang araw na buhay?*	***1***	***2***	***3***	***4***	***5***
9 (F22.1)	*9. Gaano kalinis at ligtas sa sakit ang inyong paligid?*	***1***	***2***	***3***	***4***	***5***

	Nakaraang 2 Linggo	***Walang-wala / Hinding-hindi***	***Konti at Hindi Sapat***	***Medyo Sapat***	***Sapat/ Madalas/ Tanggap***	*Laging Sapat/ Laging Tanggap*
10 (F2.1)	*10. May sapat ka bang lakas para sa pang araw-araw na gawain?*	***1***	***2***	***3***	***4***	***5***
11 (F7.1)	*11. Tanggap ba ninyo ang iyong pisikal na anyo o pangangatawan?*	***1***	***2***	***3***	***4***	***5***
12 (F18.1)	*12. May sapat ka bang pera para sa iyong mga pangangailangan?*	***1***	***2***	***3***	***4***	***5***
13 (F20.1)	*Gaano kadaling makuha ang inyong kailangan impormasyon mula sa radio, TV, dyaryo atb?*	***1***	***2***	***3***	***4***	***5***
14 (F21.1)	*14. Gaano kadalas ang inyong pagkakataon at oras para sa paglilibang o kasiyahan?*	***1***	***2***	***3***	***4***	***5***

	Nakaraang 2 Linggo	***Lubhang Hindi Kontento***	***Hindi Kontento***	***Medyo Kontento***	***Kontento***	*Laging Kontento*
15 (F9.1)	*15. Gaano ang iyong kakayahang magpunta sa mga lugar na gusto mong puntahan?*	***1***	***2***	***3***	***4***	***5***
16 (F3.3)	*16. Gaano kayo kakontento sa inyong pagtulog?*	***1***	***2***	***3***	***4***	***5***
17 (F10.3)	*17. Gaano kayo kakontento sa iyong kakayahang gawin ang mga pang araw araw mong gawain?*	***1***	***2***	***3***	***4***	***5***
18 (F12.4) c	*18. Gaano ka kakontento sa iyong kakayahang gumawa o magtrabaho?*	***1***	***2***	***3***	***4***	***5***
19 (F6.3)	*19. Gaano ka kakontento sa iyong sarili?*	***1***	***2***	***3***	***4***	***5***
20 (F13.3)	*20. Gaano ka kakontento sa iyong mga personal na relasyon (halimbawa, sa Diyos, sa pamilya at kaibigan?*	***1***	***2***	***3***	***4***	***5***
21 (F15.3)	*21. Gaano ka kakontento sa iyong sekswal na buhay?*	***1***	***2***	***3***	***4***	***5***
22 (F14.4)	*22. Gaano ka kakontento sa suporta na nakukuha mo mula sa iyong mga kaibigan? (material/ emotional)*	***1***	***2***	***3***	***4***	***5***

23 (F17.3)	23. Gaano ka kakontento sa kalagayan ng iyong tirahan?	1	2	3	4	5
24 (F19.3)	24. Gaano ka kakontento sa iyong kakayahang makakuha ng serbisyong pangkalusugan mula sa gubyerno o sa pribadong serbisyo?	1	2	3	4	5
25 (F23.3)	25. Gaano ka kakontento sa iyong kakayahang magbiyahe o magpunta sa ibang lugar?	1	2	3	4	5

	Nakaraang 2 Linggo	Hinding hindi naranasan	Bihira/ Medyo Naranasan	Madalas Nararanasan	Sobrang Madalas Naranasan	Palaging Nararanasan
26 (F8.1)	26. Gaano niyo kadalas naranasan ang mga hindi magagandang damdamin tulad ng pagsumpong, pagkabigo, pagkabahala at sobrang kalungkutan at lumbay	1	2	3	4	5

APPENDIX 4. HOSPITAL ANXIETY AND DEPRESSION SCALE – PILIPINO VERSION (HADS-P)

Mga Direksyon sa Pagsagot:
Alam ng mga doktor na may mahalagang papel ang damdamin natin sa maraming sakit. Kung alam ng iyong doktor ang inyong nararamdaman, mas matutulungan niya kayo.
Ang palatanungang ito ginawa para tulungan ka ng inyong doktor na malaman ang inyong nararamdaman.
Basahin ang bawa't tanong at i-tsek ( ) ang kahon ng katugmang sagot na pinakamalapit sa inyong nararamdaman sa nakaraang linggo.
Huwag masyadong magtagal sa pagsagot; ang inyong unang reaksyon ay mas malamang na tama kaysa mas matagal na pinag-isipang sagot.

Isang sagot lamang ang i-tsek ( ) sa bawa't tanong.

A	1	**Naliligalig at punong-punonaako:**	D	2	**Pakiramdam ko parang pinapabagal ako:**
3		Mas madalas kaysa hindi	3		**Halos lagi-lagi**
2		Madalas	2		Napakadalas
1		Paminsan-minsan	1		Minsan
0		Hinding-hindi	0		Hinding-hindi
D	3	**Ikinasasaya ko pa rin ang mga bagay na dati ko nang ikinasasaya:**	A	4	**Para akong natatakot na may nararamdamang sobrang nerbiyos:**
0		Katulad din ng dati	0		Hinding-hindi
1		Hindi na kasing dalas	1		Paminsan-minsan
2		Konti lang	2		Medyo madalas
3		Halos hindi na	3		Madalas na madalas
A	5	**Para akong natatakot na may mangyayaring masama:**	D	6	**Nawalan na ako ng interes sa aking hitsura:**
3		Lagi-lagi at medyo lang	3		Talaga
2		Palagi pero di-gaanong malala	2		Hindi ako nangangalaga ng dapat
1		Konti, pero 'di ako nag-aalala	1		Pwedeng hindi ako mag-alaga ng nararapat
0		Hinding-hindi	0		Pinapangalagaan ko pa rin ito katulad ng dati
D	7	**Kaya ko pang tumawa at mapansin ang nakakatuwang bahagi sa mga bagay-bagay:**	A	8	**Hindi ako mapakali na parang gusto kong may pinag kakaabalahan:**
0		Lagi-lagi tulad ng dati	3		Talagang madalas
1		Mas madalang na ng konti kaysa dati	2		Medyo madalas
2		Hindi na katulad ng dati	1		Di naman gaano
3		Hinding-hindi	0		Hinding-hindi

Isang sagot lamang ang i-tsek ( ) sa bawa't tanong

A	9	**Pag-aalala ang nasa isip ko:**	D	10	**Masaya akong umaasa sa bagay-bagay:**
3		Madalas na madalas			
2		Madalas	0		Kasing dalas ng nakagawian ko
1		Di gaanong madalas	1		'Di-kasing dalas ng nakagawian ko
0		Konting-konti	2		Mas madalang kaysa nakagawian ko
			3		Halos hindi na
D	11	**Masaya ang aking pakiramdam:**	A	12	**Bigla akong nakakaramdam ng pagkasindak:**
3		Hindi kailanman	3		Madalas na madalas
2		Madalang	2		Medyo madalas
1		Paminsan-minsan	1		'Di-gaanong madalas
0		Kadalasan	0		Hinding-hindi
A	13	**Kaya kong umupo nang kumportable at mag-relaks:**	D	14	**Kaya kong maaliw s a isang magandang libro o programa sa radio o TV:**
0		Palagi			
1		Madalas	0		Madalas
2		Madalang	1		Paminsan-minsan
3		Hinding-hindi	2		Madalang
			3		Madalang na madalang