

Review article

Aging healthcare workers

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The aging of the world population has tremendous implications for healthcare industry causing numerous problems such as reducing work abilities, increasing health problems and occupational injuries. Some strategies have been proposed to resolve these problems in the aging healthcare workers such as assessing workplaces, developing less physically and responsibly demanding jobs, designing more flexible work schedules, and reducing working hours whilst retaining fringe benefits. In Thailand, there has a few researches in this situation and lacks support in policy and funds from the government, so these problems might cause impact on healthcare profession and their services. Therefore, the attention should be drawn to unleash the situation and to support future research on this topic.

Keywords: Aging healthcare worker, situation, problem, strategy.

Nowadays, most countries are facing an aging society after the number and the proportion of aging people is increasing. The data of the United Nations in 2017 showed that the number of people aged 60 years and older was 962 million, representing 13.0 % of the total population with a tendency to increase by 3.0 % per year.^(1,2) Europe has the highest proportion of people aged 60 and older at 25.0 % of the entire population.⁽²⁾ In Asia, Japan is the country that has the highest proportion of people aged 60 and older in the world at 30.0 % of the entire population.^(1, 3) As for Thailand, they are also facing with this problem. In 2016, Thailand has the number of total populations 65.9 million people and the number of people aged 60 years and older is 11 million people, or 16.5 %. This number is the second in ASEAN, behind Singapore that has 18.7 % of people aged 60 years and older.⁽⁴⁾

A situation of aging workforce in Thailand is caused by the impact of aging population. As a result, the proportion of aging workers has increased as well.^(5, 6) Healthcare workers are also facing this problem too. Since healthcare workers are not enough in Thailand,⁽⁷⁾ this situation can cause numerous

problems. These affect elderly people to increase workload or extend their retirement to respond to the needs of medical personnel.⁽⁸⁾ From the literature review, we found that there are a few researches on aging healthcare workers in Thailand. Therefore, we should focus on this situation and support future research on this topic to find ways to cope with the situation that is going to happen in the near future.

Definition of aging healthcare workers

There is no exactly definition of aging workers. Some researchs focus on people age 55 years and older, while some researchs focus on people age 45 years and older.⁽⁹⁾ In Thailand, Siriruttanaprak S. said that aging workers mean workers age 40 to 45 years and older.⁽¹⁰⁾ While World Health Organization give a definition of aging workers that refer to workers age 45 years and older.⁽¹¹⁾ Therefore, this article is aimed to study aging healthcare workers, 45 years and older according to the definition of the World Health Organization.

There are others words related to this topic such as aged workers or elderly workers, which mean workers who are older than the age of retirement, most common uses the age of 65 years and above.⁽¹²⁾ But in Thailand, the Office of the Civil Service Commission sets the age of retirement at 60 years, which plans to extend the retirement age to 63 years.⁽¹³⁾ There is no age limit for retirement of the private sector. Therefore most aged workers are rarely to find in the government sector. On the other hand, aged workers are mostly to found in the private sector.

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Definition of healthcare workers are people whose job it is to protect and improve the health of their communities.⁽¹²⁾ Occupational categories can be divided into 9 subgroups as follows:

1. Physicians
2. Nursing and midwifery personnel
3. Dentistry personnel
4. Pharmaceutical personnel
5. Laboratory health workers
6. Environmental and public health workers
7. Community and traditional health workers
8. Other health service providers
9. Health management and support workers⁽¹³⁾

Therefore, we can conclude that aging healthcare workers mean groups of people age 45 years and older whose job it is to protect and improve the health of their communities.

The number of healthcare workers in Thailand

Nowadays World Health Organization (WHO) defines the proportion of doctors and nurses to the total number of country's population at 2.28 per 1,000 people. If the proportion is less than this number, it mean that country has a scarcity of medical personnels. In Thailand, there are the total number of doctors 55,763 people⁽¹⁶⁾ and the total number of nurses 158,317 people, compared with the total number of Thailand's population 66 million people so the proportion of doctors and nurses to the total number of Thailand's population is 3.24 per 1,000 people. Therefore, the problem of insufficient medical personnel in Thailand is not caused by insufficient production. But caused by problems of management and distribution that is not being distributed appropriately to the rural areas. Based on the number of medical personnel in Thailand divided by Occupational categories found that

1. The number of doctors is 55,763 people.⁽¹⁶⁾ The proportion of doctors to Thailand's population is 1 per 1,292 people.
2. The number of nurses is 158,317 people. The proportion of nurses to Thailand's population is 1 per 419 people.
3. The number of dentists is 11,575 people. The proportion of dentists to Thailand's population is 1 per 5,643 people.
4. The number of dental nurses is 6,818 people. The proportion of dental nurses to Thailand's population is 1 per 581 people.

5. The number of pharmacists is 26,187 people. The proportion of pharmacists to Thailand's population is 1 per 2,494 people.

6. The number of medical technologists is 15,200 people. The proportion of medical technologists to Thailand's population is 1 per 4,298 people.

7. The number of physical therapists is 10,065 people. The proportion of physical therapists to Thailand's population is 1 per 6,490 people.

8. The number of public health technical officers is 27,035 people. The proportion of public health technical officers to Thailand's population is 1 per 2,416 people.

9. The number of community public health officers is 27,006 people. The proportion of community public health officers to Thailand's population is 1 per 2,419 people.

10. The number of Thai traditional medicine professions/applied Thai traditional medicine professions is 30,371 people. The proportion of Thai traditional medicine professions/applied Thai traditional medicine professions to Thailand's population is 1 per 2,151 people.⁽¹⁷⁾

A situation of aging healthcare workers in worldwide

Many countries are interested in the situation of aging healthcare workers for several years ago.

In 2005, McGinnis SL and Moore J have predicted this situation in the United States that in 2015, there will had a shortage of medical personnel from rapidly increase of ages of medical personnel. This report found that the top 5 of rapidly increase of ages are respiratory therapists, registered nurses, speech therapists, health records technologists and pharmacists.^(18, 19)

In 2010, Population Reference Bureau of the United States told that by 2030, the share of the population ages 65 years and older will increase dramatically from 13.0% to 19.0%. Therefore, the demand for medical personnel will increase as well. Additionally, medical personnel are more retiring and younger medical personnel are insufficiency to replace. It happens to be a shortage of medical personnel so there has the need for medical personnel from abroad. With the expectation that proportion of foreign-born doctors in the United States increased to 26.0% and foreign-born nurses in the United States increase to 6.0%. By 2025, the amount of shortage of nurses will increase to 1 million people.⁽²⁰⁾ Using of foreign-born health professional is one of the major

problems of Europe as well. According to the Organisation for Economic Co-operation and Development (OECD), Switzerland has the highest proportion of foreign-born nurses in Europe at 28.6% and Ireland has the proportion of foreign-born doctors in Europe at 35.3%.^(21, 22)

In 2013, Harrington L. and Heidkamp M. conducted a study of this situation in the United States in three occupational groups and found that: 1) In 2020, nearly half of nurses nationwide will enter retirement age and now, the average age of nurses nationwide is 50 years old; 2) In 2007, about a quarter of physicians nationwide age 60 years and older; 3) In 2001, more than 80.0 % of dentists nationwide older than 45 years old and by 2020, the number of newly graduated dentists will not be enough to replace retired dentists.⁽⁸⁾

A situation of aging healthcare workers in Thailand

At present, Thailand still has limited researches on the situation of aging healthcare workers. The article of Kanchanajittra M said that the situation in the shortage of medical personnel in Thailand was not as intense as that of Japan, the country that has the highest proportion of people age 60 years and older in the world. The estimation of the demand of medical personnel by 2027 shows that Thailand still has enough doctors and dentists to reserve the needs, but there is a tendency to lack nurses around 1,200 - 57,000 people and may be more likely to lack pharmacists as well.⁽²³⁾

Problems followed by a situation of aging healthcare workers:

When medical personnel are aging, it inevitably causes problems as follows:

1. Work ability

Harrington L. and Heidkamp M. found that the older medical personnel are, the lower ability to work they have.⁽⁸⁾ The reason that ability to work decreased has several factors such as the quality of sleep. When medical personnel are aging, the quality of sleep got worse, resulting in decreased ability to work and reduced the maximum muscle strength and range of motion of joints.⁽²⁴⁾

2. Health problems

When the medical personnel are older, there are several health problems such as underlying diseases, reduced visibility, reduced hearing or some mental health problems such as decreased memory and depressive disorder.⁽⁸⁾

3. Accident from work

From the research of Scott K. and Newman L. in private hospitals in the United States, they found that the older medical personnel are suffered the higher rate of injury from work (slipping, tripping and falling) happen.⁽²⁵⁾ The rate of accidents increased was caused by the elderly with reduced visibility and reduced hearing.⁽²⁴⁾

The advantages of the advanced age of medical staffs

Not only aging medical staffs made the problems, but also aging medical personnel had the advantages. The advantages of aging medical personnel when compared with younger medical personnel such as more knowledge, more expertise, more experience, more leadership and more suitable when made the decisions. These advantages are invaluable and can pass on to the new generation of medical staffs.

Strategies for responding to aging healthcare workforce

It can divide into 2 methods as follows:

1. Adjusted from the individual

1.1 Reduce the workload and responsibility

According to the research of Institute of Medicine of United States (IOM), they suggest what should be done in order that elderly medical personnel still exist such as assign the job with reduced physical strength, using technology to help high resolution work and design schedules that can be easily adjusted. The important thing is that elderly medical personnel should be supervisors and they should provide additional training for retired healthcare providers to return to work with the elderly or in the instruction position.⁽²⁷⁾

1.2 Provide a flexible shift schedule

According to the research of Sloan Center on Aging & Work, they have several recommendations to make elderly healthcare providers remains. The most important thing is to allow employees to set their own schedule. Which is contrary to the traditional style that is very stricted. Elderly employees commented that the most important thing that is needed from the employer is to be able to assign the working hours and the shift by themselves to suitable with them and to manage with personal matters. Another recommendation is to understand the work and personal pressure of employees. Experts recommend that employees are more likely to stay with employers

if employers are aware of problems beyond the workplace. Reduce pressures and challenges can result in employees work efficiently and increase the ability to work. In addition, creating team-building work will make employers to retain elderly employees. Working as a team will make older employees to pass the knowledge to younger employees meanwhile, younger employees will lighten the load of older employees.⁽²⁸⁾

2. Adjusted from the organization

2.1 Workplace assessment

From the example of Robert Wood Johnson University Hospital in New Brunswick, New Jersey, United States, they observed that many nurses resigned before retirement. So they found the solution to assess the workplace and change it to be more suitable for nurses such as moving the refrigerator that used to store some drugs for patient, making it more comfortable to use or buy a sleeping mat for reducing fatigue, to allow the nurse to rest during the period of fatigue during shifts or recruit supporting staff for consult the problems that cause them to resign before retirement. Furthermore, this hospital has been suggested to improve the ergonomics, planning the career path for elderly nurses, support the policies that have a work-life balance and offer a retirement plan that can work together in another job.⁽²⁹⁾

2.2 Reduce work time without losing the fringe benefits received

From the report of NTAR Leadership Center, they conclude how to deal with elderly medical personnel of each hospital as the following

2.2.1 Mercy Health System has submitted an offer for weekend-only work, work at home opportunities, and seasonal work that allow employees to take extended leave.

2.2.2 Lee Memorial Health System has proposed flexible schedules, seasonal-months- off program up to six months during slow season for full-time and part-time employees and allows employees to work reduced schedules for up to six months without losing benefits.

2.2.3 Bon Secours Richmond Health System permits employees who are older than 65 years to work up to 24 hours per week and receive the same benefits they would get if fully retired.

2.2.4 Baptist Health Systems allows employees with at least 10 years with hospital who are 59.5 years

or older to begin to draw on their pension and still work part time. Aging employees who decide to retire can return to work with hospital within 5 years without losing their benefits.

2.2.5 Carondelet Health Network has issued the “Snowbird program” for nurses. This program allows nurses can choose to work in Tucson, Arizona for 3, 6 or 9 months consecutive. This innovative programs enable employees to shuttle between two locations seasonally, appealing to aging employees who seek warmer climates in the winter months and cooler climates in the summer.⁽³⁰⁾

Conclusion

A situation of aging healthcare workers is nearly happening worldwide, including Thailand, which causes many problems such as medical personnel are insufficient so the elderly workers must be working longer and this may affect the ability to work. Some countries have started to research the size of the current problems and predict the number of scarce medical personnel. As for Thailand, there is limited research about aging healthcare workers. Therefore, the attention should be drawn to unleash the situation and to support future research on this topic to find ways to cope with the situation that is going to happen in the near future especially factors that affect the ability of work to improve an ability of the aging healthcare workers and minimize the problems that caused from the aging workers.

References

1. Population Division, Department of Economic and Social Affairs, United Nations. World population prospects: the 2017 revision key findings and advance tables [Internet]. 2017 [cited 2018 Oct 31]. Available from: https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf.
2. United Nations. Ageing [Internet]. 2017 [cited 2018 Oct 31]. Available from: <http://www.un.org/en/sections/issues-depth/ageing/>.
3. World Health Organization. World report on ageing and health [Internet]. 2015 [cited 2018 Oct 31]. Available from: http://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811_eng.pdf;jsessionid=14BFE514405B761854E2C72C012DD130?sequence=1.
4. Foundation of Thai Gerontology Research and Development institute, Mahidol University. Report of elderly in Thailand 2016 [Internet]. 2016 [cited 2018 Oct 31]. Available from: <http://thaitgri.org/?p=38427#>.

5. Thanapob J. Occupational health in aging society: situation, impact and needs [Internet]. 2018 [cited 2018 Oct 31]. Available from: https://sph.wu.ac.th/wp-content/uploads/2018/02_4.OccupationalHealthinAgingSociety.pdf.
6. International Labour Organization. Aging workforce threatens Thailand's productivity and development, says ILO report [Internet]. 2009 [cited 2018 Oct 31]. Available from: https://www.ilo.org/asia/media-centre/news/WCMS_104833/lang-en/index.htm.
7. Wongwichai C. Aging workforce: problems and solutions of Thai health systems [Internet]. 2016 [cited 2018 Oct 31]. Available from: <https://www.hfocus.org/content/2016/04/12004>.
8. Harrington L, Heidkamp M. The aging workforce: challenges for the health care industry workforce [Internet]. 2013 [cited 2018 Oct 31]. Available from: <https://www.dol.gov/odep/pdf/NTAR-AgingWorkforceHealthCare.pdf>.
9. Canadian Centre for Occupational Health & Safety. Aging workers [Internet]. 2012 [cited 2018 Oct 31]. Available from: https://www.ccohs.ca/oshanswers/psychosocial/aging_workers.html.
10. Siriruttanapruk S. Occupational health services for aging workers [Internet]. 2016 [cited 2018 Oct 31]. Available from: <http://www.envoc.ddc.moph.go.th/html/content/107357>.
11. World Health Organization. Health of the elderly in South-East Asia: a profile [Internet]. 2003 [cited 2018 Oct 31]. Available from: http://apps.searo.who.int/PDS_DOCS/B1462.pdf.
12. The Japan Times. Keeping elderly workers in the labor force longer [Internet]. 2018 [cited 2019 Jul 11]. Available from: <https://www.japantimes.co.jp/opinion/2018/09/26/editorials/keeping-elderly-workers-labor-force-longer/#.XSbjXC2B1sN>.
13. Thepmanee M. Extending the retirement age of Thai civil servant to 63 years [Internet]. 2018 [cited 2019 Jul 11]. Available from: <https://www.ocsc.go.th/node/4225>.
14. World Health Organization. The world health report 2006: working together for health [Internet]. 2006 [cited 2018 Oct 31]. Available from: http://apps.who.int/iris/bitstream/handle/10665/43432/9241563176_eng.pdf?sequence=1
15. World Health Organization. Global atlas of the health workforce [Internet]. 2008 [cited 2018 Oct 31]. Available from: http://www.who.int/healthinfo/systems/WHO_MBHSS_2010_section2_web.pdf.
16. The Medical Council of Thailand. The data storage in a database platform of the medical council of Thailand [Internet]. 2018 [cited 2019 Jul 11]. Available from: <https://www.tmc.or.th/pdf/st-tmc-27-12-18-001.pdf>.
17. MGR Online Press. The problem of insufficient medical personnel in Thailand caused by problems of management and distribution [Internet]. 2017 [cited 2019 Jul 11]. Available from: <https://mgronline.com/qol/detail/9600000033816>.
18. McGinnis SL, Moore J. The impact of the aging population on the health workforce in the United States: summary of key findings. *Cah Social Demogr Med* 2006;46:193-220.
19. Moore J. The impact of aging on health workforce supply and demand [Internet]. 2005 [cited 2018 Oct 31]. Available from: <http://www.chwsny.org/wp-content/uploads/2015/09/042005a.pdf>.
20. Population Reference Bureau. Aging and the health care workforce. *Today's Research on Aging* [Internet]. 2010 [cited 2018 Oct 31];19:1-7. Available from: <https://assets.prb.org/pdf10/TodaysResearchAging19.pdf>.
21. Organisation for Economic Co-operation and Development. Immigrant health workers in OECD countries in the broader context of highly skilled migration [Internet]. 2007 [cited 2018 Nov 18]. Available from: http://www.who.int/hrh/migration/2007_annual_report_international_migration.pdf.
22. Aluttis C, Bishaw T, Frank MW. The workforce for health in a globalized context—global shortages and international migration. *Glob Health Action* 2014;7: 23611.
23. Kanchanajittra M. Preparing to enter the aging society in healthcare workers and public health personnel [Internet]. 2017 [cited 2018 Oct 31]. Available from: <http://newsletter.ipsr.mahidol.ac.th/index.php/component/content/article/122-vol38-no1/490-popdev-vol38-no1-a07.html>.
24. Ekburanawat W. Elderly workers [Internet]. 2008 [cited 2018 Oct 31]. Available from: http://www.summacheeva.org/index_article_elder.htm.
25. Scott K, Newman L. The aging healthcare workforce: employment and occupational injuries among workers in US private hospitals during 2010 [Internet]. 2013 [cited 2018 Oct 31]. Available from: <http://www.aohp.org/aohp/portals/0/MembersOnlyDocuments/ToolsForYourWork/Dec%202013%20Aging%20Workforce.pdf>.
26. Committee on the Future Health Care Workforce for Older Americans, Institute of Medicine. The

- professional health care workforce. In: Rowe JW, Allen-Meares PG, Altman SH, Bernard MA, Blumenthal D, Chapman SA, et al., editors. *Retooling for an aging America: building the health care workforce*. Washington, DC: The National Academies Press; 2008. P. 123-97.
27. Institute of Medicine of the National Academies. *Retooling for an aging America: building the health care workforce* [Internet]. 2008. [cited 2018 Oct 31]. Available from: <https://www.nap.edu/read/12089/chapter/1>.
 28. Sweet S, Pitt-Catsouphes M, Besen E, Hovhannisyan S, Pasha F. Talent pressures and the aging workforce: responsive action steps for the health care and social assistance sector [Internet]. 2006 [cited 2018 Oct 31]. Available from: https://www.bc.edu/content/dam/files/research_sites/agingandwork/pdf/publications/TMISR02_HealthCare.pdf.
 29. Bleich MR, Connolly C, Davis K, Hewlett PO, Hill KS. The importance of the older and experienced nurse in the workplace [Internet]. 2006 [cited 2018 Oct 31]. Available from: <https://www.rwjf.org/content/dam/farm/reports/reports/2006/rwjf13773>.
 30. Tishman FM, Van Looy S, Bruyère SM. Employer strategies for responding to an aging workforce [Internet]. 2012 [cited 2018 Oct 31]. Available from: https://www.dol.gov/odep/pdf/NTAR_Employer_Strategies_Report.pdf.