Hong Kong Journal of Mental Health
2012, *38(1),* 5-9

Prevention of Mental Disorders in late life - Perspectives from Hong Kong

Helen F K Chiu
Department of Psychiatry,
The Chinese University of Hong Kong

Joshua M Y Tsoh
Prince of Wales Hospital and Shatin Hospital

S W Li
Castle Peak Hospital

Abstract

In the last few decades, there have been significant advances in the path of prevention in some medical illnesses. Of note are some of the achievements of medicine in the field of infectious diseases, perinatal mortality and cardiovascular diseases in the developed countries. Apart from scientific advances in the etiology and treatment of the diseases and new technology, a focus on prevention and raising public awareness are some important factors associated with the downward trends of the afore-mentioned diseases (Beekman et al, 2010). In contrast, prevention of mental disorders is a young field (Beekman et al, 2010) , but fortunately, a growing field. In this paper, prevention of dementia, depression and suicide in late life will be discussed, in the context of Hong Kong. In Psychiatry, primary prevention means preventing the disease from occurring, i.e. reducing the incidence of a disease. Secondary prevention means early detection and screening, so it can lead to reduction of the prevalence of a disease. Tertiary prevention means preventing relapse or reducing dysfunction (Koplan et al, 2007).

Keywords: Prevention, mental disorders in late life

Dementia

According to a new report of Alzheimer's Disease International (2009), there were 35.6 million people with dementia globally in 2010, and this will rise to 65.7 million by 2030 and 115.4 million by 2050.

In Hong Kong, the prevalence of dementia has increased in the recent years. In a study conducted in the mid-nineties (Chiu et al, 1998), the prevalence of dementia was 6.1% for people aged 70 or above and the prevalence was estimated to be 4% for people aged 65 or above. This is a comprehensive study of a representative sample of elderly including those living at home and those in residential services. In a second study conducted after a decade (Lam et al , 2008), the prevalence of very mild dementia and mild dementia for people aged 70 or above were 8.5% and 8.9% respectively. The prevalence of moderate and severe dementia were not reported and the sample did not include people living in residential services. The relatively low response rate (only 35% of the screen positive

Correspondence concerning this article should be addressed to Helen F K Chiu, Department of Psychiatry, Multi-Centre, Tai Po Hospital, 9 Chuen On Road, Tai Po, NT, Hong Kong
e-mail: helenchiu@cuhk.edu.hk

subjects agreed to second stage interview), as well as the exclusion of older people living in residential services have imposed some limitations on interpretation of the data. Nevertheless, the evidence suggests that the rate of dementia has increased in Hong Kong over the years. The prevalence of mild dementia in people aged 70 years or above is 8.9% in this study, and this figure is at least comparable to that in other developed countries.

With the silent epidemic of dementia facing Hong Kong and globally, is dementia preventable? Although we have witnessed a lot of scientific progress in the area of dementia research, we are not yet able to state that absolute prevention of dementia is achievable at this point of time.

Fortunately, there are some interventions that might be potentially useful to decrease the risk of dementia. Some promising strategies have been described by Middeton & Yaffe (2009). These include: control of vascular risk factors, cognitive activity, physical exercise, social engagement, certain dietary factors and treatment of depression. In a recent review, Barnes and Yaffe (2011) have described 7 potentially modifiable risk factors for Alzheimer's Disease which include: diabetes, hypertension, midlife obesity, smoking, depression, cognitive inactivity or low educational level and physical inactivity. They conclude that reduction in these risk factors could potentially prevent a number of cases with Alzheimer's disease. On the other hand, other researchers have not found enough evidence to draw conclusions on the association of any modifiable factors with the risk of developing Alzheimer's disease (Daviglus et al, 2011). In a review paper, Larson (2010) concludes that absolute prevention of dementia is still not feasible but compression of cognitive morbidity is a more achievable goal.

For the time being, although we are not yet able to draw firm conclusions about primary prevention, it is reasonable to advise people to control vascular risk factors, abstain from alcohol and smoking, lose weight for people who are obese and to be engaged in cognitive, physical and social activities. These are interventions that might prove to be useful for brain health apart from being beneficial for physical health. In addition, there is a growing interest to identify people with mild cognitive impairment or early dementia, and to implement pharmacological or non-pharmacological interventions to prevent the onset or to slow down the progression of dementia. There are currently many ongoing research in this exciting area. The Department of Health, psychogeriatric teams and geriatric teams will have major roles in the secondary prevention of dementia.

Elderly Suicide

Each year, up to one million people commit suicide (Chiu et al, 2001). Suicide is a tragic event that is potentially preventable. A systematic review on suicide prevention strategies by an international panel of experts has identified several interventions to be most promising to reduce suicide rates, including physician education in depression, restricting access to lethal means of suicide and gatekeeper training (Mann et al, 2005).

A recent review has shown that apart from psychiatric illness, physical illness and pain, social disconnectedness, as well as functional impairment are risk factors for elderly suicide (van Orden & Conwell, 2011). The authors recommend that efforts should be paid to enhance social connectedness apart from considering risk factors like depression in suicide prevention strategies.

Despite the culture of respect for the elderly in Asia, elderly suicide rate in Asia is very high compared with the rate in the general population (Chiu et al, 2001). In Hong Kong, the elderly suicide rate is 2 to 3 times that of the general population. In a local psychological autopsy (Chiu et al, 2004), 87% of the suicide victims had a mental disorder (mostly depression), 60% had expressed suicidal ideation before they committed suicide, and 75% of suicide subjects had consulted a doctor within 1 month of death. These findings suggest that doctors may be

gatekeepers for suicide prevention in older people, and that treatment of mental disorders is important in the prevention of suicide.

In response to this significant public health challenge, the territory-wide Elderly Suicide Prevention Program (ESPP) was established in 2002. There are now 7 ESPP teams under the Hospital Authority. The ESPP operates on a multi-faceted 2 tiered service model. The first tier consists of frontline workers from social centres and primary care doctors. People identified with suicidal risk are referred to the second tier which consists of fast-track clinics and the multidisciplinary psychogeriatric teams. Core components of the ESPP include: gatekeeper training, access enhancement to psychiatric services, specialist psychogeriatric team management and case management by psychiatric nurses. There is some suggestions from a recent study that the establishment of the ESPP service is associated with a reduced suicide rate among a group of old-age suicide attempters when compared with historical controls in Hong Kong (Chan et al, 2011).

Preventing suicide is not an easy task, but it is achievable if there are good understanding of the problem and up-to-date research data, collaborative efforts between various health and social sectors, and a commitment by the government, health care professionals and the community (Chiu et al, in press). The ESPP has shown some preliminary findings in achieving its goals, and it is essential that the Government should inject more resources to strengthen the scope and coverage of this program.

Elderly Depression

Depression is the fourth leading cause of the Global Burden of Disease in 1990 and is estimated to be the second leading cause in 2020 (World Health Organization, 2004). Interventions for prevention of mental disorders are usually classified as "universal", "selective" and "indicated". "Universal" interventions are targeted at the entire population, "selective" interventions are targeted at people who have risk factors while "indicated" interventions are targeted at symptomatic individuals (Baldwin, 2010).

In the recent years, there are a number of studies showing that "selective" interventions are effective in the primary prevention of depression for certain conditions like stroke and macular degeneration, and for dementia caregivers. In addition, some studies have shown that "indicated" interventions for symptomatic people with depressive symptoms are effective (Baldwin, 2010). It is noteworthy that antidepressant therapy and certain types of psychotherapy including Problem Solving Therapy, are interventions with more evidence of efficacy in preventing elderly depression (Baldwin, 2010).

In the case of secondary and tertiary prevention, i.e., detection of depression and prevention of relapse, there is good evidence that antidepressant treatment and/or psychotherapy are useful modalities. For instance, a systematic review and meta-analysis of randomized controlled trials of antidepressants has concluded that continuing treatment with antidepressants is efficacious in preventing relapse and recurrence of elderly depression (Kok et al, 2011).

In Hong Kong, little work has been done in the area of primary prevention of elderly depression. More research data in the field is necessary. In particular, in view of the growing evidence of the effectiveness of "selective" and "indicated" interventions in the prevention of depression (Beekman et al, 2010), more studies are required to examine if these interventions are useful in Hong Kong as well as the cost-effectiveness of these interventions.

Two recent reviews on the prevention of depression (Beekman et al, 2010; Baldwin et al, 2010) conclude that "universal" interventions targeted at the general population do not have strong evidence base and that focusing on high-risk groups is likely to be more fruitful. On the other hand, there is growing evidence that exercise may be useful in people with mild depressive symptoms (Harvey et al, 2010). There are also reports that insomnia is associated with depression, as well as reports on the association of diet and mood state (Baldwin, 2010). In addition, there are some suggestions that social engagement may have protective effects on the development of

depressive symptoms in older people (Glass et al, 2006). We consider that it is worthwhile to promote to the public, especially to older people, the importance of regular exercise, social engagement and healthy lifestyle as these are low-cost interventions that could be applied in a widespread manner, and are potentially beneficial to mental health as well as physical and brain health.

In the area of secondary and tertiary prevention, the psychogeriatric teams have provided a lot of service in the treatment of elderly depression and preventing relapse. There is, however, still scope for improvement in terms of detection and screening of depression as secondary prevention. This is best facilitated by a collaborative stepped-care model involving the psychogeriatric teams working more closely with primary care, which would result in early detection and timely treatment of depression. This type of model is found to be feasible and effective in several successful programs from overseas, e.g. the PROSPECT study (Alexopoulos et al, 2005) and the IMPACT study (Unutzer et al, 2006).

Conclusions

With the population ageing in Hong Kong, mental disorders in older people will become a major health care challenge. It is high time to look into the preventive aspect of these conditions as the rising number of people with dementia and elderly depression and the problem of elderly suicide may pose a great burden on the health care and social services soon. Prevention of mental disorders and suicide in older people would require the conjoint effort and commitment of the policymakers, researchers, health care professionals, governmental and non-governmental agencies, and community leaders.

摘要

香港地區的生命末期精神疾病之預防

在過去幾十年裏，一些疾病的預防得到了長足的發展，比較有代表性的成就如，在發達國家，傳染性疾病、圍產期死亡率、心血管疾病的預防。除了在疾病的病因學、治療學、新技術方面的進展外，主要集中于對這些疾病發生有關的重要因素的預防和引起公眾的關注。相比之下，精神疾病的預防起步較晚，但幸運的是這是一個新興領域。本文章，將對香港地區的癡呆症、抑鬱症、生命末期自殺傾向的預防進行討論。在精神病學領域，初級預防意味著預防疾病的發生，如減少疾病的發生；二級預防即早期發現和篩查，進而減緩疾病的發展；三級預防即預防疾病的復發和身體機能的減退。

References

Alexopoulos, G.S., Katz, I. R., Bruce, M.L., Heo, M., Ten Have, T., Raue, P. et al. (2005). Remission in depressed geriatric primary care patients: a report from the PROSPECT study. *American Journal of Geriatric Psychiatry, 162,* 718-724.

Alzheimer's Disease International (2009). *World Alzheimer Report 2009.* London: Alzheimer's Disease International.

Baldwin, R.C. (2010). Preventing late-life depression: a clinical update. *International Psychogeriatrics, 22,* 1214-1216.

Barnes, D.E., Yaffe, K. (2011). The projected effect of risk factor reduction on Alzheimer's disease prevalence. *Lancet Neurology, 10,* 819-828.

Beekman, A.T. F., Smit, F., Stek, M., Reynolds, C.F., Cuijpers, P.C. (2010). Preventing depression in high-risk groups. *Current Opinion in Psychiatry, 23,* 8-11.

Chan, S.S.M., Leung, V.P.Y., Tsoh, J., Li, S.W., Yu, C.S., Yu, G.K.K., Poon, T.K., Pan, P.C., Chan, W.F., Conwell, Y., Lam, L.C.W., Chiu, H.F.K. (2011). Outcomes of a two-tiered multi-faceted elderly suicide prevention program in a Hong Kong Chinese community. *American Journal of Geriatric Psychiatry, 19,* 185-196.

Chiu, H.F.K., Lam, L.C.W., Chi, I., Leung, T., Li, S.W., Law, W.T., Chung, D. W.S., Fung, H.H.L., Kan, P.S., Lum, C.M., Ng, J., Lau, J. (1998). Prevalence of dementia in Chinese elderly in Hong Kong. *Neurology,* 1002-1009.

Chiu, H.F.K., Chan, S.S.M., Lam, L.C.W. (2001). Suicide in the elderly. *Current Opinion in Psychiatry, 14,* 395-399.

Chiu, H.F.K., Yip, P.S. F., Chi, I., Chan, S., Tsoh, J. Kwan, C.W., Li, S.F., Conwell, Y., Caine, E., (2004). Elderly suicide in Hong Kong. A case controlled psychological autopsy study. *Acta Psychiatrica Scandinavica, 109*, 299-305.

Chiu, H.F.K., Chan, S.S. M., Caine, E.D. (In press). Suicide prevention in the Asia Pacific Region. *Asia Pacific Journal of Psychiatry.*

Daviglus, M.L., Plassman, B.L., Pirzada, A., Ball, C.C., Bowan, P.E., Barke, J.R., Connolly, E.S. Jr., Dunbar-Jacob, J.M., Granieri, E.C. McGorry, K., Patel, D., Trevisan, M ., Williams, J.W. Jr. (2011). *Archives of Neurology, 68,* 1185-1190.

Glass, T.A., De Leon, C.F., Bassuk, S.S., Berkman, L.F. (2006). Social engagement and depressive symptoms in late life. *Journal of Ageing and Health, 18,* 604-628.

Harvey, S.B., Hotopf, M., Overland, S., Mykktun, A. Physical activity and common mental disorder, (2010). *British Journal of Psychiatry, 197,* 357-364.

Kok, R.M., Heeren, T.J., Nolen, W.A. (2011). Continuing treatment of depression in the elderly: a systematic review and meta-analysis of double-blinded randomized controlled trials with antidepressants. American *Journal of Geriatric Psychiatry, 19,* 249-255.

Koplan, C., Charuvastra, A., Compton, M.T., Maclntyre II, J.C., Powers, R.A., Pruitt, D., Wissow, L., (2007). Prevention Psychiatry. *Psychiatric Annals, 375*, 319-328.

Lam, L.C.W., Tam, C.W.C., Lui, V.W.C., Chan, W.C., Chan, S.S. M., Wong, S., Wong, A., Tham, M.K., Ho, K.S., Chan, W. M., Chiu, H.F.K. (2008). Prevalence of very mild and mild dementia in community-dwelling older Chinese people in Hong Kong. *International Psychogeriatrics, 20,* 135-148.

Larson, E.B. Prospects of delaying the rising tide of worldwide, late-life dementias (2010). *International Psychogeriatrics, 22,* 1196-1202.

Mann, J.J., Apter, A., Bertolote, J., Beautrais, A., Currier, D., Haas, A., Hegert, U., Lonnqvist, J., Malone, K., Marusic, A., Mehlum, L., Patten, G., Phillips, M., Rutz, W., Rihmer, Z., Schmidtke, A., Shaffer, D., Silverman, M., Takahashi, Y., Varnik, A., Wasserman, D., Yip, P., Hendin, H. (2005). Suicide prevention strategies: a systematic review. *JAMA, 294,* 2064-2074.

Middleton, L.E., Yaffe, K. (2009). Promising strategies for the prevention of dementia. *Archives of Neurology, 66,* 1210-1215.

Unutzer, J., Tang, L., Oishi, S., Katon, W., Williams, J.W., Hunkeler, E. et al. (2006). Reducing suicidal ideation in depressed older primary care patients. *Journal of the American Geriatrics Society, 54,* 1550-1556.

Van Orden, K., Conwell, Y. (2011). Suicides in late life. *Current Psychiatry Report, 13,* 234-241.

World Health Organization (2004). *The Global Burden of Disease 2004 update.* Geneva, World Health Organization.