

Actual Participation Status in Occupational Education and Training by Korean Middle Aged Workers and Factors Determining Occupational Education and Training

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Background/Objectives: The purpose of this study is to identify the actual status of participation in vocational education and training and the variables of determining the participation of middle aged workers. **Methods/Statistical analysis:** The data of 4,921 middle aged workers born from 1954 to 1978 whose age was 40 to 64 years old at the time of survey in 2017 was used for analysis out of a total of 14,477 respondents to the 20th Wave (2017) of Korea Labour & Income Panel Study. The frequency analysis, descriptive analysis and binary logistic regression analysis were performed using SPSS 21.0. **Findings:** Firstly, out of the middle aged workers, the proportion of paid workers was higher and the proportion of regular workers reached 70% showing the stability of employment structure. The job satisfaction was also high. Secondly, out of the middle aged workers, the workers who received the vocational education and training was 6.4% of the total showing that it is significantly low. Thirdly, in the results of analysing the factors of determining the participation in the vocational education and training, gender, health levels, form of employment, acquisition of certificate and earned income had significant influence. Among them, the influence of earned income was the highest. In the case of females, the better the health level the more likely they were to participate in the vocational education and training. In the case of paid workers, acquiring the certificate within the past year combined with the higher the earned income meant they were more likely to participate in the vocational education and training. It also implies that the vocational education

course is needs to be developed. **Improvements/Applications:** There is the need to encourage the workers to improve job performance and to prepare for the golden age through the vocational education in the company and governmental level.

Keywords: *Occupational Education and Training, Middle Aged Worker, Status of Participating, Korea Labour & Income Panel Data, Vocational Competency Development.*

Introduction

A rapid increase of the aging population and the decrease of the working age population are aggravating the anxiety for the future of Korean society. Above all, the lack of an economically active population from 2010, when those who were born in 1955 (the first of the baby boom generation with 7.12 million people, accounting for 14.6% of the Korean population) were included in the retirement population of over 55 year-olds became a serious economical problem. Their inclusion in the over 65 year-old population in 2010 implies a social problem including diverse welfare support. One of the solutions for this is to support their labour participation by recognising the middle aged worker as an important human resource and removing barriers for labour participation, which can be the measure to remove economical problems at the individual level and to reduce national welfare resources. Particularly, since Korea, among OECD member countries, has the highest proportion of non-regular workers, the stability of occupation is low. The proportion of workers experiencing occupational education and training is 20.6%, not reaching the OECD member countries average of 28% and the middle aged group that have not experienced the vocational education and training is 21.4% showing the highest among the OECD member countries (average 9.2%). As the baby boom generations do not participate in the vocational education and training due to busyness or for various reasons (OECD, 2018), the labour quality of the middle aged workers is poor. Therefore, preparing the conditions so that the middle aged worker can enter a high quality working site by developing vocational ability through vocational education and training is needed urgently.

Above all, since the middle aged workers have high loyalty, commitment, excellent communication ability and low absence rate (Magd, 2003), the imperativeness of the employment support of the middle aged worker is being increased. In addition, the government has also increased the support for middle aged workers' continuous employment such as by the salary peak system, the reduction of middle aged worker's working hours, and employment extension subsidy, etc (Ministry of Employment and Labour, 2019). Nevertheless, the participation rate of worker's vocational skills development is 31.0% in 2012, 31.1% in 2013, 29.0% in 2014 and 24.2% in 2015 (Ministry of Employment and Labour, 2016) declining every year. So, the government is striving to reinforce the vocational

skills development infrastructures such as by building the 4th industrial revolution linked vocational training model, the smart vocational training platform, activation of virtual training contents development and distribution, etc (Ministry of Employment and Labour, 2019). However, the effectiveness is still not visible.

Various research (Kwon and Roh 2005; Kim et al., 2008; Jang et al., 2003; Armstrong, 2008; Davis, 2003; Loretto and White, 2006; Zientara, 2009) on the vocational skills development and the employment support for the middle aged worker have been published. In addition, there was research that analysed the demand for the education and training from the enterprise having middle aged worker employment plan or middle aged job seeker (Park, 2010; Han, 2014).

However, since the research on the factors having influence on middle aged worker's participation in vocational education and training was limited to job-related research, the diversity of middle aged workers is overlooked. Actually, although the individual characteristics such as educational level, gender, age, marital status, health, etc. were identified as variables having significant influence on the re-employment of middle aged workers (Kim and Woo, 2010; Sung and Ahn, 2006; Lee and Bang, 2009), the preceding research on the vocational education and training of the middle aged worker did not consider these individual characteristic factors sufficiently and ignored the important variable for the diverse demands and participation reflected with individual characteristics. In addition, although to identify the Korean middle aged worker's actual participation status in the vocational education and the factors having influence on the participation large accumulated data is required, since their research is limited to several papers, it has the limitation of it being hard to generalise the research results (Han, 2014) (Son, 2004) (Jeon, 2018).

Therefore, the purpose of this study is to identify the actual status of participation in the vocational education and training and the variables having influence on the participation of the middle aged workers from 40 to 64 years old utilising the survey data of the Korea Labour & Income Panel Study. Particularly, in this study, the variables related to the job and the personal life-related variables will be examined by complementing that the preceding research is limited to the factors related to the job.

The purpose of this study is to identify the actual status of participating in the vocational education and training and the variables of determining the participation of the middle aged workers from 40 to 64 years old. To do that, first the participation status of the middle aged workers in the vocational education and training, and second, the variables of determining the participation in the vocational education and training according to the socio-demographic characteristics and the job characteristics of the middle aged workers were identified.

Materials and Methods

Data and Subject

This study used the 20th (2017) Wave Data of Korea Labour & Income Panel Study. Korea Labour & Income Panel Study took 19,025 enumeration districts in city areas across the country (17,363 enumeration districts in the dong section of the city and 1,672 enumeration districts in eup and myeon section of City) out of 21,938 enumeration districts across the country, of which 10% of the 1995 e-Census of Housing and population excluding Jeju-do and military base areas as a sample frame (Korea Labour Institute, 2019). In this study, the data of 4,921 middle aged workers born from 1954 to 1978 whose age was 40 to 64 years old at the time of survey in 2017 were used for analysis out of total 14,477 respondents to the 20th Wave (2017) of Korea Labour & Income Panel Study.

Measuring Tool

Status of Participation in Vocational Education and Training

For the vocational education and training participation characteristic variables of Korea Labour & Income Panel Survey, the variables such as participation in vocational education and training, participation count, training period, training area, form of training support, training institution and training purpose, etc. were used.

Job Characteristics

For the work-related variables, the variables such as form of employment, regular position, possession of qualification, total income, weekly working hours and job satisfaction were used. The form of employment was composed of 1 question and a nominal variable ① paid worker, ② unpaid family worker, ③ employer/self-employed. The job satisfaction was composed of 5 questions and the 5-point Likert scale. For the reliability, Cronbach's alpha was .876.

Analysis Method

For the frequency analysis, descriptive analysis and binary logistic regression analysis were performed using SPSS 21.0.

Results and Discussion

Job Characteristics and Status of Participation in Vocational Education and Training of Middle Aged Workers

Job Characteristics of Middle Aged Workers

In the job characteristics of the middle aged workers (Table 1), in the form of employment, the paid worker was the highest at 69.5%. Employer and self-employed were 25.2% and the unpaid family worker was 5.3%. The regular worker was the highest at 67.7%, which is because it seems that the employer and the self-employed are regular workers. The case of those that acquired the certificate during the 1 year before the survey was very low with only 33 persons (0.7%). In addition, annual total income was an average 35.21 million won and the weekly working hour was average 40.02 hours. Job satisfaction was 3.53 points out of 5 points, which seems to be high showing that the paid worker occupies the most.

Table 1: Job Characteristics of Middle Aged Worker

(N=4,921)		
		N (%)
Form of Employment	Paid Worker	3,418(69.5)
	Employer and Self-employed	1,241(25.2)
	Unpaid Family Work	262(5.3)
Regular Position*	Regular Worker	3,332(67.7)
	Non-Regular Worker	1,587(32.3)
Acquired the Certificate	Yes	33(.7)
	No	4,888(99.3)
		M(S.D)
Annual Total Income (unit: million won)		3,520.95(2,587.79)
Weekly Working Hour (unit: hour)		40.02(13.55)
Job Satisfaction		3.52(.61)

*Employer/self-employed were classified as regular workers and the unpaid family worker was classified as non-regular workers.

Status of Participating in Vocational Education and Training

Out of 4,921 middle aged workers, the case having participated in the vocational training ('Have experience of vocational education and training') was 303 persons (6.2%) and the case of currently receiving the education and training' was 11 persons (0.2%) showing that only 6.4% have experience of vocational education and training. Therefore, in the actual status analysis on the variable of participating in the vocational education and training, the data of 314 persons was selected and used.

As shown in Table 2, in the vocational education and training area the office management area was the highest at 34.1%, the finance and insurance area was ranked second at 29.3% and the construction, mechanical and computer area was the lowest at 17.5%. For the institution that supports the training fee, the company that he/she is working for was the highest at 61.0%, those supported by the government were 27.2% and the cases where individuals paid the fee were 10.2% showing that most participated in the vocational education and training by external support. For the institution of vocational education and training, in-house training institutions were 50.0% occupying half, private education institutions were 20.4%, colleges and associations were 17.9% and public training institutions were 11.7% showing that the case of receiving the vocational training in the public training institution was the lowest. In the purpose that the middle aged workers were receiving the vocational education and training to enhance the job performance was 93.3% occupying the absolute majority, and the case of acquiring the certificate was very low at 0.6%. The education course of receiving the vocational education and training was average 1.39 course and the average period was 0.32 months.

The fact that out of the middle aged workers, the proportion of those receiving vocational education and training was 6.4% significantly low is significantly different from the announcement of OECD (OECD, 2018). This difference may be varied according to the data collection period or method. In addition, as they participated in the vocational education and training to improve job performance with the support of their company, the investment in self-development and preparation for the golden age seems to be low. Therefore, the countermeasure is deemed to be necessary.

Table 2: Status of Participating in Vocational Education and Training (N=314)

		N (%)
Vocational Education and Training Area	Office Management Area	107(34.1)
	Service, Finance and Insurance Area	92(29.3)
	Construction, Mechanical and Computer Area	55(17.5)
	Other	60(19.1)
Who Supports the Training Fee	Company	191(61.0)
	Government	85(27.2)
	Individual Paid the Fee	32(10.2)
	Other	5(1.6)
Institution	Public Training Institution	36(11.7)
	Private Education Institution	63(20.4)
	In-House Training Institution	154(50.0)
	College and Association	55(17.9)
Purpose	Founded	6(1.9)
	Re-employment	13(4.1)
	Enhance Job Performance	293(93.3)
	Case of Acquiring the Certificate	2(.6)
		M(S.D)
Participation Amount		1.39(1.31)
Term(unit: month)		.32(1.40)

Factors of Determining Middle Aged Worker's Participation in Vocational Education and Training

To identify the factors determining the Korean middle aged worker's participation in vocational education and training, the binary logistic regression analysis was performed. For the sociodemographic characteristic factors, gender, age, education level, marital status, economic level and health level were used. For job characteristic factors, the form of employment, regular position, acquisition of certificate, earned income, weekly working hours, and job satisfaction were used. The explanation power of the model was 0.59% and the accuracy of classification was significantly high at 93.4% (Table 3).

Firstly, out of the sociodemographic characteristics of Korean middle aged workers, gender and health level were significant and in the job characteristics, the form of employment,

acquisition of certificate and earned income had significant influence. Among them, the influence of the earned income was the highest. More specifically, females were likely to participate in the vocational training 1.61 times higher than males. When the health level is enhanced 1 level, it increased 1.393 times and the paid worker is likely to participate 2.015 times higher than the employer/self-employed. In the case of acquiring the certificate during the past 1 year, it was 4.336 times higher and when the earned income is raised by 10,000 won, the likelihood of participation increased by 1.

Secondly, females are more likely to receive vocational education and training compared with males, which can be explained liked to the working condition of the women. The female worker. Female worker works total working jour hour shorter than the male worker (Ministry of Employment and Labour, 2019) and is interpreted to have extra time to participate in the vocational education and training. Nest, that the paid worker is highly likely to receive the vocational education and training than the employer/self-employed is same context as that the case that the company support the vocational education and training fee was 61%. In addition, in the aspect of acquiring the certificate within 1 year or the higher the earned income, that is that they can afford it, they are more likely to receive vocational education and training made us think about the polarisation in vocational education and training. Therefore, if the middle aged worker is encouraged so that they can acquire the certificate mandatorily, participate in the vocational education and training and the government supports the fee for vocational education and training, the job performance of the middle aged worker would be enhanced

In the results of this study, in making it mandatory for the middle aged worker to receive vocational education and training with the support of the company or government, job performance of the middle aged worker is improved which becomes the basis of occupational change and start-up or creation of work after retirement. It implies the needs of policy measure related to that.

Fortunately, the Korean government suggested 'Lifelong Vocational Education Innovation Measures' in July, 2019 and showed diverse strategies and specific measures for the job performance improvement over the entire life (Ministry of Employment and Labour, 2019). That is, through investment and quality management by the state, it establishes the basic direction that reinforces the responsibility of the state in lifelong vocational education and training and 65 detailed tasks were presented. If these measures are promoted, it is expected to help cope actively with the changes in job terrain and job competence due to the advent of the 4th industrial revolution, progress of the low birth rate and an aging population.

Table 3: Factor of Determining Middle Aged Worker's Participation in Vocational Education and Training
(N=4,921)

		1=Participation Group, 0=Non-Participation Group			
		B	S.E	Wald	Exp(B)
Sociodemographic Characteristic	Gender	-.476	.137	12.014**	.621
	Age	-.008	.010	.686	.992
	Education Level	.149	.142	1.097	1.160
	Marital Status	.270	.192	1.981	1.309
	Economic Level	.244	.157	2.413	1.276
	Health Level	.331	.116	8.220**	1.393
Job Characteristic	Form of Employment	.700	.169	17.139***	2.015
	Regular Position	.237	.167	2.010	1.268
	Acquisition of Certificate	1.467	.484	9.173**	4.336
	Earned Income	.000	.000	25.739***	1.000
	Weekly Working Hours	-.022	.017	1.833	.978
	Job Satisfaction	-.042	.115	.136	.959
Constant		-4.047	1.037	15.234***	.017
Chi-square		104.654***			
Nagelkerke R ²		.059			
Accuracy of Classification		93.4			

*p<.05, ***p<.001

^aDummy Variables: Gender(Male=1), Education Level(University Graduation =1), Marital Status(Spouse=1), Work Type(Wage Worker=1), Regular Position(Full-Time=1), Acquired the Certificate(Yes=1)

Conclusion

The purpose of this study was to identify the status of Korean middle aged worker's participation in vocational education and training and the factors in determining participation. To do that, out of the 20th (2017) Wave Data of Korea Labour & Income Panel Study, the data of 4,921 middle aged workers from 40 to 64 years old was used for analysis.

In the results of the study, firstly, that out of the middle aged workers, the proportion of paid workers was higher and the proportion of regular workers reached 70% showing that the stability of employment structure and job satisfaction is also high. Secondly, out of the middle



aged workers, the workers who received vocational education and training was 6.4% of the total, showing that it is significantly low. The middle aged workers who participated in vocational education and training showed that they were receiving the vocational education and training for an average of 3 months to improve job performance in the in-house training institution with the support of the company that they were working for. The vocational education and training areas were shown in order of office management, service/finance and insurance, construction, machinery and computer, which seems to reflect the occupation they performed. In the results of analysing the factors in determining the participation in vocational education and training, gender, health level, form of employment, acquisition of certificate and earned income had significant influence. Among them, the influence of earned income was of highest significance. Therefore, in case of female, the better the health level, in case of earned worker, in case of acquiring the certificate within recent 1 year, the higher the earned income, it is highly likely to participate in the vocational education and training. It implies that the vocational education course needs to be developed and that there is the need to encourage them to improve job performance and to prepare for the golden age through vocational education in the company and at governmental level.

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REFERENCES

- Armstrong SM. (2008). Organizational practices and the post-retirement employment experience of older workers. *Human Resource Management Journal* . 18(1):36–53.
- Davis F. (2003). Factors related to bridge employment participation among private sector early retirees. *Journal of Vocational Behavior*;63(1):55-71.
- Han CS. (2014). A Study on Determinants of Participation in Vocational Education and Training of Adult Employers[master's thesis]. Catholic University.
- Jang MH, Ju IJ, Park YH. (2003). Development of Education and Training Program to Improve Employment Ability for the Elderly and Elderly. Vocational Competency Development Center; p. 137.
- Jeon BC. (2018). Determinants of Vocational Training Participation: Focused on Wage Workers[Ph.D.'s thesis]. Korea University of Technology and Education.
- Kim HJ, Woo KS. (2010). A Study on the Determinants of Reemployment in Middle and Elderly People. *Korean Gerontological Society*. 2004;24(2):97-110. Park YH. Analysis on the Employment and Vocational Competency Development Needs of the Elderly. *HRD Research*. 12(3):83-111.
- Kim KH, Im E, Lee JP. (2008). A Study on the Career Support System for the Elderly. Korea Vocational Competency Development Center; p. 58.
- Korea Labour Institute. (2019). Korean Labour Panel Survey 20th User Guide. Korea Labour Institute; p. 20-60.
- Kwon DB, Roh KR. (2005). Comparison of Policy Support between Korea and Japan for the Development of Vocational Ability of Middle and Elderly. *Human Resources Development*. 7(2):1-26.
- Lee SY, Bang HN. (2009). Polarization of Employment of Middle and Older Workers by Gender and Age. *Korean Gerontological Society*. 29(2):593-610.
- Loretto W, White P. (2006). Employers' attitudes, practices and policies towards older workers. *Human Resource Management Journal*. 16(3):313-330.
- Magd, H. (2003). Management attitudes and perceptions of older workers. *International Journal of Contemporary Hospitality Management*. 15(7):393-401.



- Ministry of Employment and Labour[Internet]. (2016). Employment Labour White Paper. [updated 2019 Octo 15; cited 2019 Nov 16] Available from: <http://www.moel.go.kr/search.do/> (website)
- Ministry of Employment and Labour[Internet]. (2019). Employment Labour White Paper. [updated 2019 Octo 15; cited 2019 Nov 16] Available from: <http://www.moel.go.kr/search.do/> (website)
- Ministry of Employment and Labour[Internet]. (2019). Lifelong Vocational Training Innovation Plan; 2019 [updated 2019 Octo 15; cited 2019 Nov 16] Available from: https://m.blog.naver.com/PostView.nhn?blogId=molab_suda&logNo=221328010986&proxyReferer=http%3A%2F%2Fblog.naver.com%2FPostView.nhn%3FblogId%3Dmolab_suda%26logNo%3D221328010986/ (website)
- OECD. (2018). Ageing and employment policies. Working Better with Age. Korea. Paris: OECD; p. 70.
- Park YH. (2010). Analysis on the Employment and Vocational Competency Development Needs of the Elderly. HRD Research. 12(3):83-111.
- Son JJ. (2004). Analysis of Determinants of Vocational Education and Training of Adult Learners-Focusing on Wage Workers and Adult Employers. Lifelong Education Research. 10(2):109-128.
- Sung GM, Ahn JY. (2006). Determinants of Employment for the Elderly. Labour Policy Research. 2006;6(1):39-74. Park YH. Analysis on the Employment and Vocational Competency Development Needs of the Elderly. HRD Research. 2010;12(3):83-111.
- Zientara P. (2009). Employment of older workers in Polish SMEs; employer attitudes and perceptions, employee motivations and expectations. Human Resource Development International. 12(2);135-153.