

Knowledge, Attitude and Preventive Practice on Dementia among Community-dwelling Older People in Macao

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KNOWLEDGE, ATTITUDE AND PREVENTIVE PRACTICE ON DEMENTIA AMONG COMMUNITY-DWELLING OLDER PEOPLE IN MACAO

Abstract: Alzheimer Disease International ranked Macao as the highest stage five to develop dementia-friendly community globally. Awareness of dementia care among older people was of great significance for the prevention and early detection of dementia. This study aimed to investigate the awareness of dementia care among community-dwelling older people in Macao. The validated questionnaires investigating the awareness of dementia care, in terms of knowledge, attitude and preventive practice domain, were distributed to older people from 14 randomly selected day centres and community rehabilitation wards in Macao and 408 public samples were collected. The score of the knowledge domain was 58.15 ± 20.95 , the attitude was 75.34 ± 7.99 , and the preventive practice was 76.10 ± 12.48 . Older people's knowledge (58.15 ± 20.95) was significantly less than the health professionals working in Health Centers ($p < 0.001$) and the staff working in day-care centres and nursing homes in Macao ($p < 0.001$). Older people's preventive practice (76.10 ± 12.48) was significantly less than the health professionals working in Health Centers in Macao ($p < 0.01$). These findings demonstrated that community-dwelling older people in Macao had less knowledge and less preventive practice of dementia care. More public lectures and education for community-dwelling older people in Macao were recommended strongly to improve their knowledge and preventive practice of dementia care.

Keywords: KAP, Dementia, Older people, Macao

Introduction

Dementia is a very common neurodegenerative syndrome among older people with deterioration in memory, thinking and behaviour that interfere with their daily living. The aging population in Macao Special Administrative Region (SAR) China resulted from decreased fertility and extended lifespan expectancy and older people aged 65 years and above accounted for 15.7 percent of the local population in 2022 (Macao Statistics and Census Bureau, 2023). Alzheimer's Disease International (2014) reported about four thousand people were living with dementia and the prevalence was 4.98% among older persons in Macao SAR. In response to the challenges, the Macao SAR Government announced the Macao Dementia Policy in World Alzheimer's Month 2016, and at the same time established the Dementia Working Group and Dementia Medical Center. This landmark policy in Macao SAR was recognized by Alzheimer's Disease International as the 27th globally. Macao Dementia Policy, aligned with WHO Global Action Plan on the Public Health Response to Dementia 2017-2025, aims to promote dementia-friendly

communities and establish a dementia service network in Macao SAR (Lo *et al.* 2019). Awareness of dementia care among community-dwelling older people was of great significance for early prevention and detection of dementia, however, whether older people in Macao SAR were well knowledgeable about dementia care was still unknown. Therefore, investigating the awareness of dementia care among community-dwelling older people in Macao SAR would help to guide the development of public lectures and education and the significant support towards dementia care for community-dwelling older people in Macao SAR, and similar Chinese communities all over the world.

Aim

This study aimed to investigate the awareness of dementia care among community-dwelling older people in Macao SAR.

Methods

Research Design

A cross-sectional survey was utilized to investigate the awareness of dementia care among community-dwelling older people in Macao from September to October 2019 and approved by the Medical Ethical Committee of Centro Hospitalar Conde de São Januário of the Government of Macao SAR China.

Sample Selection and Procedure

The public sample comprised the community-dwelling older people from 10-day centres (41.7%), being randomly selected from all 24-day centres throughout Macao SAR and 4 community rehabilitation wards. Each participant completed a questionnaire investigating the awareness of dementia care.

Instrument

The questionnaire investigating the awareness of dementia care, in terms of knowledge, attitude and preventive practice domain, was applied and validated in Macao previously and the Content Validity Index (CVI) was 0.973 and Cronbach's α was 0.808 consequently (Lo *et al.* 2020). The score per knowledge, attitude and preventive practice domain ranges from 0 to 100 separately, for which higher scores demonstrate more knowledge, a better attitude and more preventive practice of dementia care.

Data Analysis

IBM SPSS Statistics 25 was used for statistical analysis by a skilled statistician, by which descriptive statistical analysis demonstrated mean, standard deviation, frequency, percentage and inferential statistical analysis involving one-way ANOVA test and Pearson Correlation.

Results

Demographic Data

408 public samples were collected and the participants ranged from 65 to 99 years old (76.0 ± 7.9 years). Most participants were female (n=326, 79.9%), education level of primary school or below (n=279, 69.2%), and retired (n=346, 95.6%). The common chronic diseases among the participants were hypertension (n=225, 56.3%) and diabetes mellitus (n=93, 23.3%). The common ways of the participants to receive information of dementia care were lectures (n=245, 61.4%) and TV/radio (n=153, 38.3%).

The study demonstrated that the awareness of dementia care among community-dwelling older people in Macao, in terms of knowledge, attitude and preventive practice domain were 58.15 ± 20.95 , 75.34 ± 7.99 and 76.10 ± 12.48 respectively. The results also indicated that common misunderstandings for knowledge of dementia care were ‘memory difficulty is the only symptom of dementia’ (n=325, 80.6%), ‘Alzheimer’s disease is not the most common type of dementia’ (n=253, 63.1%), and ‘environment changing frequently is helpful for people with dementia’ (n=237, 59.0%) consequently. Moreover, the study found knowledge was positively related to attitude ($r=0.300$, $p<0.001$) and preventive behaviour ($r=0.256$, $p<0.001$) (Table 1). Furthermore, the results of LSD post-hoc test of ANOVA indicated that older people’s knowledge (58.15 ± 20.95) was significantly less than the health professionals working in Health Centers (Lo *et al.* 2020) ($p<0.001$) and the staff working in day-care centres and nursing homes in Macao SAR ($p<0.001$); the preventive practice of the participants (76.10 ± 12.48) were significantly less than the health professionals working in Health Centers in Macao SAR (Lo *et al.* 2020) ($p<0.01$) (Table 2).

Table 1 Correlations among Awareness of Dementia Care among Older People in Macao

Variable	Knowledge	Attitude	Preventive practice
Knowledge	1		
Attitude	0.300*	1	
Preventive practice	0.256*	0.301*	1

^a Pearson correlation coefficient

* $p<0.001$

Table 2 Knowledge, Attitude and Practice on Dementia between Older People and Different Populations^a

Variable	Health Centers professionals			Day-care centers staff			High school students		
	Mean	SD	<i>p</i>	Mean	SD	<i>p</i>	Mean	SD	<i>p</i>
Knowledge	87.02	14.01	0.000**	76.23	19.62	0.000**	56.27	24.90	0.075
Attitude	69.52	5.83	0.000**	80.05	8.92	0.000**	73.97	7.72	0.001*
Preventive practice	77.88	13.18	0.005*	75.59	13.88	0.411	68.34	14.05	0.000**

^a Significance verified by LSD post-hoc test of ANOVA

* $p < 0.01$

** $p < 0.001$

Discussion

Lack of Knowledge of Dementia among Community-dwelling Older People in Macao SAR

The study showed that the community-dwelling older people in Macao SAR lacked knowledge of dementia and were significantly less than the health professionals working in Health Centers and the staff working in day-care centres and nursing homes in Macao SAR. Similar findings were reported previously (Purandare *et al.*, 2006, Arai *et al.*, 2008, Shen *et al.*, 2011). Improving knowledge of dementia care among community-dwelling older people might result in their appropriate self-assessment, early detection and well follow-up care of dementia. Moreover, the findings demonstrated their common ways to receive information on dementia care were lectures ($n=245$, 61.4%) and TV/radio ($n=153$, 38.3%). It was reported that public education could raise awareness of dementia prevention and promote public empowerment in facing dementia positively. TV/radio was demonstrated to be the most effective and reachable media for people living in the community to learn about dementia, including older people (Woo, 2012). Therefore, the Dementia Working Group of Macao Health Bureau has been striving to work with local 164 non-governmental organizations to provide lectures, workshops and conferences to the public to improve their knowledge of dementia and there were more than eight thousand attendants involved. However, the study also showed that most participants' education level was only primary school or below ($n=279$, 69.2%), a similar situation was found in a previous local study in Macao SAR indicated that 81.7% of older people's education level was only primary school or below (Community Services Consultation Committee of Macao SAR Government, 2010), might result in that many older people in Macao SAR could not understand accurately the vast information of dementia care. Therefore, older people characters of low education levels, traditional cultural backgrounds and common ways to receive information should be considered as the priorities of considerations while developing public education or activities related to dementia care for older people, by which the contents would be concise, interesting, age-friendly,

and easy to understand (Sun *et al.* 2007, Hsiao, 2011, Ma and Xi, 2012, Hsieh, 2019), to increase efficiently the understanding of dementia care among community-dwelling older people in Macao SAR.

Moreover, the study also demonstrated there were wrong understandings, such as ‘memory difficulty is the only symptom of dementia’ (n=325, 80.6%), ‘Alzheimer’s disease is not the most common type of dementia’ (n=253, 63.1%), and ‘environment changing frequently is helpful for people with dementia’ (n=237, 59.0%) among many participants. Many older people also did not know the consequences of degenerative brain function would be disorientation to time, place, and person, expression difficulty, psychological and behavioural symptoms of hallucination and depression etc., after which would be not treated considerably and thereafter led to late diagnosis and treatment, causing worse prognosis and poorer care of older people living with dementia (Tseng and Tseng, 2018). The result showed that common chronic diseases among older people were hypertension (n=225, 56.3%) and diabetes mellitus (n=93, 23.3%). Moreover, a local study demonstrated that more than half of older people in Macao SAR suffered from three or more chronic diseases simultaneously (Community Services Consultation Committee of Macao SAR Government, 2010) which might cause dementia. However, low education level and lack of knowledge about the risk factors of hypertension and diabetes mellitus for causing dementia among older people would result that the inability to manage their daily living including diet, and house furnishings, and delayed seeking proper medical advice and treatment for dementia care.

Poor Preventive Practice of Dementia among Community-dwelling Older People in Macao SAR

The poor preventive practice of dementia was found among the participants and was significantly less than the health professionals working in Health Centers in Macao SAR (Lo *et al.* 2020). Moreover, the findings indicated knowledge was positively related to preventive practice. However, as discussed previously, the community-dwelling older people in Macao SAR had less knowledge of dementia, many older people with low education level (Community Services Consultation Committee of Macao SAR Government, 2010), and frailty of older people would result in their poor practice to prevent dementia (Purandare *et al.* 2006). Therefore, more public lectures and education for community-dwelling older people in Macao SAR were recommended strongly to improve their knowledge and preventive practice of dementia care.

Limitations

The study sample did not cover the population of older people in Macao SAR, so particular attention should be paid if apply such findings in other regions.

Implications for practice

The findings of the study offered the baseline data which would be useful to compare with the further research and development of Macao dementia-friendly community. More public lectures and education for community-dwelling older people in Macao SAR were recommended strongly to improve their knowledge and preventive practice of dementia care. Future researchers could utilize the study results as well as the validated questionnaire of awareness of dementia care, in terms of knowledge, attitude and preventive practice domain which would be beneficial to assess different populations, including similar Chinese communities all over the world, in further studies.

Conclusion

This study showed that community-dwelling older people in Macao SAR had less knowledge and less preventive practice of dementia care and strongly recommended more public lectures and education for community-dwelling older people in Macao SAR to improve their knowledge and preventive practice of dementia care.

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Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

Authors' Contributions

S.M.W. contributed to the conception of this study and approved the final version of the article; W.Z. drafted the article and revised it critically and interpreted the data; I.L.L. made a substantial contribution to the conception and design of this work, and approved the version of the article to be published; C.L. and H.L.L. contributed to the acquisition of data.

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