

The Impact of Satisfaction with Major Curriculum on Acquisition of Certification and Employment for College students with Major in Healthcare

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〈Abstract〉

대학생들의 전공 교육과정의 만족도가 자격증 취득 및 취업에 미치는 영향

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목적: 보건 의료 관리 분야의 진로는 급변하는 사회적 요구와 시대적 흐름에 발맞추어 다양한 형태로 변화하여 왔다. 본 연구에서는 학습 수요자 측면으로 교과과정에 대한 만족도와 보건 의료 계열 취업에 영향을 미치는 요인을 분석하여 보건 의료 계열 학과 학생들의 취업률을 향상시킬 수 있는 방안을 도출하고자 한다.

방법: 경기도 성남시 소재 보건 의료 계열 학과 163명을 대상으로 2013년 5월 6일부터 5월 9일까지 설문조사를 거쳐 분석을 실시하였다.

결과: 성별에 따른 교육과정의 만족도는 통계적으로 유의하지 않았으나, 고학년으로 올라갈수록 교육과정에 대한 만족도가 낮은 것으로 분석되었다. 성별과 학년에 따라 자격증 취득 계획 여부는 통계적으로 유의한 차이를 보였다. 즉, 성별이 여학생이고 학년이 낮을수록 전공관련 자격증 취득 계획이 높았다. 전공관련 자격증 취득에 영향을 미치는 요인으로는 '성별', '학년(학번)', '보건 의료 계열 분야로의 취업 여부'가 유의하게 영향을 미치는 것으로 나타났다. 보건 의료 계열 취업 여부에 영향을 미치는 요인으로는 '교육과정 만족도', '전공관련 자격증 취득 계획'이 통계학적으로 유의하게 영향을 미치는 것으로 분석되었다.

결론: 보건 의료 관련 학과 학생들의 동일 계열 취업률을 향상시키기 위해서는 전공 관련 자격증 취득에 직접·간접적으로 영향을 미치는 학생들의 요구를 파악하여 교육과정에 반영하는 것이 중요할 것이다.

중심단어 : 교육과정, 만족도, 자격증, 취업, 대학생

I . INTRODUCTION

The career in the area of healthcare management has been diversified to meet the rapidly changing social demands and move with the times [1]. The

field of public health on the increasing social demand is composed of diverse occupation groups. The Korea Research Institute for Vocational Education and Training has classified the occupation groups in the field of public health into doctors, nurses, Oriental

* 투고일자 : 2016년 08월 26일, 수정일자 : 2017년 03월 03일, 게재확정일자 : 2017년 03월 08일

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This study was supported by the National R&D Program for Cancer Control, Ministry of Health & Welfare, Republic of Korea (1420210) and funded by the Ministry of Science, ICT & Future Planning (NRF-2010-0023700).

medicine doctors, pharmacists, medical technology managers, medical record administrators, occupational therapists, health education specialists, medical information managers, hospital coordinators, emergency medical technicians, nursing assistants, midwives, and so on [2]. The students in the field of public health, including the departments of healthcare administration and health administration, are expected to get a job in these areas of public health.

However, the employment trend in December 2013 and on a yearly basis showed the youth (15~29 age) unemployment rate increased from 7.5% in 2013 to 8.5% in 2013, up 1.0% from the same month previous year [3]. The higher youth unemployment rate due to the economic recession is increasing job scarcity and job insecurity, such as fewer jobs and unbalanced manpower supply and demand. The increased youth unemployment rate has not only aggravated competition with graduates from the same department but also with those from other departments in getting a job in the areas of public health. Financial investment industries, Statistics Korea, and the Korea Employment Information Service reported in 2013 that 77 out of 100 young persons getting a job select career irrelevant to their major [4]. This trend causes a problem that people getting a job irrelevant to their major show lower job satisfaction and higher turnover and downward employment than those getting a job associated with their major [5]. As there are few jobs that meet aptitude or major, more graduates have selected downward employment by getting a job at a lower level than they have hoped in consideration of their education [4]. Taking into account opportunity costs for major learning over several years and significant losses of time and costs needed to seek a job in the field irrelevant to major, it can be labor and economic loss at the national level beyond personal loss.

This study aims to analyze the levels and contents

of education and training in the major curriculum from the perspective of learning providers and satisfaction with curriculum and the effects of major curriculum on employment in the same field for public health majors from the perspective of learning consumers. This is because one of the important factors determining the quality of the public health area is major curriculum and the possibility of cultivating manpower required by the field of public health may depend on how desirable curriculum has been provided to students [6]. The process of assessing satisfaction with major curriculum and examining the level of requirements among students will ultimately be able to generate a plan to improve the employment rate for them. This study intends to provide basic data useful for career guidance and exploration and to suggest a direction for better major curriculum.

This study aims to determine the effects of satisfaction with major curriculum and acquisition of major-related certification on future employment in the field of public health. It has the following details:

First, satisfaction with major curriculum, the plan to acquire major-related certification, and future employment in the field of public health are analyzed in terms of socio-demographic variables. Second, the plan to acquire major-related certification and desired types of certification to acquire are analyzed in terms of satisfaction with major curriculum. Third, the impact on acquisition of major-related certification and employment in the same field is tested in terms of improvement in job satisfaction in the future.

II. METHODS

1. Study participants

A self-administered survey was conducted in

students at a university in Seongnam, Gyeonggi Province from May 6 to 9, 2013. A total of 200 questionnaires were distributed; then, 163 copies were analyzed, with the exception of 37 containing insufficient responses. The opinions were gathered from a panel of undergraduate students—sophomores, juniors and seniors—to make a questionnaire and the panel of five students distributed and collected questionnaires.

2. Survey contents

To achieve the goal of this study, we have developed a questionnaire with a total of 20 items including brief information about major-related certification, such as the medical record administrator's and the health education specialist's, and information about required and optional subjects in the major curricula for the academic years from 2007 to 2012 by collecting opinions from the panel of sophomores, juniors, and seniors. It is composed of three items about the subjects' socio-demographic characteristics, six about satisfaction with major curriculum, six about major-related certification, and five about career and employment [7].

Among the respondents' characteristics, both academic years and numbers were investigated. At college, a curriculum depends on the year of entrance, or the academic number, not on the academic year. Recently, lots of students suspend their college education to become an exchange student or fulfill their military commitment. In this context, the differences in satisfaction with the curriculum by academic year and number were examined.

Satisfaction with the curriculum was examined in three areas: first, the area for knowledge acquisition in the area of healthcare (medical terminology, healthcare laws, introduction to public health, quality management); second, the area for

healthcare institution and organization management (principles of healthcare administration, healthcare industry); and third, the technical area for support of healthcare service (healthcare statistics and practice, medical database and practice, research methods in healthcare, ubiquitous healthcare).

3. Data Analysis

Statistical analysis was conducted using IBM SPSS Statistics version 18. Frequency analysis was performed to identify the general characteristics of the subjects; cross-tabulation analysis was carried out to determine if the degree of satisfaction with major curriculum depended on the socio-demographic factors; and independent t-test, ANOVA and Kruskal Wallis analysis were performed to determine if scores in satisfaction varied. Logistic regression analysis was performed to identify the factors affecting the plan to acquire major-related certification and employment.

4. Limitations

This study couldn't be free of response bias since it relied on the subjective method based on respondents' self-administration; it is necessary to be careful in generalizing its results to all the college students in the field of public health because it was conducted in students at only one university in a certain region.

III. RESULTS

1. General Characteristics of Study Participants

Among a total of 163 students, 93 (57.1%) were female; students in the class of '10 formed the

highest rate (40 students; 24.5%), followed by '09 (34; 20.9%), '12 (33; 20.2%), and '11 and '08 (28; 17.2%). Higher graders, such as juniors and seniors, formed 73%.

52.8% were satisfied with required major subjects and 59.5% were satisfied with optional ones, whereas 47.2% were satisfied with the entire curriculum, showing a rather higher level of

general dissatisfaction, 55.8% intended to acquire major-related certification and about 71% hoped to get a job associated with their major. 76.1% suggested that career should be associated with major, showing strong correlation between major and career decision-making after graduation (Table 1).

<Table 1> Characteristics of Demographic and Major Curriculum

Variable		Frequency (N)	Percent (%)
Gender	Male	70	42.9
	Female	93	57.1
Class of year (student number)	'12	33	20.2
	'11	28	17.2
	'10	40	24.5
	'09	34	20.9
	'08	28	17.2
Grade	2	44	27.0
	3	55	33.7
	4	64	39.3
Satisfaction with curriculum	Dissatisfaction	86	52.8
	Satisfaction	77	47.2
Satisfaction of major in core courses	Dissatisfaction	77	47.2
	Satisfaction	86	52.8
Satisfaction of major in elective	Dissatisfaction	66	40.5
	Satisfaction	97	59.5
Plan of certification acquisition	Yes	91	55.8
	No	72	44.2
Willingness of employment to the health care field	Yes	116	71.2
	No	47	28.8
Opinion of relevance between career and major	Yes	124	76.1
	No	39	23.9

<Table 2> Plan to acquire a major-related license and willingness of employment to the health care field by general characteristics

Variable		Plan of certification acquisition		χ^2	<i>p</i>	Employment related to the major		χ^2	<i>p</i>
		YES N(%)	NO N(%)			YES N(%)	NO N(%)		
Gender	Male	30(42.9)	40(57.1)	8.371	0.004*	47(67.1)	23(32.9)	0.968	0.325
	Female	61(65.6)	32(34.3)			69(74.2)	24(25.8)		
Class of year ¹	under '10	52(51.0)	50(49.0)	2.597	0.107	70(68.6)	32(31.4)	0.856	0.355
	upper '11	39(63.9)	42(36.1)			46(75.4)	15(24.6)		
Grade	2	31(79.5)	13(29.0)	9.304	0.011*	37(84.1)	7(15.9)	5.926	0.052
	3	33(60.0)	27(40.0)			39(70.9)	16(29.1)		
	4	27(42.2)	37(57.8)			40(62.5)	24(37.5)		

¹ Group formation based on student numbers with similar curriculum

* Independent mean comparison test shows test results, with significance set at $p < 0.05$

1) Plan to acquire major-related certification

As for correlation between the socio-demographic factors and the plan to acquire major-related certification, gender and grade were significantly correlated with the plan to acquire major-related certification.

Those who were female (65.6%) and who were at lower grades were more likely to plan to acquire major-related certification, with 79.5% of the sophomores hoping to acquire major-related certification (Table 2).

2) Future employment in the field of public health

No statistically significant correlation was found between the socio-demographic factors and future employment in the field of public health. However, those who were female, who were in the class of '11 or higher, or who were at lower graders were more likely to hope getting a job in the field of public health (Table 2).

2. Satisfaction with Curriculum

1) Socio-demographic factors

Independent-sample t-test or ANOVA was performed to determine if the mean of satisfaction with curriculum depended on the socio-demographic variables, with 100 for strongly satisfied, 75 for satisfied, 50 for dissatisfied, and 25 for strongly dissatisfied.

As for satisfaction with curriculum by the socio-demographic factors, satisfaction with major curriculum didn't vary by gender, whereas its mean varied by the academic number and grade, with students in the class of '11 or higher and sophomores scoring especially higher (Table 3).

2) Plan to acquire certification and future employment

The curriculum satisfaction of the students having a plan to acquire major-related licenses was 62.6 points, and was higher than that of the

students without a plan to acquire those licenses, which was 56.6 points, and the difference was statistically significant.

The curriculum satisfaction of the students having an intention to get a job in the field of public health was 61.8 points, and was higher than that of the students without a plan to get a job in the field of public health, which was 55.3 points (Table 3). Looking at the results above, the students planning to acquire major-related licenses or having an intention to get a job in the field related with major subjects are predicted to have higher interest in the major subjects in the case of the group with higher curriculum satisfaction.

3) Acquisition-desired license

This study examined curriculum satisfaction using the Kruskal Wallis test, which is a nonparametric test, according to the major-related license types, which the students want to acquire.

The curriculum satisfaction of the students wishing to acquire the International Medical Tour Coordinator license was highest, followed by that of the students wishing to acquire Hospital Administrator license and Health Education Specialist license. The satisfaction did not show statistically significant results (Table 3).

<Table 3> Satisfaction with curriculum

Variable	Satisfaction with curriculum		t/F	p
	Mean ± SD			
Gender ²	Male	59.3 ± 17.6	-0.470	0.639
	Female	60.5 ± 14.9		
Class of year ^{1,2}	under '10	57.1 ± 16.6	-3.009	0.030*
	upper '11	64.8 ± 14.0		
Grade ³	2	67.6 ± 12.7	12.735	0.000*
	3	61.8 ± 15.1		
	4	53.1 ± 16.4		
Plan of certification acquisition ²	Yes	62.6 ± 15.5	2.416	0.017*
	No	56.6 ± 16.2		
Employment to the field of health care ²	Yes	61.8 ± 15.9	2.383	0.018*
	No	55.3 ± 15.5		
Type of certification acquisition ⁴	Hospital administration	44.38	2.884	0.416
	International Medical Tour Coordinator	50.54		
	Health Education Specialists	42.32		
	Others	39.82		

¹ Group formation based on student numbers with similar curriculum

² t test were used

³ ANOVA test were used

⁴ Kruskal Wallis test(Non-parametric test) were used

* Independent mean comparison test shows test results, with significance set at p<0.05

<Table 4> Factors affecting to plan of major-related license acquisition

Variable		Odds Ratio(OR)	p
Gender	Male	0.181	0.001***
	Female	1.0	—
Class of year	under '10	2.219	0.214
	upper '11	1.0	—
Grade	2	4.66	0.053*
	3	3.73	0.032**
	4	1.0	—
Satisfaction with curriculum	Dissatisfaction	0.94	0.918
	Satisfaction	1.0	—
Willingness of employment to the health care field	NO	0.026	0.000***
	YES	1.0	—

*p<.1 **p<.05 ***p<.01

3. Impact on Acquisition of Certification and Employment

1) Impact on acquisition of major-related certification

Logistic regression analysis was performed to measure the relative impact of the predictors of career in the field of public health. As for the effects of the socio-demographic factors, including gender, grade, and the academic number, and such factors as satisfaction with general curriculum, satisfaction with required major subjects, satisfaction with optional major subjects, and future employment in the field of public health on acquisition of major-related certification, gender, grade, employment in the field of public health had a statistically significant impact, with the other factors revised.

Male students were relatively less likely to plan to acquire major-related certification than female ones. Juniors were about 3.73 times more likely to hope acquiring major-related certification than seniors, and sophomores were about 4.66 times more likely to hope acquiring it than seniors at the

0.1 significance level. Future employment in the field of public health had a statistically significant impact: those hoping to get a job in the field of public health were more likely to acquire certification. However, satisfaction with curriculum insignificantly affected acquisition of certification (Table 4).

2) Effects on future employment in the field of public health

As for the factors affecting future employment in the field of public health, satisfaction with curriculum and acquisition of major-related certification had a statistically significant impact.

Satisfaction with curriculum had no impact at the 0.05 significance level; however, students dissatisfied with curriculum were about 0.21 time less likely to hope getting a job in the field of public health than those satisfied with it at the 0.1 significance level. Students not planning to acquire major-related certification were about 0.02 time less likely to hope getting a job in the field of public health than those planning to do (Table 5).

<Table 5> Factors affecting to willingness of employment to the health care field

Variable		Odds Ratio(OR)	p
Gender	Male	1.33	0.571
	Female	1.0	—
Class of year	under '10	2.03	0.365
	upper '11	1.0	—
Grade	2	3.99	0.182
	3	1.21	0.767
	4	1.0	—
Satisfaction with curriculum	Dissatisfaction	0.21	0.066*
	Satisfaction	1.0	—
Plan of certification acquisition	NO	0.02	0.000***
	YES	1.0	—

*p<.1 **p<.05 ***p<.01

IV. DISCUSSION

This study aimed to analyze the effects of satisfaction with major curriculum on acquisition of major-related certification and employment in the field of public health among public health administration and healthcare administration majors. To do this, the impact on acquisition of major-related certification and employment in the same field was analyzed in terms of the socio-demographic variables, satisfaction with major curriculum, and future improvement in job satisfaction.

Shin et al. reported that among the students in the field of public health, females formed an increasingly higher rate [8]. There were more women (53.7%) than men (46.3%) among the applicants for the civil service examination in public health in 2014 [9].

As for the socio-demographic variables, first, female students were more likely to be satisfied than male ones, showing no statistical significance. Since most of the departments in the field of public health are characterized by failure to be centralized to acquire specific certification within major curriculum, gender had a smaller impact and it

was possible to meet a wider demand and concerns among students. Second, those who were female and who were at lower grades were more likely to plan to acquire major-related certification. Female students (66%) were more likely to plan to acquire certification than male ones (43%). This result was not statistically significant but was correlated with the finding that females were more satisfied with curriculum than males. Literature review concerning career selection and satisfaction by major among college students found that female students were better at major performance and attention in terms of major adjustment [10].

The literature regarding satisfaction with the curriculum by academic year also revealed that students in lower academic years (or numbers) were more satisfied. This result was because students in higher academic years/numbers invested relatively more time and efforts in completion of the curriculum and could consequently determine their aptitudes for the major. In addition, they may have more chances than those in lower academic years to enter other areas (for exchange student, code sharing and double major) than the major and be less satisfied with the curriculum or major.

Gati suggests that the process of compromise is essential to major satisfaction as well as to career decision-making because the job individuals have regarded as ideal is not identical to the job they can actually get [11].

As for satisfaction with curriculum, first, those preparing for the international medical tourism coordinator's or the hospital administrator's license among other desired types of certification to acquire were more satisfied with major curriculum, especially required and optional major subjects. In other words, students preparing for certification whose application requirements were met by major curriculum were more satisfied with curriculum. The international medical tourism coordinator's license has been designated as the national technology certificate since 2013 and has been found to be the most desired certificate to acquire among students [12]. Still, students hoping to acquire the international medical tourism coordinator's license were less satisfied with the required major subject. It is necessary to investigate students' demand of, and satisfaction with, curriculum carefully and draw constant attention to major-related certification. Second, about 96% of the students planning to acquire major-related certification hoped to get a job in the field of public health, whereas about 60% of those without the plan hoped to get a job in other fields than the same one. For example, the hospital administrator's certificate makes it possible to take charge of comprehensive tasks, such as general affairs, hospital affairs, personnel, planning, education and training, and management, at administration and management departments in hospitals and relevant majors hope to acquire it [13,14]. It is believed that students prepare for the international medical tourism coordinator's certificate [15] because they regard it as useful in getting a job in the relevant field with the establishment of international

medical centers to meet the global trend of medical tourism, rapid growth of international medical markets including medical tourism, and prospective activation of the medical tourism industry according to the revision of the medical law in May 2009.

As for future improvement in job satisfaction, satisfaction with curriculum had no absolute impact on the plan to acquire major-related certification and employment in the field of public health in terms of the predictors of career in the same field. However, the plan to acquire major-related certification affected employment in the field of public health, and the intention to get a job in the field of public health affected the current plan to acquire major-related certification.

The current major curriculum for cultivating public health manpower has the level of its education and training and its contents vary frequently with rapidly-changing social requirements. While it is necessary to change major curriculum by social requirements, a shift to a new curriculum before testing its effectiveness can give more confusions to students, who are education consumers, lower satisfaction with major curriculum, and ultimately aggravate the rate of employment in the same field; thus, it can also serve as a risk factor in terms of job satisfaction.

College education in South Korea has not widely applied the concepts of marketing or education service yet [9]. It has provided one standardized education service rather than understanding the needs of students, who are consumers, and has been focused on lecturers, who are education providers, rather than on learners, who are education consumers. College education not reflecting the opinions of students, who are customers, would cause them to be dissatisfied and lose the will to learn. Satisfaction with curriculum is regarded as an important indicator to predict successful and effective education. It is therefore necessary to

identify diverse needs of students from consumers' perspective so that they can be more satisfied with major curriculum. Further research needs to carefully address reflecting the needs of learners as consumers, not those of lecturers as providers, in major curriculum.

It can be said that satisfaction with the major curriculum is essential for career decision because the job individuals have considered to be ideal is not identical with the one they can actually get. Satisfaction with the major curriculum can be improved through the curriculum for acquiring licenses or certificates of qualifications that may help them get a job. The efforts to identify students' needs related to the curriculum and reflect them in the curriculum in multilateral ways are expected to help draw constant attention to major-related certificates of qualifications and, ultimately, raise the employment rate in the area of healthcare.

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