

## SYSTEMATIC REVIEW

**Working Beyond Retirement Age: A Systematic Review**Halimatus Sakdiah Minhat<sup>1,2</sup>, Suttama Suwanmanee<sup>3</sup><sup>1</sup> Department of Community health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia<sup>2</sup> Malaysian Research Institute on Ageing, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia<sup>3</sup> Department of Public Health, Faculty of Health and Sport Science, Thaksin University, Phatthalung, Thailand 93210**ABSTRACT**

**Introduction:** Population ageing brings along various crucial implications, with working beyond retirement age is one of the economics implications of ageing. Realizing the increasing demand and concern to accommodate older adults into the workforce, this review was conducted to develop better understanding on the factors associated with post-retirement employment among older adults aged 50 years and older. **Methods:** Using Scopus, ScienceDirect and PubMed databases, related articles between January 2017 and June 2021 were thoroughly searched using combination of keywords and screened according to the predetermined eligibility criteria. Post-retirement employment was defined as employment of older adults aged 50 years old and above beyond retirement age or re-employment of retired older adults, either from compulsory or voluntary retirement. All observational, qualitative, mixed methods and experimental studies were included in the screening process. The Crowe Critical Appraisal Tool (CCAT) was used to assess the quality of included articles. **Results:** A total of 12 articles included for review, with seven articles rated as high-quality. The review had successfully identified 10 factors associated with working beyond retirement age among older adults. Having good health status and being male gender were the commonest factors influencing the decision to work beyond retirement age, followed by level of education, financial commitment/ reasons, and work characteristics. **Conclusion:** The findings of this review provide a crucial insight and foundation towards addressing the unique needs of older workers in the employment policy.

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**INTRODUCTION**

Ageing population is a global phenomenon and is affecting the developing countries rapidly, which will substantially induce “greying” of the working age population. The increasing of the proportion of older persons due to longevity brings along various implications, including extending the retirement age and employment of older adults beyond compulsory retirement age. The associated life transition experience following retirement may also reverse the initial retirement decisions, leading to post-retirement employment (1).

Working beyond retirement is also known as ‘bridge employment’. It refers to any form of paid employment after an individual retires and starts receiving a pension (2), or older workers labor force participation, either through post-retirement re-employment or continue

working before they completely and permanently retire (3).

Many positive outcomes have been linked with post-retirement employment or bridge employment, including the positive impacts on health and depressive symptoms (4), promotes psychological wellbeing and social supports (5), enables to earn extra income, develop and improve new skills and abilities, as well as an opportunity to contribute to the society (6). Continue working after retirement was reported to increase happy index and improve health status of older workers compared to their non-working counterparts (2).

The needs to work beyond employment age is determined by a wide range of factors which include the sociodemographic attributes such as age, gender, education level and family status, reasons of the initial retirement, health status, financial circumstances of individuals (1) and work motivation (7). Compared to women, most literatures reported retired men were more likely to return into the labor force. Retired women spent more time doing housework and frequently and intensively involved in elder care than retired men,

which contribute towards the lower post-retirement employment among them (8). However, more women have been reported to continue working beyond retirement age recently especially among those with better education. According to Hill (9) in the USA monthly labor review, older women's labor force participation was influenced by the non-economic factors such as level of education, job flexibility in work hours, and physical stress of fully engaged with housework.

Apart from individual factors, work-related factors such flexibility in working hours and participation in less demanding jobs (10) and social factors, such as having a working spouse and children to support, were also reported to positively associated with post-retirement employment (11). Other than that, employers' related factors such as their attitudes and willingness to retain older staff, and to hire older workers (12) also play a role towards recruitment and retention of older adults in the workforce. Stereotyping and ageism among employers have been linked with unwillingness to hire or retain older workers in workforce. The global increased in the proportion of older persons has created demands towards post-retirement employment. Hence, exploring the potential contributing factors of post-retirement employment are necessary to accommodate, sustain and support participation of older adults in the labor force without compromising their rights and health. This review aimed to identify the factors determining post-retirement employment among older adults. A comprehensive review on this issue will enrich the existing scientific evidence and assist the organizations to better understand the contributing factors, in order to implement a more effective strategic human resource (HR) planning.

## METHODS

### Identification and selection of studies

This review was conducted and reported in accordance to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (13). The review included observational, qualitative, mixed methods and experimental studies, reporting factors associated with post-retirement employment among older adults aged 50 years and older. For this review, post-retirement employment refers to employment of older adults beyond retirement age (bridge employment) or re-employment of retired older adults, either following mandatory or voluntary retirement. Age of 50 years old was selected to cater early compulsory retirement age in some of the developing countries, particularly among women. Non-English language studies (due to limited resources for translation process), review articles, editorial, proceedings, descriptive studies, protocol, and articles published before January 2017 were excluded. Studies exploring similar issues from the perspectives of employers or immigrants were also excluded. Systematic search for relevant articles were conducted using three

established databases; Scopus, PubMed and Science Direct, limited from January 2017 to June 2021, using combination of keywords.

### Data extraction, analysis, and quality assessment

Guided by the inclusion criteria, each included study was recorded as include, exclude, or unclear, followed by retracement of full articles to further assess the 'include' and 'unclear' categorized articles. All included articles and extracted data were checked and revised by the first author (HSM). Information related to year of publication, study design, study location, study population (age) as well as the key findings (factors associated with post-retirement employment) were extracted and documented in a table. The extracted key findings may be presented as specific measure of estimates such as, crude odds ratios, adjusted odds ratios, relative risk ratios values, or standardized beta coefficient with 95% confidence interval and a p-value of less than 0.05, as well as frequency, percentage, or proportion.

### Quality assessment of included articles

Quality of individual article was assessed using the Crowe Critical Appraisal Tool (CCAT), which is applicable for both, quantitative and qualitative studies (14). The CCAT assessed the studies based on eight criteria which are preliminaries, introduction, design, sampling, data collection, ethical matters, result, discussion, and conclusion. The total score was interpreted as percentage according to the following categories for comparison; poor quality ( $\leq 50\%$ ), acceptable quality (51–74%), high quality ( $\geq 75\%$ ).

## RESULTS

A total of 12 articles were included in the final review. Fig. 1 shows the PRISMA flowchart illustrating the search strategy. Quality assessment for each article is demonstrated in Table I with high-quality in seven studies (4, 15, 16, 17, 18, 19, 20) and acceptable quality in the remaining five (6, 20, 21, 22, 23).

The final review involved four cohort (4, 16, 18, 19), six cross-sectional (15, 20, 21, 22, 23, 24) and one each for mixed methods (6) as well as qualitative (17) studies. Four studies were conducted in the Netherlands (6, 15, 17, 18), two studies in the United Kingdom/ England (19, 24), and one study in Canada (20), Finland (16), Poland (21), Sri Lanka (22), United States of America (USA) (4) and Germany (23) respectively, with sample size ranging between 33 and 23777 respondents. Characteristics of reviewed articles are summarized in Table II.

The key findings as well as the summary of the factors associated with post-retirement employment among older adults aged 50 years and older is tabulated in Table II and Table III. A total of 10 factors were identified in this review which are age, gender (male), level of

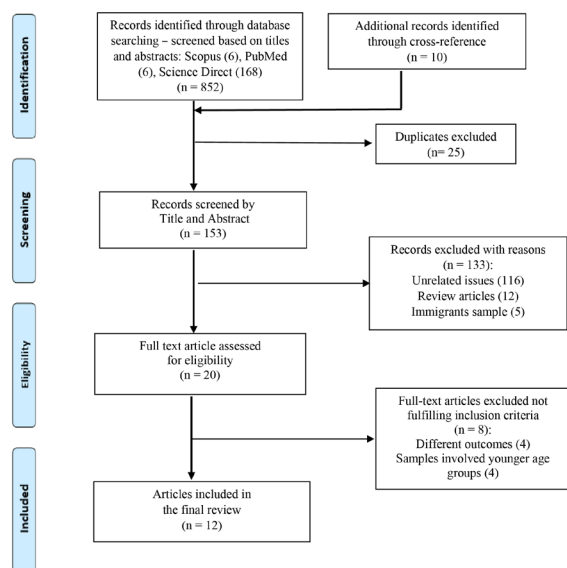


Fig. 1: PRISMA flowchart

education, health status, financial reasons, knowledge and skills transfer, marital status, employment status of partner/ spouse, purpose in life and work characteristics. Health status was reported in 10 articles (4, 6, 15, 16, 17, 18, 19, 20, 22, 23). The second most important factor identified from this review was gender, with male older adults were reported to frequently and significantly worked beyond retirement age or back to work after retirement (4, 6, 15, 16, 19, 20, 22, 23). Work characteristics was also found to be an important factor, with flexible work arrangements (6, 17), low physical workload (16, 18), work time control (16), working in the healthcare sector (15, 18) and self-employed (23) were characteristics of employment identified to influence post-retirement employment among older adults. Other factors identified include level of education, financial reasons, age at retirement, marital status, knowledge and skills transfer, employment status of partner or spouse and purpose in life.

Table I: The Crowe Critical Appraisal Tool Quality Assessment

Articles	Preliminary	Introduction	Design	Sampling	Data collection	Ethics	Results	Discussion	Total score (/40)	%
Settels & McMullin (2017) (20)	4	4	4	3	3	3	4	4	29	72.5
Scharn et al. (2017) (15)	4	4	4	4	4	3	4	4	31	77.5
Virtanen et al. (2017) (16)	5	4	4	4	4	3	4	4	32	80.0
Sewdas et al. (2017) (17)	5	5	4	4	4	2	4	4	32	80.0
de Wind et al. (2018) (18)	4	4	4	4	4	5	5	5	35	87.5
Oleksiyenko & Zyczyńska-Ciołek (2018) (21)	3	4	3	3	3	3	4	4	27	67.5
Di Gessa et al. (2018) (24)	4	4	4	4	4	2	4	4	30	75.0
Perera & Weerakkody (2018) (22)	3	4	4	3	3	2	3	4	26	65.0
van der Zwaan et al. (2019) (6)	3	3	4	3	4	3	3	3	26	65.0
Platts et al. (2019) (19)	5	4	4	4	4	4	4	4	33	82.5
Silver et al. (2020) (4)	3	4	4	4	4	3	4	4	30	75.0
Hess et al. (2020) (23)	4	4	4	4	4	2	3	4	29	72.5

## DISCUSSION

The review had identified 10 factors determining post-retirement employment among older adults. Good health status and male gender were the two most frequently reported factors. Other factors identified were level of education, work characteristics, financial reasons, age at retirement, purpose in life, knowledge and skills transfer, marital status as well as the employment status of partner/ spouse. These factors were divided and discussed according to the four dimensions of the employability framework (25); career motivation (being male, age at retirement, health status, financial reasons, knowledge and skills transfer, work characteristics), human capital (educational level and being male), social capital (marital status), and identity (employment status of partner/ spouse, purpose in life). None of the factors fit into the fifth dimension of the employability framework, which is personality.

### Career motivation

Career motivation involves needs and self-perceptions, with needs refer to the drive for money, security, advancement, peer approval, esteem and the desire for continuous learning and generativity, while self-perception refers to an individual's realistic assessment of employment possibilities (25). In this current review, being male, age at retirement, financial commitment as well as knowledge and skills transfer were identified as factors influencing the needs to work after retirement among older adults. On the other hand, health status and work characteristics were factors linked to the self-perceptions.

Men hold higher possibility for bridge employment as most of them are the head of the family and carry more responsibility for family commitments (22). However, mixed findings on retirement decisions by gender have been reported, with family commitment and caregiving responsibilities were linked with both,

**Table II: Characteristics and main findings of included studies**

Citations	Study design	Study location	Sample size	Study population	Key findings	
					Prevalence	Factors
Settles & McMullin (2017): Gender and Relationship Status Interaction and Likelihood of Return to Work Post-Retirement (20)	Cross-sectional study	Canada	4144	≥50 years old, who retired at least once, and whose first retirement occurred after having turned 50 years of age	1346 (32.5%) returned to work after retirement	<ol style="list-style-type: none"> <li>1. Gender – low likelihood among women who were married/ common-law relationship (OR = 0.52)</li> <li>2. Parental status- Being a parent (OR = 1.27)</li> <li>3. Financial adequacy (OR = 1.59)</li> <li>4. Age - Lower current ages and lower ages at first retirement (OR = 4.06).</li> <li>5. Health at retirement - poor (OR = 0.24).</li> <li>6. Education - high school diploma (OR = 1.91, p &lt; .001) and holding a university degree (OR = 3.26, p &lt; .001)</li> <li>7. Community involvement (OR 1.41)</li> </ol>
Scham et al. (2017): Predicting working beyond retirement in The Netherlands: An interdisciplinary approach involving occupational epidemiology and economics (15)	Cross-sectional study	Netherlands	1070	≥56 years old	1/4 <sup>th</sup> of the sample worked beyond retirement (N=197). The mean age of people who worked beyond retirement was 61.3 years and the majority were male.	<ol style="list-style-type: none"> <li>1. Health characteristics - a higher score on the physical component scale of the SF-12, being intensively physically active for ≥20 minutes for ≥2 days/week, and taller body height remained in the final model and increased the likelihood to work longer beyond retirement.</li> <li>2. Work characteristics - respondents with a permanent contract and who worked in handcraft were less likely to work beyond retirement, but respondents who worked in healthcare were more likely to work beyond retirement.</li> <li>3. Social environmental characteristics - negative opinion of the partner about working until retirement was associated with not working beyond retirement.</li> <li>4. None of the socioeconomic and demographic characteristics predict working beyond retirement age.</li> </ol>
Virtanen et al. (2017): Occupational class and working beyond the retirement age: A cohort study (16)	Cohort study	Finland	5331	≥63 years old	On average, 17.3% (N=921) extended their employment more than six months beyond the pensionable age (63-65) - Higher proportions were found among managers and professionals (20.8%) and lower grade non-manual workers (23.0%) while lower proportions were found among skilled manual (11.3%) and elementary workers (10.4%).	<ol style="list-style-type: none"> <li>1. Adjusted for gender: A probability of 0.95 (95% CI 0.72–1.23) for skilled manual, 2.03 (1.59–2.58) for lower grade non-manual, and 1.79 (1.41–2.27) for managers and professionals to extend their employment compared to elementary occupations.</li> <li>2. Men, non-married, full-time workers, day workers, those with low physical workload, low job strain, high work time control, no chronic somatic disease, no psychological distress, good work ability, and no obesity had a greater likelihood of working longer.</li> <li>3. With lower physical workload as a mediator: high occupational class indirectly increases the likelihood of extended employment compared to low occupational class.</li> <li>4. With work time control as a mediator: high work time control was associated with 1.11-fold (95% CI 0.87–1.41) and 1.68-fold (95% CI 1.40–2.02) higher probability of extended employment among participants with low and high occupational classes, respectively, thus being a stronger predictor of future employment among high-occupational-class participants.</li> </ol>
Sewdas et al. (2017): Why older workers work beyond the retirement age: A qualitative study (17)	Qualitative study	Netherlands	33	≥65 years old		<p>Motives and preconditions of working beyond retirement age:</p> <ol style="list-style-type: none"> <li>1. Health -good health</li> <li>2. Work characteristics – flexible work arrangements, contact and feeling responsible with clients</li> <li>3. Skills and knowledge - utilization of abilities, ability to pass on skills and knowledge, and learning new skills and knowledge</li> <li>4. Social factors - those with working partner or single</li> <li>5. Financial factors – financial benefit</li> <li>6. Purpose in life - maintaining daily routines, contribution and participation in society, worries about their life as a retiree.</li> </ol>
de Wind et al. (2018): Predictors of working beyond retirement in older workers with and without a chronic disease - results from data linkage of Dutch questionnaire and registry data. (18)	Cohort study	Netherlands	1125	Employees aged 56–64 years old	Workers without chronic disease were more likely to work beyond retirement compared to workers with chronic disease (27% vs 23%).	<ol style="list-style-type: none"> <li>a. Workers with chronic disease: healthcare work, better physical health, higher body height, lower physical load and no permanent contract were positively predictive of working beyond retirement.</li> <li>b. Workers without chronic disease: feeling full of life and being intensively physically active for ≥ 2 days per week were positively predictive of working beyond retirement; while manual labour, better recovery, and a partner who did not support working until the statutory retirement age, were negatively predictive of working beyond retirement.</li> </ol>
Oleksiyenko & Zyczyńska-Ciołek (2018): Structural Determinants of Workforce Participation after Retirement in Poland (21)	Cross sectional study	Poland	787 retirees	Retirees: Mean age of the sample equal to 70 and median equal to 69	11.3% of the respondents declared being in paid employment at the time of the study.	<ol style="list-style-type: none"> <li>1. High educational attainment (OR 1.706)</li> <li>2. Occupational prestige of the last job (OR 1.017)</li> <li>3. Low retirement benefit (OR 4.082)</li> <li>4. Working before retirement in an agricultural sector (OR 3.080)</li> </ol>
Di Gessa et al. (2018): The decision to work after state pension age and how it affects quality of life: evidence from a 6-year English panel study (24)	Cross-sectional	England	2,502 and 1,823 individuals for the cross-sectional and longitudinal analyses	≥65 years old for men, ≥60 years old for women	Almost 20% of the sample was in paid work beyond SPA (State Pension Age) – Of which, about 2/3 <sup>rd</sup> reported that they were in paid work because they ‘enjoy working’ or to ‘keep active and fit’ and the other 1/3 <sup>rd</sup> reported financial issues as the main reason for working beyond SPA.	<ol style="list-style-type: none"> <li>1. Adjusted for health: being in paid work out of financial necessity beyond SPA had significantly lower QOL [CASP-19 scores (β = -1.21)] compared with those who retired at the expected/usual age.</li> <li>2. Being in paid work beyond SPA for positive reasons, reported significantly better QoL (β = 1.62).</li> <li>3. Voluntary retirement was significantly reported higher QoL (β = 1.12)</li> <li>4. Longitudinal analyses suggest that those who were working post-SPA by choice, but who had stopped working at follow-up, also reported marginally (P &lt; 0.10) higher CASP-19 scores.</li> </ol>

**Table II: Characteristics and main findings of included studies (continued)**

Citations	Study design	Study location	Sample size	Study population	Key findings	
					Prevalence	Factors
Perera & Weerakkody (2018): Determinants of Post-Retirement Employment in Sri Lanka (22)	Cross-sectional study	Sri Lanka	97	Male: ≥62 years old, Female: ≥61 years old	Post retirement employment: Male (67%) vs Female (33%) Among the post-retired employees: 81.4% were married, 51.5% were living in urban areas in Sri Lanka, 78.4% were heads of families, 66% were employed in the private sector, 56.7% worked with different employer, 40.2% were permanent employees, 74.2% were full time workers.	Late Career Meaningfulness, Health Conditions, Legal Enforcements, Family Accomplishments, Social Security and Declining Fertility Rates and Increased Life Expectancy.
van der Zwaan et al. (2019): The role of personal characteristics, work environment and context in working beyond retirement: a mixed-methods study (6)	Mixed methods study	Netherlands	Quantitative: 568 Qualitative: 30	≥ 65 years old	<b>Quantitative findings</b> 28.3% (N= 161) of the participants worked beyond the statutory retirement age: Men (55.3%), higher education level (33.5%), indicated to like to work more often (84.5%).  <b>Qualitative findings:</b> 15 persons worked beyond the statutory retirement age and 15 were fully retired.	<b>Quantitative findings</b> Good physical health (OR = 1.80), developmental proactivity (OR = 1.38), interesting work (OR = 2.02), appreciation (OR = 1.62) and voluntary work (OR = 1.58) were associated with working beyond the statutory retirement age.  <b>Qualitative findings:</b> 1. Good physical and mental health condition influence the decision-making process. 2. The desire to transfer skills and share knowledge with younger co-workers. 3. Having an employer who allowed to work beyond retirement was crucial influencer on decision-making process. 4. Opportunity to maintain contact with clients and colleagues, and to avoid the so-called black hole of retirement. 5. The degree of flexibility that the job offers. 6. To compensate for financial shortcomings. 7. The extra income provided the opportunity to undertake leisure activities or to supplement savings. 8. The employment status of the partner - Those with a working partner were more inclined to work beyond retirement.
Platts et al. (2019): Returns to work after retirement: a prospective study of unretirement in the United Kingdom (19)	Prospective/ Cohort study	U n i t e d Kingdom	2046	50 - 69 years old	398 respondents were observed to reverse their retirement (215 men and 183 women) – 25% (cumulative proportion) experienced a retirement reversal after reporting being retired after 15 years follow up; about half of these reversals occurred within the first five years of retirement.	1. Gender-male [Female (HR 0.74)] 2. Educational level-high: [O level GCSE (HR 0.64)] 3. Better Health [Fair, poor or very poor (HR 0.77)] 4. Housing tenure - Owned with mortgage [Rented (HR 1.40)] 5. Spouse - Partner in paid work [HR 1.38]
Silver et al. (2020): The effect of post-retirement employment on health (4)	Longitudinal/ cohort study	USA	Female =10 210, Male = 13 567	≥ 50 years old	Approximately 4–5% of women and men return to work from full retirement.	1. Age: Majority of individuals that return to work from retirement tend to do so before the age of 62 for men and women. After the age of 62: - A large proportion of men returning to work from full retirement. - For women, however, a declining proportion returning to work up to the age of 90. - For men, the proportion returning to work begins to steadily decline after reaching their late 60 s/early 70s.  2. Higher reported self-assessed health – increase likelihood of returning to work in men and women from retirement.
Hess et al. (2020): Attitudes towards working in retirement: a latent class analysis of older workers' motives (23)	Cross-sectional study	Germany	1868	Mean age = 58.34 (2.87)	744 (39.8%) were still working and wish to continue working after retirement.	1. Work characteristics: 30% want to be self-employed and again 70% want to work in the same type of job. 2. Financial reasons: about half of the respondents plan to work in addition to receiving a pension (the share is higher amongst men and those with higher levels of education). 1.Motives for staying in post-retirement employment a. financially driven b. status-driven c. contact and fun-driven d. generativity driven 2.Education- highly educated men want to work as self-employed, women and those with lower qualifications want to stay in their old jobs. 3.Gender - Men on average want to work more hours and days per week than women 4. Age – Increasing age > preferable towards same job and want to work more. 5.Health - poor health want to work less.

**Table III: Summary of factors associated with post-retirement employment among older adults**

Factor	Study designs			
	Cohort	Cross-sectional	Mixed methods	Qualitative
Age	Silver et al. (2020)	Settels & McMullin (2017) Hess et al. (2020)		
Gender (male)	Virtanen et al. (2017) Platts et al. (2019) Silver et al. (2020)	Settels & McMullin (2017) Scharn et al. (2017) Perera & Weerakkody (2018) Hess et al. (2020)	van der Zwaan et al. (2019)	
Level of education	Platts et al., (2019)	Settels & McMullin (2017) Oleksiyenko & Zyczyńska-Ciołek (2018) Hess et al. (2020)	van der Zwaan et al. (2019)	
Health status	Virtanen et al. (2017) de Wind et al. (2018) Platts et al. (2019) Silver et al. (2020)	Settels & McMullin (2017) Scharn et al. (2017) Perera & Weerakkody (2018) Hess et al. (2020)	van der Zwaan et al. (2019)	Sewdas et al. (2017)
Financial reasons		Settels & McMullin (2017) Di Gessa et al. (2018) Hess et al. (2020)	van der Zwaan et al. (2019)	Sewdas et al. (2017)
Knowledge and skills transfer			van der Zwaan et al. (2019)	Sewdas et al. (2017)
Marital status	Virtanen et al. (2017)	Settels & McMullin (2017)		
Employment status of partner/ spouse	Platts et al. (2019)		van der Zwaan et al. (2019)	Sewdas et al. (2017)
Purpose in life		Settels & McMullin (2017)	van der Zwaan et al. (2019) - a	Sewdas et al. (2017)- a, b
a. Opportunity to maintain contact with clients and colleagues		- b		
b. Community involvement				
Work characteristics	Virtanen et al. (2017) – b, c de Wind et al. (2018) – b, d	Scharn et al. (2017) – d Hess et al. (2020) - e	van der Zwaan et al. (2019) - a	Sewdas et al. (2017) - a
a. Flexible work arrangements				
b. Physical load (low)				
c. Work time control				
d. Healthcare				
e. Self-employed				

early full retirement (26) and increased needs to work beyond retirement age (27) among women. The mixed findings may reflect the potential role of moderators or mediators such as type of work, educational level and family background and social support. Furthermore, many older adults who retired at a younger age before the compulsory retirement age (28) were eventually participated in bridge employment. Young retirees were not only more likely to engage in career bridge employment but also a different field than in full retirement (3). Potential explanation was, unexpected younger age retirement is associated with unstable retirement transition, commonly due to financial constraints, as well as lacking companion or peers to share the retirement transition experiences, which can be ameliorated through bridge employment (3, 29). Nevertheless, workers aged 45 and older who have lost their jobs often reported to encounter difficulties in finding a new job (30, 31).

Having adequate resources is another important factor in shaping what retirees can do physically and afford financially as well as influencing the opportunities and quality of the retirement experience (31). Financial resource is an important determinant in retirement research and has been argued to reflect the affordability of full (32). Hence, financial constraints or commitments may thus work as a driving factor towards bridge employment.

Knowledge and skills transfer were also a factor identified

to influence post-retirement employment among older adults, particularly those from professional background and of higher-ranking position. Available evidence has shown, older adults who get employed past retirement age tend to have a niche position prior to retirement or highly educated. If the qualification they possess is rare and the experience they have is irreplaceable, at least in the immediate time frame, the tendency to have bridge employment is imminent because of the need to utilize the ability and training of new personnel for that position (10). As such, they were commonly needed to be mentoring the fresh recruits to the job. However, the role of knowledge and skills transfer in this review should be interpreted with caution based on the hierarchy of evidence, since it was identified in a mixed methods and qualitative studies.

As expected, having good health increase the likelihood of working after retirement among older adults, with poor health frequently linked with early retirement. Perceived poor health was not only found to be an important risk factor towards early retirement and unemployment, but also exiting from paid employment through disability pension (33). However, the post-retirement age employment policy should be in parallel with efforts to sustaining employability among them such as implementation of workplace interventions that promote good health because wellbeing becomes more relevant as workers become older (34) and they are more likely to have disabilities and other health problems (35). In a systematic review to identify the

relationship between retirement age and health, 60.0% of the studies reported a significant inverse relationship between age and health, with the remaining studies reported no significant relationship (20.0%) or significant positive relationship (20.0%) (34). However, the review was unable to produce a sound comparison between the included studies due to the different operational definitions used (34).

Having interesting job and good rapport with clients had also increased the likelihood to work beyond statutory retirement age, providing flexible work arrangement that allows more family time while meeting the job requirement is in place. Some older adults may also willingly to learn new skills for a new set of job scope, which some considered it a golden learning opportunity while getting paid at it. Nevertheless, work characteristics such as the physical and environmental contexts, including working hours, equipment use, and ergonomics are physical requirements of the job which are known to affect employees of different age which need to be seriously evaluated to sustain older workers. Prolonged working hours with high workload may not be suitable for older workers and this presumably hamper the employment by company who prioritize wage versus productivity (16). Flexible work conditions had been proposed as a solution to keep older workers in the workforce and had been consistently identified as one of the most effective strategies for attracting and retaining older workers and considered facilitators to a longer working life beyond retirement age (36).

### **Human capital**

Human capital has been referring to the knowledge, skills, and abilities that individuals gain through education, training, and job experiences (25). In another definition, human capital refers to what the employee brings to the organization and helps an organization to achieve success rather than the employee who works in the organization (37). Apart from career motivation (needs), being male is also classified under the human capital dimension, with men frequently reported to work after retirement, either related to their opportunity for training in the previous employment or better job opportunity compared to women. Gender gap is an established issue associated with human capital across all age group, contributed by either labor market discrimination or work constraints among women due to caregiving roles. Women workers who were not in a common-law or marital relationship were more likely to become a university graduate with better employment opportunity, who eventually work beyond retirement (20), which directly support the association between education and post-retirement employment reported in this review. Low education has been linked with lower-income jobs, more adverse working conditions, and less attractive work (38), which increase the likelihood of earlier retirement (39).

### **Social capital**

Meanwhile, social capital is the informational (e.g., providing advice, knowledge) and emotional (e.g., expressing concern, listening) support gained through relationships with others that individuals use to identify and obtain career opportunities (25). This review suggested that, retired older adults who were married or in common law relationship significantly determined bridge employment participation among older adults. This is because, family relationships and the household are not important in retirement decision-making (32) but also influencing the retirement experience.

### **Identity**

The fourth dimension of employability is identity which is the degree by which a person defines himself or herself according to work and nonwork roles (25). In this review, older adults who had spouse who were still working had increased likelihood to participate in bridge employment. Spouse serves as an important source of social support during retirement process. Available scientific evidence showed retirees who had no partner or having a partner who is still actively working, were less able to replace the work-related social support network (40) and are therefore particularly more likely to participate in bridge employment (32). This is because partners play an important role to provide meaningful social interaction, particularly after retirement, which can substitute for the interaction with colleagues (41).

Purpose in life is another identified reason of post-retirement employment among older adults identified in this review, either as an opportunity to maintain contact with clients and colleagues or an avenue for community involvement. It refers to as having goals, and a sense of direction, as well as meaning to the present and past life, which have a positive impact on health, such as reducing the risk of chronic conditions and disability, as well as reducing risk of mortality (42). Purpose in life was reported to highly correlated with resilience, which refers to an ability to adapt and cope with life's transition and challenges (43). Resilience has also been recognized as a central concept towards successful ageing, reducing depressive symptoms, positive life balance and instilled positive health perception over time (43, 44). The social support obtained from meeting clients or colleagues and active community participation constitute a consistent element of optimal human functioning and psychological well-being (42).

### **Personality**

None of the factors identified in this review belongs to the personality dimension of employability, which basically refers to the different traits of personality that can act positively or negatively with employability (25). According to Henning et al. (45), personality plays an important role towards adjustment to retirement but has been generally overlooked in the literature despite

its importance in adjusting to other life events. For example, individuals with openness to experience trait are more likely to seek out new experiences, even as they approach retirement age (45). While personality traits may not necessarily predict future retirement, it stabilizes the retirement transition experiences, particularly those with low neuroticism and high openness are more likely to experience retirement satisfaction (46).

## CONCLUSION

This review highlights the dominant role of having good health and being male on post-retirement employment among older adults aged 50 years and older, followed by level of education, underlying financial commitment and work characteristics. Other factors identified to also influence the decision to work beyond retirement age are age at retirement (younger age), knowledge and skills transfer, marital status, employment status of partner or spouse, and purpose in life (meaning of work). Although slight differences were observed on the operational definition used to measure health (perceived health vs presence of chronic illness) in the different studies reviewed, the role of health status in determining post-retirement employment among older adults is almost consistent and undoubtful. Nonetheless, most of the studies included in this review were conducted in the European countries due to their advanced stage of aging population. The adherence of the review to the PRISMA guidelines for systematic review reporting (13) and dominated by studies of high qualities serve as strength of the review. The findings can be utilized by many countries particularly the developing countries which experiencing rapid aging process, to face the future demands related to post-retirement employment among older adults as well as development of related policy.

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