

간호·보건계열 대학생의 비대면 원격 수업 운영 관련 연구 동향 분석

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An Analysis of the Trends in Studies Related to Contactless and Remote Class Operations for the College Students of Nursing and Health Related Major Programs

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Abstract

Purpose : The purpose of this study is to provide basic data for the future research and direction of non-face-to-face remote class operation research for nursing and health college students by analyzing and confirming trends on non-face-to-face remote class operation research targeting domestic nursing and health college students. **Method** : Literature searches were conducted through the databases such as KERIS, K-eArticles, DBpia, KISS, the Academy of Academic Education, and others, covering those published from 2011 to April 2021. The main terms of search were ‘online class,’ ‘LMS class,’ ‘corona class operation,’ ‘Nursing and health college students,’ and ‘online class satisfaction.’ The final analysis of the 50 films which meet the criteria for selection was performed. **Result** : A total of 50 research papers on the operation of the contactless, remote classes for college students in the department of public health have been analyzed. Among the 87 key words, the most frequent were “online classes,” “LMS classes,” “corona class management,” “Nursing and health college students,” “online class satisfaction,” and “online classes.” Of the 50 papers, 31 were quantitative research studies, 11 was a experimental research, and 8 was an qualitative research **Conclusion** : An analysis of the contactless, remote classes identified in this study shows that this study can lay a foundation for developing the programs needed to establish a systematic contactless, remote class system for the Nursing and health college students.

Key words : Nursing, Health care sector, Analysis, Students, Trends

I. 서론

1. 연구의 필요성

세계보건기구 WHO는 2020년도 3월 코로나바이러스감염증-19(COVID-19)에 의한 호흡기 감염질환에 대한 팬데믹을 선언하였고, 현재 전 세계가 COVID-19와 사투를 벌이는 중이다[1]. COVID-19는 세계 모든 지역에서 사람들 일상을 마비시켰고, 그동안 경험하지 못한 미래를 미리 앞당겨 많은 생활의 변화를 가져오게 하였다. 특히 재택근무, 재택수업 등을 통해 낯설게만 생각했던 온라인 회의와 수업 등이 매우 빠르게 우리의 일상에 자리 잡게 되었다.

우리나라도 지난해 교육부에서 대한민국 초·중·고교 및 대학교의 개학 및 개강 시기인 2020년도 03월 COVID-19의 감염예방을 위해 전국 모든 대학의 개강 연기 및 비대면 원격수업을 권고하였다. 이로 인해 각 대학에서는 학사일정 수정 및 대면 수업 시기결정에 대해 COVID-19 감염추세를 지켜보면서 연기 및 철회를 하였다[2,3]. 이와 같은 학사일정과 수업형태 등의 결정이 불안한 상황으로 인해 대학과 학생들은 혼란스러운 상황을 맞이할 수밖에 없었고, COVID-19 확산 추이가 꺾이지 않아 대학에서는 선택의 여지가 없이 온라인 수업을 시급하게 도입할 수밖에 없는 상황이 되었다. COVID-19 발병 전 우리나라 대학교육기관에서 비대면 원격수업을 시행중인 곳은 방송통신대학교를 포함하여 비대면 원격수업 교과목을 개설한 20여 개의 사이버 대학들이 있으며, 전국 3·4년제 대학에서도 부분적으로 일부 교과목을 비대면 원격수업으로 운영하고 있다[4].

그러나 대부분의 대학에서는 갑자기 맞이한 비대면 원격수업에 대한 준비가 거의 되어 있지 않았으며 기존에 비대면 원격수업을 시행하고 있던 대학교육기관은 충분한 준비시간을 거치고 나서 운영되고 있는 곳이다. 대학에서 비대면 원격수업으로의 전환을 하려면 새로운 온라인 시스템 구축과 이에 따른 비용 및 각 교과목 교수자에게도 비대면 수업을 준비할 충분한 시간이 필요하다. 따라서 이러한 준비를 하기 위해

서는 사전에 대학의 지원, 역할 및 프로그램 개선을 통한 교육이 요구된다. 교수자가 비대면 원격수업을 100%로 끌어올리기 위해서는 학습자와 해당 교과목의 비대면 원격수업계획 및 개발, 평가, 운영을 통한 학습을 할 수 있도록 환경을 조성하는 것이 중요하다[5]. 특히 보건 계열 학생들의 임상·현장실습 및 국가고시 합격과 직결된 수업을 비대면으로 시행할 경우 더욱 많은 노력과 준비시간이 필요하다. 3, 4년제 대학의 간호·보건계열 대학생의 교육과정은 임상 실습 및 국가고시 준비를 위해 보통 2학년부터 전공 실습수업이 진행되므로 교육과정 특성상 보건 계열 교과목에 전면 비대면 원격수업을 적용하는 데는 한계가 있다. 실습 교과목 비대면 원격수업의 경우 대면수업과 달리 직접적으로 실습을 시행할 수 없으므로 대면수업과 다른 체계가 필요하며, 학습자의 비대면 원격강의에 대한 낮은 준비도를 고려하여 시행해야 한다[4]. 그러나 이러한 상황에서도 긍정적인 부분은 비대면 원격수업의 학습환경에서 수업 효과에 대한 많은 연구사례가 있으며, 예로 비대면 원격수업의 경우 수업 효과에 영향을 주는 것은 학업성취도와 수업 만족도를 들 수 있다는 것이다[6].

기존에 제시된 비대면 원격수업의 긍정적 사례와 더불어 현재 진행중인 팬데믹 상황에서 효율적인 비대면 수업 개발 및 적용이 필요한 상황이다. 이에 앞서 연구자들은 현재 비대면 수업의 진행 상황에 대한 고찰이 필요한 시기이므로 예기치 못한 COVID-19의 감염병 유행으로 충분한 준비 없이 시행되고 있는 간호·보건계열 학과의 비대면 원격수업에 대한 어떤 연구가 이루어지고 있는지에 대한 연구 동향분석은 선행 연구의 연구 결과를 취합 및 분석하는 것은 추후 근거기반의 연구, 실무 및 정책의 방향을 제시하는 데 지침이 될 수 있을 것이다[7]. 이에 따라 본 연구에서는 연구동향 분석을 이용한 연구를 수행하고자 한다.

본 연구에서는 국내 간호·보건계열 대학생들의 비대면 원격수업 관련 연구 동향을 분석하고 통합적으로 고찰하여 추후 간호·보건계열 대학생들의 비대면 원격수업이 나아갈 방향을 제시하는 데에 도움이 될 만한 기초자료가 되고자 한다.

II. 연구방법

1. 연구설계

본 연구는 최근 11년간(2012~2021년) 국내 학회지 및 학위논문에 게재된 간호·보건계열 대학생의 비대면 원격수업 연구를 분석한 서술적 조사연구이다.

2. 연구대상 및 자료수집 방법

본 연구의 분석대상이 된 논문의 구체적인 선정기준은 국내에서 간호·보건계열 대학생을 대상으로 비대면 원격수업 교육 관련 문헌으로 학술지에 출판된 논문, 학위논문을 자료 수집하였다. 학술지와 학위논문 중복 시 학술지 논문을 선택하였다. 분석대상 논문에 대한 구체적인 제외기준은 비대면 원격수업과 무관한 내용의 논문, 간호·보건계열 대학생이 대상이 아닌 문헌, 학술대회 발표논문 및 종설 논문이다. 자료수집 및 분석 기간은 2021년 4월 1일부터 4월 30일까지였으며, 논문검색에 사용된 주요 핵심단어는 ‘온라인 수업’, ‘LMS 수업’, ‘코로나 수업운영’, ‘간호·보건계열 대학생’, ‘온라인 수업 만족도’를 주요어로 검색하였다. 인터넷 검색에서 확인되지 않은 논문들을 찾기 위하여 주제와 관련된 논문 등에 대한 검색을 병

행하였으며, 중복 게재된 학술지 논문과 여러 DB에서 중복이 확인된 논문은 제외하였다. 첫 단계에서 탐색한 학술지는 KERIS, K-eArticles, DBpia, KISS, 학술교육원, SCHOLAR에서 총 80편의 논문을 확보하였다.

1차 검색된 논문은 논문 수집 양식에 기록하였으며, 논문 선정 기준에 부합되는지 확인을 위하여 Cochrane hand-book에서 제시하는 실험군과 대조군의 특성, 중재의 적용, 연구결과를 비교 분석하여 기술할 수 있는 기준을 바탕으로 논문 수집 양식을 구성하였다. 이 과정을 통해 1차 선정된 72편의 원본을 확보하여 연구자와 교수 2인이 함께 선정기준 부합 여부를 확인하는 과정을 (Figure 1)과 같이 거쳤으며 총 50편이 분석대상으로 선정되었다.

3. 자료 분석방법

최근 11년간(2012~2021년) 국내 학회지에 게재된 논문 50편을 본 연구자들인 간호학 및 임상병리학을 전공한 3인 교수와 연구책임자가 사전연구를 통해 마련한 일차적인 분석 틀에 의해 분석하였으며, 분석 시 명확하지 않거나 확인이 필요한 부분은 재확인하는 과정을 통해 최종 자료 분석을 완성하였다. 분석의 구성 틀은 논문의 일반적 특성인 연구 발표년도, 게재된 학회지, 측정도구로 분석하였으며 연구설계 부분에서

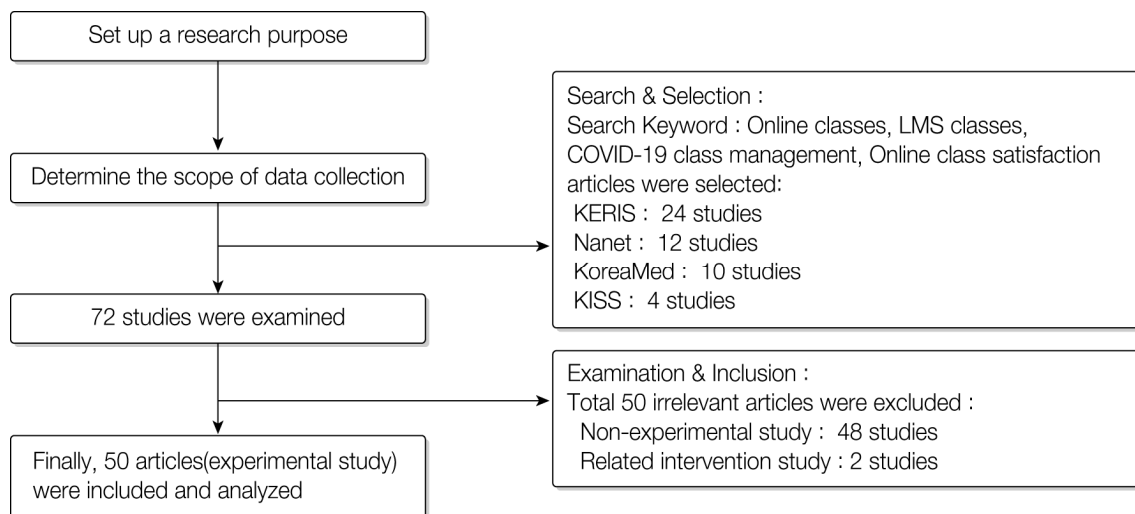


Figure 1. Flowchart of included studies through Database Search

Table 1. Characteristics of Included Studies

(N = 50)

Variable	Category	n	%
Published year	2011~2015	2	5
	2016~2021	48	96
IRB	Yes	3	6
	No	47	94
Published Journal	The Korean Society of Radiological Science	7	14
	The Korean Journal of Emergency Medical Services	4	8
	The Korea Academia-Industrial cooperation Society	3	6
	The Society of Digital Policy and Management	3	6
	The Korean Academy of Dental Technology	3	6
	The Journal of Korean Academic Society of Nursing Education	3	6
	The Korean Academy of Fundamentals of Nursing	2	4
	The International Promotion Agency of Culture Technology	2	4
	The Korean Institute for Pratical Engineering Education	2	4
	The Korean Journal of Clinical Laboratory Science	2	4
	The Korean Ophthalmic Optics Society	2	4
	The Korean Society of Clinical Health Science	2	4
	The Research Institute of Nursing Science, Kyungpook National University	2	4
	The Korean Society of Oral Health Science	2	4
	The Journal of Korea Institute of Information, Electronics, and Communication Technology	1	2
	The Korean Association of General Education	1	2
	The Korean Society of Clinical Health Science	1	2
	The Korean Association For Learner-Centered Curriculum And Instruction	1	2
	The Korea Convergence Society	1	2
	The Korean Society Of Computer And Information	1	2
	The Society of Convergence for Small and Medium Business	1	2
	The Korean Society of Adult Nursing	1	2
	The Korea Association for Educational Information and Media	1	2
	The Journal of Learner-Centered Curriculum and Instruction	1	2
	The Korean Society Of Child Welfare	1	2
Study design	Quantitative research	31	62
	Experimental research	11	22
	Qualitative research	8	16
Sample size	Below 100	20	40
	101~300	15	30
	301~500	12	24
	501~1,000	3	6

Table 2. Key Words in Search

(N = 50)

	Key Words	n(%)
1	Online Class	32(64%)
2	Learning Management System	6(12%)
3	Non-face-to-face Classes	4(8%)
4	Web-based	2(4%)
5	blended learning	1(2%)
6	etc	5(10%)

는 양적 연구, 중재 연구, 질적 연구, 기타 연구의 부분으로 구분하였다. 각 연구설계로 나눈 후 세부적으로 저자, 제목, 발표년도, 논문출처, 논문 설계, 대상자, 측정도구, 자료수집 방법, 자료분석 방법, 연구결과를 포함하여 분석하고 분석 후 연구자들이 검토 후 최종 분석대상 논문으로 결정하였다. 최종 분석대상으로 결정된 수집자료는 SPSS/WIN 23.0 통계 프로그램을 사용하여 실수와 백분율을 산출하여 분석하였다.

Table 3. Key Variables Related to Online Class Operation

(N = 50)

Main variable	n(%)
Satisfaction with Teaching	8(16)
Self-efficacy	6(12)
Self-directed learning	3(6)
Motivation	3(6)
Critical thinking	3(6)
Learning effect	2(4)
Academic achievement	2(4)
Teacher-student interaction	2(4)
Communication ability	2(4)
Career awareness, Career perception	2(4)
Meta cognition	1(2)
Problem solving ability	1(2)
Life adjustment	1(2)
Stress	1(2)
Anxiety	1(2)
Depression	1(2)
Anger	1(2)
Impulsivity	1(2)
Learning persistence	1(2)
Learning behavior	1(2)
Decision making type	1(2)
Enhancing basic ability of work	1(2)
Experience awareness	1(2)
Negative emotions	1(2)
Job ability	1(2)
Tendency	1(2)
Active learning	1(2)
Traditional face-to-face learning	1(2)
Career awareness	1(2)
Class awareness	1(2)
Type of perception	1(2)
Alternative methodology	1(2)
New infectious disease awareness	1(2)
Ethical awareness	1(2)

Ⅲ. 연구결과

1. 분석에 포함된 논문의 특성

간호·보건계열 대학생을 대상으로 한 온라인 수업 운영에 관한 동향분석 논문 총 50편의 특성을 분석한 결과 <Table 1>과 같다. 총 50편 논문 중 2011년에서 2015년까지 2편(5%)이 진행되었고 2016년에서 2021년도까지 48편(96%)으로 나타났다.

연구 학회는 대한방사선과학회에 7편(14%)으로 가장 많이 게재되었으며, 다음으로 한국응급구조학회 4편(8%), 한국산학기술학회 3편(6%), 한국디지털정책학회 3편(6%), 대한치과기공학회 3편(6%), 한국간호교육학회 3편(6%), 한국기본간호학회 2편(4%), 국제문화기술진흥원학회 2편(4%), 한국실천공학교육학회 2편(4%), 대한임상검사학회 2편(4%), 한국안광학회 2편(4%), 한국임상보건과학회 2편(4%), 경북간호학회 2편(4%), 한국구강보건과학회 2편(4%) 한국정보전자통신기술학회 1편(2%), 한국교양교육학회 1편(2%), 한국임상보건과학회 1편(2%), 학습자중심교과교육연구회 1편(2%), 한국융합학회 1편(2%), 한국컴퓨터정보학회 1편(2%), 중소기업융합학회 1편(2%), 한국성인간호학회 1편(2%), 한국교육정보미디어학회 1편(2%), 한국아동복지학회 1편(2%), 한국학습자중심교과교육학회 1편(2%)순으로 게재되었으며, 간호·보건계열의 각 전공분야별로 진행된 연구는 간호 18편(36%), 치위생 9편(18%), 방사선 7편(14%), 보건 5편(10%), 응급구조 4편(8%), 작업치료 및 교육계열 각 2편(4%), 임상병리, 안경광학, 의학계열에서 각 1편(2%) 순으로 나타났다. 50편의 논문 중 31편이 양적 연구였고, 실험연구 11편, 질적연구 8편이었다. 표본 크기는 100명 이하가 20편(40%)으로 가장 많았으며, 101~300명 15편(30%), 301~500명 12편(24%), 501~100명 3편(6%)으로 나타났다.

2. 문헌검색 분석결과

간호·보건계열 대학생을 대상으로 한 온라인 수업

Table 4. Summary of the Literature

(N = 50)

	Author	Major Field	Year	Purpose	Design	Method	Sample	Main result
1	E,H Park, S,Y Hwang	Nursing	2011	After developing and applying a surgical nursing e-Learning program to support nursing students' surgical nursing clinical practice, the knowledge, self-directed learning ability, and learning motivation of nursing students were compared with those of nursing students who had received clinical practice training. This is to investigate the effect.	experimental research	Questionnaire	48	In surgical nursing practice, which requires learning the latest clinical knowledge, parallel practice with e-learning is the learning of nursing students who practice clinical practice in the operating room. It was confirmed that the teaching-learning support strategy developed in this study could be used as an effective teaching-learning strategy for improving the quality of clinical practice in the operating room of nursing students.
2	J,G Sim, S,J Park	Nursing	2017	The purpose of this was to study and analyze smart learning the self directed learning, self efficacy, learning satisfaction about department of radiology in a college.	experimental research	Questionnaire	74	This study applied the smart learning method in the health sector, and through the lecture, the learners improved the level of understanding and satisfaction of learning.
3	Y,J Kim, E,Y Joe, E,M Jeon	Nursing	2017	Based on this study, it is suggested that qualitative and quantitative research should be expanded to spread flip learning teaching methods in nursing major courses.	quantitative research	Interview	5	When flip-learning classes are applied through this study, there is a psychological burden that nursing students have to take pre-class. However, it was a very effective method in terms of understanding the class and improving self-directed learning.
4	Y,J Lee	Nursing	2018	This study proposed to examine the effects of a blended-learning orientation program executed for nursing students' clinical practice.	experimental research	Interview	Experimental group: 61 Control group: 57	After two-week of clinical practice, differences were observed between the experimental group and the control group in adaptation to clinical practice ($F=10.242$, $p=.002$), communication skills ($F=4.305$, $p=.040$) and clinical competence ($F=6.823$, $p=.010$).
5	S,M Ahn	Nursing	2020	The purpose of this study was to identify the factors affecting the adjustment to college life of freshmen in nursing colleges in COVID-19 distance education.	quantitative research	Questionnaire	165	College adjustment showed a positive correlation with academic self-efficacy, critical thinking disposition, problem solving ability. These factors affecting the college adjustment of the subjects were with an explanatory power of 37.7%. Nursing freshmen need to method of class and student guidance that take these factors into account in the distance education during COVID-19.
6	S,N Kim	Nursing	2020	To confirm what the meaning of "non-face-to-face class" perceived by nursing students	qualitative research	Questionnaire	177	In conclusion, non-face-to-face classes require many qualitative revisions and supplements, and content development is required.
7	J,K Lee, W,J Kim, J,G Lee	Nursing	2020	The effects and relationships of nursing students who have experienced non-face-to-face online lectures on learning motivation, learning commitment, and academic achievement To understand and find out the impact on academic achievement	quantitative research	Questionnaire	147	The relationship between learning motivation, learning commitment, and college life adaptation all showed a significant positive correlation. In the results of multiple regression analysis, the factors that influence the academic achievement of nursing students who received non-face-to-face online lectures were learning motivation and learning. It turned out to be immersion. Therefore, in order to increase the academic achievement of nursing students for non-face-to-face online lectures, it is necessary to develop specific strategies that can improve learning motivation and various activities and educational programs that can immerse in learning.
8	P,H Kim, K,N Kim	Nursing	2020	To find out the difference in education method applied flip-learning class in community nursing III class for 4th grade students of a nursing college. After applying the flip-learning teaching and learning method to the theory of community nursing, the differences in the student's learning motivation, learning attitude, and problem-solving ability were identified.	quantitative research	Questionnaire	93	The results of this study showed that the instruction of the flip learning application was statistically different from that before the test in the learning motivation ($t=-2.149$, $p=.034$) and problem solving ability ($t=2.210$, $p=.030$). However, there was no statistically significant difference in learning attitude. It is thought that the flipped-learning classes was progressed with the learner-centered, and the learner was given a lot of tasks and the preparation time was required. The classes with the flip learning was effective for the motivation and problem solving ability improvement.
9	H,N Yoo, Y,S Yoon, O,B Kim	Nursing	2020	This study is a phenomenological study to understand the meaning of nursing students' experience of major classes applying flip-learning pedagogy.	qualitative research	Interview	8	As a result of analyzing this study, a total of 35 key words and 11 central meanings were derived. The 11 central meanings were classified into pre-education, in the classroom, and after education. In the pre-educational stages, 'lack of information', 'psychological burden', 'difference in teaching method', 'self-directed learning ability improvement', and 'difference in learner achievement' were derived as central meanings. In the classroom, the main meanings

Author	Major Field	Year	Purpose	Design	Method	Sample	Main result
							were Efficient instructional direction' and Improving confidence,' and the post-educational stages were 'positive impact on class', 'enhancement of self-burdens', 'disliked', and 'preferred for lectures'. Therefore, in view of the results of this study, in order to apply the flip-learning teaching method to the nursing major, a more multifaceted and in-depth iterative study is suggested.
10 Y.S Ha, M.J Son	Nursing	2020	This study examined the effect of using web-based distance program in home health education for nursing college students in COVID-19 special disaster area.	experimental research	Comparison of experimental group and control group	49	The experimental group had significantly different in knowledge related home health nursing, perceived motivation, and learning commitment in comparison to the control group. This suggests that the web-based distance program in the COVID-19 special disaster area can be applied as a way to increase nursing students' knowledge related home health nursing, perceived motivation, and learning commitment.
11 E.J Jeon, S.E Kim	Nursing	2020	Understand the relationship between metacognition, learning immersion, and problem-solving skills of nursing students in online classes, To find out what factors are influencing	quantitative research	Questionnaire	88	As a result of this study, metacognition, learning commitment, and problem solving ability were found to have a significant positive correlation in online classes.
12 M.H Seo	Nursing	2021	This study is a qualitative study conducted using focus group interviews to understand the experience of mixed face-to-face lessons that nursing students are experiencing in the context of Corona 19.	qualitative research	Interview	7	This study used the PGO research method to understand the experiences of nursing students in mixed classes.
13 H.S Kim, E.M Kim, D.S Lee	Nursing	2021	This study is a qualitative study that analyzes the experiences of practical students on the in-school practice conducted in the field of mental nursing practice education due to the discontinuation of clinical practice.	qualitative research	Questionnaire	62	He said that he learned that hospital affairs such as hospital administration and diagnostic tests through EMR are not performed solely by nursing, but are performed systematically, and that cooperation with each other is necessary.
14 H.R Ahn, J.Y Lee	Nursing	2021	It is a descriptive research study to understand the degree of major selection motivation, academic stress, self-efficacy, and college life adaptation of nursing students in the crisis of COVID-19, and to identify factors that influence college life adaptation.	qualitative research	Questionnaire	243	For the first semester of 2020, 65.8% of the classes were both face-to-face and non-face-to-face classes(real-time classes, recording classes), which accounted for twice the proportion of those that consisted of only non-face-to-face classes(real-time classes, recording classes). The biggest influencing factor on college life adjustment was self-efficacy.
15 W.S Park, H.W Son, C.Y Byeon, H.R Son, S.H Lee, Y.J Lee	Nursing	2021	This study investigated the influencing factors of COVID-19 infection anxiety, impulsivity, and decisionmaking type on health information-seeking behavior on the internet.	quantitative research	Interview	178	The results showed that non-planning impulsivity ($\beta = -.25, p < .001$), dependent decision-making types ($\beta = .23, p < .001$), and COVID-19 infection anxiety ($\beta = .22, p = .001$) had statistically significant effects on health information-seeking behavior on the internet with 33.6% overall explanatory power
16 S.H Kwon, S.Y Kim, J.H Kim, E.B Kim, Y.W Jeong, N.Y Kwon, H.Y Kwon, S.E Park, H.W Byeon, S.G Park	Nursing	2021	Because of the COVID-19 pandemic in 2020, colleges had no choice but to introduce online classes without sufficient preparation. As a result, various problems emerged in college students' learning experience. To establish a strategy for improving online education quality, the necessity to understand university students' learning behavior, learner characteristics, learning satisfaction, and the impact of professor-student interaction on online lecture concentricity.	quantitative research	Questionnaire	215	The concentration in-class lectures and online lectures averaged 7.04 and 5.73, respectively. According to the analysis, online learning concentration was a significant positive correlation by learner characteristics ($r = .40, p < .001$), professor-student interaction ($r = .30, p < .001$), online lecture evaluation ($r = .34, p < .001$).
17 K.A Kim	Nursing	2021	This study was conducted to identify the factors affecting the academic achievement of nursing students at home.	quantitative research	Questionnaire	324	In the results of the study, there was a positive (+) correlation between self-efficacy, learning participation, and academic achievement of nursing students at home. The factor that affects the academic achievement of nursing students at home was identified as learning participation.
18 J.G Kim, Y.M Kim, S.J Park	Radiology	2016	This study is aimed at radiology students in health departments, after conducting a learning method for smart learning lectures. Learning outcomes by empirically analyzing	experimental research	Questionnaire	102	Through the significant correlation between learning satisfaction and academic self-efficacy through the smart learning method, the radiology department is also bidirectional.

	Author	Major Field	Year	Purpose	Design	Method	Sample	Main result
				the relationship between learning efficacy and learning satisfaction for students based on a survey on lectures It presents implications for improvement and seeks ways to revitalize practical education.				It is believed that the application of the lecture method through communication is necessary.
19	J.G Sim, S.J Park	Radiology	2017	In this study, in order to find out how to recognize and activate the application of smart learning method in health-related radiology departments, to investigate the effect on self-directed learning ability, academic self-efficacy, and learning satisfaction	quantitative research	Questionnaire	74	The smart learning method had a positive effect on self-directed learning and learning satisfaction for health-related radiology students,
20	J.K Park	Radiology	2018	This study applied Dick & Carey's (1985) ADDIE model and applied a customized flip-learning teaching and learning model for first-year radiologists to strengthen basic vocational skills to implement and practice classes,	quantitative research	Questionnaire	150	It was found that this model of instruction was helpful in acquiring skills,
21	J.H Son, H.S Kim	Radiology	2020	Radiology 1, For 2nd graders, learn about the satisfaction of students' teaching methods according to each class type for face-to-face and non-face-to-face online classes for students majoring in radiation, and learn how to better teach and learn in the context of COVID-19	quantitative research	Questionnaire	169	In the case of online non-face-to-face lectures related to lectures in radiology majors, it is considered to be better to conduct real-time lectures than recorded lectures. This is because the location is different, but in the same time, it is difficult to learn the difficult radiation majors that are first encountered between instructors and students. Through real-time questions and answers, students can broaden their understanding and can expect the advantage of being able to empathize with matters that are difficult for students, such as closeness and bond between students,
22	J.H Son, H.S Kim	Radiology	2020	Radiology 1, for 2nd graders, learn about the satisfaction of students' teaching methods according to each class type for face-to-face and non-face-to-face online classes for students majoring in radiation, and learn how to better teach and learn in the context of COVID-19	quantitative research	Questionnaire	169	In the case of online non-face-to-face classes related to lectures in radiology majors, it would be better to conduct real-time lectures than recorded lectures,
23	J.G. Sim, S.M Kwon	Radiology	2020	In order to verify the effectiveness as an educational tool for virtual reality video, a virtual reality content for radiation therapy was produced, and two control groups were selected for students who had encountered virtual reality education in face-to-face lectures and selected two control groups for self-directed learning ability, academic efficacy, and learning. Based on the results of the survey on satisfaction, the effectiveness of the learning flow is analyzed to seek a new direction for education.	experimental research	Questionnaire	137	It can be seen that learning satisfaction slightly improved in the group to which the virtual reality content was applied. The correlations for self-directed learning ability, academic efficacy, and learning satisfaction all showed significant correlations.
24	Y.W Kim, B.J Ahn, J.H Lee, J.M Kim, H.Y Yeo	Radiology	2020	In this study, the sexual relationship between face-to-face education and non-face-to-face education was compared through a simulation test as the subject of the national examination before the national examination conducted in the 3rd grade and the 4th grade of the radiology department in the national health department.	quantitative research	Questionnaire	2019 : 391 2020 : 402	Face-to-face education showed a higher rate of acceptance than non-face-to-face education,
25	Y.S Lee, Y.E Lee	Health Science	2016	The purpose of this study is to confirm the effect of applying the flip-learning teaching method on the self-efficacy, critical thinking ability, and communication ability of nursing students in the 'health assessment' curriculum, which is a major subject.	quantitative research	Questionnaire	140	The results of the study suggest that inverted learning has been proven to be an influential educational program for nursing students' self-efficacy, critical thinking tendency, and communication skills. Flip Learning has been an effective educational program for nursing students, and other nursing subjects need to be developed.
26	H.Y Kim, Y.H Kim	Health Science	2017	The purpose of this study is to confirm the design, operation, and effectiveness of basic nursing practice lessons applying flip learning.	experimental research	Questionnaire	57	As a result of grasping the effect of class operation using a quantitative evaluation method, it was confirmed that self-directed learning ability and critical thinking tendency were improved.
27	S.J Doe, Y.S Jin	Health Science	2018	Designing a teaching/learning program for university liberal arts TOEIC English (ETP)3 classes based on flip learning, applying it to actual classes, and then trying to find out the effect of flip learning learning based on the results.	quantitative research	Questionnaire	48	Participation in classes has increased due to prior learning and interest in English has increased, but these factors have not been developed until learners' confidence in English.

	Author	Major Field	Year	Purpose	Design	Method	Sample	Main result
28	S.C Lee, S.Y Kim, S.H Park	Health Science	2020	The study starts with the concerns that emerged from the university's initial response to COVID-19. It is noteworthy that the first semester of 2020 college education was very concerned about class quality due to the application of the non-face-to-face teaching method, which appeared as a means of social distancing. In addition, taking an example of the experience of the 2020 first semester at Kyungpook National University, one of the base national universities, an overview of major issues arising from changes in class management at the university, as well as changes in student dissatisfaction. Through this, in response to a situation where prediction is difficult after the fall semester, we intend to derive implications for improving the quality of non-face-to-face classes.	qualitative research	satisfaction research	100	This paper examined the responses of Korean universities to COVID-19 disaster in 2020, particularly focusing on student evaluations on untact classes at KNU, one of Korea's largest national universities. We attempted to overview some critical issues regarding untact lectures in the spring semester. Then, upon discussing and analyzing student evaluations across three vantage points, we discovered meaningful disparities between the spring semesters of 2019 and 2020, and between late March and July of 2020. The discussion on probable factors that may have affected student dissatisfaction follows, based on comparison between regular classes and untact ones in 2020. This study, despite obvious limitations, is meaningful in that it is the first attempt to analyze the unprecedented class experiences and to provide some policy messages for higher education in responding to a severe virus disaster like COVID-19.
29	H.J Kim, S.N Roh, M.S Joe	Health Science	2020	In this study, in the first semester of 2020, during the corona19 epidemic period, at the same time as admission, a full-scale non-face-to-face class Self-efficacy, negative emotions (depression, anger) and willingness to continue studying for 688 college freshmen who have started learning The structural relationship was considered.	quantitative research	Questionnaire	688	The self-efficacy was found to have a factor loading of 0.5 or more in all 10 items, and the validity was verified with a Kronbach alpha value of 0.898, a concept reliability of 0.786, and an average variance extraction value of 0.761. Depression was found to have a factor loading of 0.5 or more in all 12 items, and the validity was verified with a Kronbach alpha value of 0.950 and a concept reliability of 0.894 and an average variance extraction value of 0.843. As for anger, 10 items of anger were removed as factor loading 0.441 and factor loading 0.5 or less, and the remaining 9 items were validated with Kronbach's alpha value of 0.929 and concept reliability of 0.873 and average variance extraction value of 0.826.
30	Y.A Lee, H.S Kim	Department of Emergency Rescue	2016	In the NCS-based course 'Core Skills (2) Patient Management,' designing the flip learning method with the subject of the job ability of first-class emergency medical personnel, and after applying it, to check the effect on self-directed learning ability and academic achievement of emergency rescue students.	experimental research	Questionnaire	56	After completion of flipped learning, significant improvement was found in self-directed learning($t=6.04$, $p<.001$), academic achievement ($3.25\pm.79$) and academic achievement ($t=6.41$, $p<.001$). There was a significant positive correlation among self-directed learning and academic achievement.
31	C.T Kim, J.S Kim	Department of Emergency Rescue	2019	This study aimed to introduce active learning methods, including flipped, case-based, and team-based learning in an electrocardiography (ECG) course and to investigate outcomes and satisfaction with these methods.	experimental research	Questionnaire	control group : 84	The experimental group showed significant improvement in post-academic self-efficacy and knowledge. The experimental group also showed high clinical performance (9.83 out of 10 in ECG checking ability and 9.63 out of 10 in ECG reading ability). The mean satisfaction score was 4.23 out of 5 (responses based on a Likert scale) in the experimental group
32	H.J Lee, S.Y Shin, E.K Jeong	Department of Emergency Rescue	2020	This study aimed to provide a practical education image as a 360° virtual reality image and a first-person view image in non-face-to-face online classes, and to compare the satisfaction, interest, and experience perception of education.	experimental research	Questionnaire	27	The 360° virtual reality video had a higher score of experience recognition ($p=.039$), vividness ($p=.045$), presence ($p=.000$), fantasy factor ($p=.000$) than the first-person video, but no significant difference was indicated for satisfaction ($p=.348$) or interest ($p=.441$).
33	H.J Lee, S.Y Shin, E.K Jeong	Department of Emergency Rescue	2020	Non-face-to-face online practice in the era of coronavirus infection The purpose of this study was to share class cases and to compare the satisfaction, interest, and experience perception of a 360° virtual reality image and a first-person perspective image. In addition, through this, we intend to derive problems and improvement measures for non-face-to-face online training classes.	experimental research	Questionnaire	27	First-person view video is effective for teaching procedures using mannequins or equipment at the learner's eye level, and 360° virtual reality video should be suitable for learning contextual situations that can occur in the field and in hospitals.
34	H.K Jeong, S.H Lee	Dental engineering	2017	By analyzing the effects of the flip learning method on self-directed learning ability, critical thinking tendency, learning motivation, and learning satisfaction of college students, this study aims to reveal the effectiveness of the flip learning method as a new teaching method.	quantitative research	Questionnaire	104	According to the analysis, the student who attended a class that utilized Flipped Learning Method was found to have higher levels of self directed learning ability, critical thinking disposition, learning motivation, and learning satisfaction than a student who attended a class that did not utilize such a method.

	Author	Major Field	Year	Purpose	Design	Method	Sample	Main result
35	W. Kang, L.S Kim	Dental engineering	2020	This study aimed to verify whether blended learning is worth alternating with traditional face-to-face learning for some dental technology students in practice teaching.	quantitative research	Questionnaire	68	The learning satisfaction and the perceived useful of blended learning by students appeared to be higher than that of traditional face-to-face learning. However, there was no significant difference in the variables of traditional face-to-face learning and those of blended learning ($p < 0.05$).
36	J.Y Choi, H.K Jeong	Dental engineering	2020	To understand the students' level of recognition of online classes in the Department of Dental Technology and to provide the basic data for designing online classes based on the dental technology course.	quantitative research	Questionnaire	300	The students' level of recognition of online classes in the Department of Dental Technology is shown in the rate of recognition for video-based classes for both the theory and experiments. Students displayed high positivity with the video-based learning as it is repeated learning that is not affected by the limitations of time. In addition, video-based learning is highly beneficial in terms of convenience, satisfaction, and achievement for learning.
37	J.K Kim	Dental hygiene	2020	In this study, flip-learning learning techniques are only used for hands-on classes. Learning by learning about the impact on your family To promote the student's academic achievement and the quality of classes To lay the groundwork	quantitative research	Questionnaire	53	As a result of the subjects' study time and the number of times they watched learning materials, in the first semester, 'less than 1 hour' was the most common with 37 (69.8%), and in the second semester, '1~2 hours' was 16 (30.2%). Was the most frequent. The total number of learners who study "more than one hour" was 16 students (32.0%) in the first semester, but doubled to 33 students (62.1%) in the second semester. The number of viewing of learning materials was not provided in the first semester, and in the second semester, 23 people (43.3%) viewed 'one time' and 25 people (47.2%) 'viewed 2-3 times' were similar. Most of the students watched more than once (92.5%) with one 'multi-view' (1.9%).
38	H.J Kim, S.Y Yoon, J.H Park	Dental hygiene	2020	In this study, as part of the social distancing carried out to prevent the COVID-19 outbreak, this study analyzed changes in sleep quality in some college students whose daily routines were broken due to the conversion of most of their daily life to a non-face-to-face manner. It was conducted to check the learning satisfaction for the non-face-to-face teaching method (online). In addition, by identifying the level of sleep quality, the correlation between the stress level of the students and the satisfaction with the class was analyzed according to the quality of sleep.	qualitative research	Interview	300	The lower the quality of sleep, the higher the stress, and the lower the satisfaction level of learning. In the correlation between the quality of sleep, stress, and learning satisfaction, the lower the quality of sleep, the higher the stress, and the learning satisfaction. Also, the higher the stress, the lower the satisfaction level of learning
39	E.K Son, I.S Park	Dental hygiene	2020	For dental hygiene and students in some areas of Gangwon-do, the changes in class perception and career perception according to class methods.	quantitative research	Questionnaire	183	There was a difference in class perception and career perception according to grades, and career interest and career aspirations were found according to school life satisfaction and tooth-free linen class satisfaction. Sim and career confidence showed a difference. In the case of non-face-to-face classes, the proportion of career decisions through the Internet increased, and career confidence was also increased.
40	H.Y Park, J.W Yoon, H.J Kim, M.K Lee	Dental hygiene	2020	As part of the social distancing carried out to prevent the COVID-19 infection, most of daily life has been converted to a non-face-to-face method, which analyzes changes in sleep quality for some college students whose daily rules have been broken, and unexpected non-face-to-face teaching methods (online) To check learning satisfaction	quantitative research	Questionnaire	300	First, the lower the quality of sleep, the higher the stress. Second, the lower the quality of sleep, the lower the learning satisfaction. Third, in the correlation between sleep quality and stress-learning satisfaction, the lower the sleep quality, the higher the stress, and it also affected the satisfaction of learning and learning.
41	C.H Kim, H.M Kim, E.J Kwon	Dental hygiene	2020	Searching for ways to improve the quality perception and satisfaction of students in the dental engineering and dental hygiene departments.	quantitative research	Questionnaire	474	The online class of video lectures induces the learner's learning motivation through sufficient exploration and understanding of the learner, builds a platform that can be used in a variety of easy and easy interactions with instructors and learners, and enhances learning achievement and learning satisfaction in online classes. For this purpose, web-based program design and development should be carried out, and a plan to obtain the optimal educational effect should be sought by applying the effective parallel of face-to-face and non-face-to-face lectures.

	Author	Major Field	Year	Purpose	Design	Method	Sample	Main result
42	S.R Jeong, M.S Kim, E.J Kim, Y.G Choi	Dental hygiene	2020	In order to promote the change of the new educational environment in the dental hygiene system, and to explore the change of students' perception of learning and the effect of education through a student participation-centered curriculum,' Clinical Dental Hygiene, which deals with periodontal structure technique, one of the major subjects of the Department of Dental Hygiene. We will develop and operate a curriculum based on flip-learning in the 'Study and Practice III' class to check its effectiveness.	quantitative research	Interview	48	1. The learning preference for the flip-learning-based clinical dental hygiene curriculum is higher than that of traditional teaching methods, the learning motivation is the learning ability through flip learning, the critical thinking tendency is the possibility of active exchange of opinions through team discussions during flip-learning. The leading learning ability showed the highest score due to the increase in participation through flip learning, and the skill ability through the improvement of practical skills through repetitive learning. 2. Overall satisfaction of the lecture through lecture evaluation showed a high satisfaction of 4.54 points out of 5 points. Through this study, it was confirmed that the development and operation of a flip-learning-based clinical dental hygiene course can provide a highly satisfactory learning process for students. It is expected that the instructor should go through an accurate understanding of flip learning and a sufficient pre-development stage, and try to operate the subject considering the learner's needs and the characteristics of the curriculum.
43	H.K Kang, J.Y Lee	Dental hygiene	2021	The purpose of this study is to investigate the effects of online lecture learning characteristics on learning motivation, class satisfaction, and academic achievement of dental hygiene students and provide basic data for the design and operation of online lectures in future courses	quantitative research	Questionnaire	296	The variables of the online learning characteristics that influence learning motivation were the online lecture education effect and school system while the variables influencing the online class satisfaction were the online lecture education effect and school system. The variables of the online lecture characteristics that significantly influence the learning achievement were found to be the online lecture effect, school system, and homework
44	M.E Kim, M.J Kim, Y.I Oh, S.Y Jeong	Education	2020	Results of this study, college life of freshmen of nursing college students In order to improve adaptation, instructors need guidance that considers personal factors such as age, academic background at the time of admission, grades, and motivation for admission, and considers the characteristics of students.	quantitative research	Questionnaire	181	As a result of this study, in order to improve the adaptation of new nursing students to college life, professors should be assigned age, education at the time of admission, and gender. It is necessary to confirm the personal factors of the enemy and the motivation for admission, and to take the student's characteristics into consideration.
45	J.N Baek	Education	2020	This study was designed to investigate the efficacy of college students' participation in online real-time classes conducted at domestic universities due to the coronavirus outbreak.	quantitative research	Questionnaire	701	As a result of the study, the real-time online method was applied as a temporary replacement for the face-to-face class, but the face-to-face class was completely We also confirmed the limitation that it cannot be replaced.
46	J.S Park, S.H Lee	Education	2021	This study was analyzed using the Q methodology in order to explore the subjective perception patterns of graduate students majoring in counseling and coaching about the online class experience conducted by the COVID-19 pandemic.	quantitative research	Interview	21	As a result of the study, a total of 4 types of recognition were derived, type 1 being clinical practice, Experience-worrying type, type 2 focused on interaction, type 3 focused on online class, and type 4 focused on efficiency.
47	S.B Hong, S.H Jeong, I.S Shin, Y.B Yoon, Y.O Yoo	Clinical laboratory science	2018	By replacing pre-learning with on-site pre-practice instead of the video medium that was mainly used in the existing flip learning, we developed a clinical microbiology practice class model in which learners experience hands-on practice in the medical field before class and participate as a leader in class progress. To increase academic self-efficacy, class participation, and satisfaction.	quantitative research	Questionnaire	33	By applying the field fusion type L2L teaching model to the class, academic self-efficacy, class participation, and class satisfaction were increased, and there was a positive correlation between them. This is believed to have increased the level of satisfaction in class by increasing students' self-efficacy and participation in class by performing preliminary on-the-job training.
48	K.H Cheon, W.K Park, E.M Joe, D.Y Keum	Medical science	2012	This study aims to improve the effectiveness and efficiency of clinical practice among the medical curriculum conducted in medical schools. It was to explore ways to apply e-learning and its possibilities.	quantitative research	Interview	112	Teachers' satisfaction was 3.22 ± 0.69 , and the major's satisfaction was 3.55 ± 0.68 , and there was no significant difference between the two groups. The remaining 70.37% (19 people) answered below average. In the case of majors, 63.64% (7) of all 11 respondents answered that they were satisfied, and 36.36% (4) answered below average.

	Author	Major Field	Year	Purpose	Design	Method	Sample	Main result
49	S.J Kim, H.J Kim	Department of Optics	2021	In the situation of Corona 19, we tried to find out the perception and ethical awareness of new infectious diseases, and the degree of knowledge of COVID-19 among university students in opticians and opticians.	quantitative research	Questionnaire	130	The perception of new infectious diseases of the opticians college students was moderate, and the ethical awareness and knowledge of COVID-19 showed a high level. Through the results of this study, it is necessary to develop a health education program to improve awareness of new infectious diseases and ethical awareness, and it is thought that it will be used as basic data for developing guidelines for coping with new infectious diseases when working as an optician.
50	A.R Lim	Art psychotherapy	2021	This study is to verify whether the interactive cinematographic psychotherapy class developed on the premise of discussion in a university lecture environment where non-face-to-face classes were conducted due to COVID-19 has an effect on emotional intelligence and empathy even in a non-face-to-face environment. There is a purpose.	qualitative research	Questionnaire	139	Non-face-to-face interactive cinematic psychotherapy class It can be said that it has the effect of improving the ability to understand others' emotions and utilize emotions.

운영에 관한 논문 총 50편의 특성을 분석한 결과는 <Table 2>와 같다.

2011년부터 2021년도까지 간호·보건계열 대학생 대상으로 한 온라인 수업 운영에 관한 논문을 검색 한 결과 주요 검색어 중 빈도수가 높은 핵심단어는 온라인 수업 32편(64%), LMS 수업 6편(12%) , 비대면 수업 4편(8%), 웹기반 2편(4%), 블렌디드러닝 1편(2%) 등의 단어의 빈도수가 높게 나타났으며, 기타도 5편(10%)로 나타났다.

3. 온라인 수업 운영과 관련된 주요 변수

전체 논문의 온라인 수업 운영과 관계되어 분석된 주요 변수들을 확인한 결과는 <Table 3>와 같다. 논문에서 사용된 온라인 수업운영과 관련된 주요 변수들에 대한 분석결과, 만족도가 8편(16%)으로 가장 많이 연구된 관련변수로 나타났고, 그 다음은 자기효능감 6편(12%)이 다음으로 자기주도학습 3편(6%), 동기부여 3편(6%), 비판적사고 3편(6%), 학습효과 2편(4%), 학업성취도 2편(4%), 교수-학생 상호작용 2편(4%), 의사소통능력 2편(4%), 진로의식 2편(4%), 메타인지 1편(2%), 문제해결능력 1편(2%), 생활적응 1편(2%), 스트레스 1편(2%), 불안 1편(2%), 우울 1편(2%), 분노 1편(2%), 충동성 1편(2%), 학습지속의향 1편(2%), 수업행태 1편(2%), 의사결정 유형 1편(2%), 기초학업능력 강화 1편(2%), 경험의식 1편(2%), 부정적 감정 1편(2%),

직무능력 1편(2%), 기질 1편(2%), 액티브러닝 1편(2%), 전통적 대면 학습법 1편(2%), 수업인식 1편(2%), 인식유형 1편(2%), 대체방법론 1편(2%), 신종감염병 인식 1편(2%), 윤리의식 1편(2%) 등으로 나타났다.

4. 간호·보건계열 대학생의 온라인 수업 운영과 관련된 국내 연구

<Table 4>과 같이 각 논문은 분명하게 연구 목적, 대상자, 연구설계, 연구방법, 연구결과가 50편 모두 적절하게 서술되어있다.

IV. 논 의

본 연구는 간호·보건계열 대학생의 온라인 수업 연구에 대한 최근 10년간 연구동향을 파악하고, 앞으로 온라인 수업 연구의 발전을 위하여 나아갈 방향을 모색해 보고자 시도되었다.

본 연구의 분석대상 문헌은 최근 10년간(2011~2021년)까지 국내 학술지에 게재된 간호·보건계열 대학생 관련된 온라인 수업운영의 문헌으로 총 50편이었다. 이 중 2020년 이후 게재된 문헌이 총 35편(75%)을 차지하여 10년 동안의 연구 중 많은 부분을 차지하였다. 이는 최근 들어 COVID-19의 확산 방지와 학생들의 안전, 학습권을 보장하기 위해 대면 수업을 비대

면 원격수업으로 시행한 것에 대한 결과로 많은 연구가 진행되었을 것이다.

연구결과 <Table 1>에 제시된 바와 같이 국내 25개 학술지에 게재된 50편의 문헌이 연구설계는 비실험연구 39편(78%), 실험연구 11편(22%)으로 비실험연구가 대부분이었다. Choi 등[8]의 연구결과에서 비실험연구가 54.9%, 실험연구가 45.1%로 나타난 결과와는 현저한 차이의 결과이지만 Kim과 Chio[9]연구에서 비실험연구가 93.8%로 차지한 것을 보면 유사한 연구설계 비율이다. 이와 같은 결과는 분석하고자 하는 대상의 연구동향과 특성에 따라 연구설계의 비율이 달라진다고[8]. 또한 간호·보건계열 대학생의 온라인 수업 연구에 대한 연구동향의 경우 온라인 수업 운영의 짧은 역사와 더불어 온라인 수업 운영 관련 연구가 COVID-19가 한창 유행한 시기였던 2020년도에 가장 많이 시도되었다는 것을 감안한다면 실험연구를 할 수 있는 환경이 이루어지기가 어려웠을 시기였을 것이라고 본다. 이에 추후 연구에서는 실험설계연구를 진행하여 근거기반중심 연구를 더 많이 시도할 필요가 있다.

자료수집 방법에서는 대부분 대학생을 대상으로 한 설문 조사법이 39편(78%)으로 연구 도구를 사용한 논문이 가장 높게 나타났다. 추후 연구에서는 연구결과의 신뢰도를 높이기 위해서는 연구의 목적과 방향 그리고 대상자의 수준에 맞는 연구도구와 설문조사법 개발이 지속적으로 이루어진다면 좋은 연구결과가 도출 될 것이다.

간호·보건계열에서 전공분야별로 진행된 연구 수를 보면 간호학과 18편(36%), 치위생과 9편(18%)으로 높게 나타났다. 이러한 결과는 학과별 학생과 교수 인원, 학습자의 참여의지의 차이와 관련이 있다[10]. 그러나 현재까지의 간호·보건계열에서 진행한 온라인 수업관련 연구는 갑자기 확대된 온라인수업과 길지 않은 진행기간 때문에 아직은 타 연구분야에 비해 소수의 연구가 시행되었다고 볼 수 있다. 따라서 전공분야별 연구의 수나 질에 대해서는 계열별 정의나 표준화가 어려운 상태이므로 다양한 변수의 사용과 반복적이고 지속적인 연구를 통해 표준화된 온라인 수업

방향을 정립해 나가는 것이 필요하다.

온라인 수업 운영에 관한 논문을 검색 및 분석하였을 때 ‘온라인 수업’, ‘LMS 수업’, ‘비대면 수업’, ‘웹기반’, ‘블렌디드러닝의 수업 운영 방식이 가장 많은 것으로 확인되었다. COVID-19 상황에서 Lee[16]는 수업의 질을 높이하고자 많은 대학에서는 실습 대면수업과 녹화 및 실시간 비대면 원격수업 등을 혼합하여 일방향 원격수업에 비해 수업의 만족도와 학생의 참여도 면에서 긍정적인 결과를 나타내었다. 그러나 추후 지속적인 간호·보건계열 대학생들의 인식 및 의견을 검토 및 수용하여 비대면 원격수업의 체계적인 교육시스템을 개발하여 학습자의 편의성 및 효율성, 학업 성취도 향상이 필요하다고 본다. 특히, 비대면 원격수업으로 실습과목을 운영해야 할 경우 실습과목을 담당하는 교수자는 대면 실습수업과의 질의 차이를 최대한 줄이기 위해 학생들의 적극성과 이해력을 높일 수 있는 자료 개발과 동시에 비대면 수업에 영향을 주는 요소들을 사전에 대비하는 세심한 준비과정도 요구된다.

본 연구결과에서 온라인 수업 적용 시 확인된 가장 많은 변수는 수업만족도로 확인되었다. Choi[12]의 연구에서도 학생들의 온라인 수업 참여도를 살펴보면 학생들이 능동적으로 비대면 원격수업을 참여하는 학생들이 만족도가 높은 것으로 확인되었다. COVID-19의 상황에서 온라인 수업이 갑자기 이루어짐에 따라 학생들의 수업 만족도를 높이는 것은 중요함에 따라 앞으로 온라인 수업의 중요한 이유에 대해 간호·보건계열 학생들에게 중요성을 인식시키고 온라인 수업을 참여시키는 프로그램 개발 및 적용이 필요하다.

Ju, Oh, Bang[17], Lee와 Kim[18]의 연구에서는 비대면 원격수업의 만족도가 학년별로 차이가 나타났는데 고학년일수록, 비대면 원격수업 경험이 있는 경우 높게 보고되었다. 이유는 학년이 낮을수록 전공과목에 비해 교양과목에 비중이 높아 수업의 이해도와 필요성이 느끼기 어렵고, 졸업 학년에 가까울수록 국가고시와 직결된 전공교과목을 수강하므로 수업에 대한 적극성이 높은 것으로 분석하였다. 이와 같이 각 연구에서 측정된 여러 변수의 결과는 현 시점의 온라인 수

업 방식개선과 학생들의 이해도와 참여도를 향상하여 이들의 학습격차를 줄이기 위한 방안을 모색해야 함을 보여준다. 실제로 온라인 수업의 장기화에 따라 교수자는 학생들의 이해정도를 확인하기가 어렵고, 학생들과 능동적인 의사소통이 어려워 학생들의 학습격차가 커질 수밖에 없는 상황이 된다. 이러한 문제점을 해결하기 위해서는 교수자 스스로가 다양한 교수법을 적용한 수업콘텐츠 개발 노력과 동시에 대학에서의 적극 지원도 함께 진행되어야 할 것이다.

두 번째로 온라인 수업 적용 시 확인된 변수는 자기효능감이 확인되었다. Kim[13]은 자기효능감은 개별적 학습 전략 선택 및 교육방향 설정에 영향을 주어 학습활동 강화와 지속적인 학습 참여에 긍정적인 영향을 준다고 하였으며, Lee[14]의 연구에서는 학생들의 자발적 수업참여를 위해 본인의 자기효능감이 높을수록 동기 및 흥미유발을 시킬 수 있는 온라인 콘텐츠를 활용하면 긍정적인 영향을 미치는 것으로 확인되었다. 이에 자기효능감을 높일 수 있도록 자기효능감 증진 프로그램을 통해 지속적 교육과 함께 즉각적 피드백을 제공하여 자기효능감 강화가 이루어지도록 도움을 주어야 할 것이다.

본 연구 결과를 통해 선택된 50편의 간호·보건계열 대학생에 대한 비대면 원격수업 연구의 ‘저자, 제목, 발표년도, 논문출처, 논문 설계, 대상자, 측정 도구, 자료수집 방법, 자료 분석 방법, 연구 결과’에 대한 분석이 향후 향상된 비대면 원격수업을 간호·보건계열 대학생에게 제공할 수 있는 이론적 근거라고 생각된다. 본 연구에서 확인된 결과를 통해 현재 진행되고 있는 비대면 원격수업 형태를 좀 더 체계적이고 구체적이며 실증적인 방법으로 간호·보건계열 학생들에게 도움이 될 만한 수업 체계 확립 및 개발에 적용할 수 있을 것으로 기대한다.

V. 결론 및 제언

본 연구는 최근 10년간의 간호·보건계열 대학생에 대한 비대면 원격수업 연구 50편에 대해 연구의 ‘저

자, 제목, 발표년도, 논문출처, 논문 설계, 대상자, 측정 도구, 자료수집 방법, 자료 분석 방법, 연구 결과’에 대해 분석하고, 연구동향을 파악하여 앞으로 온라인 수업 연구의 발전을 위하여 나아갈 방향을 모색해 보고자 시도되었다. 이를 위해 최근 10년간(2011~2021년)까지 국내 학술지에 게재된 간호·보건계열 대학생 관련된 온라인 수업운영 문헌 총 50편을 선정하고, 선정된 문헌은 학술지별 특성, 연구설계, 자료수집방법, 전공 분야별 연구 수, 주요 검색어, 주요변수 등을 분석하였다. 이 중 연구설계는 대부분 비실험연구로 이루어져 연구설계의 다양성이 부족하여 정확한 검증을 위한 메타분석이나 실험연구 등의 연구설계 확대가 필요한데, 실험연구의 경우 외생변수를 통제된 반복연구가 이루어져야 할 것이다. 자료수집은 학생들을 대상으로 한 설문조사법이 가장 많이 사용되었으므로 객관적 결과를 반영할 수 있는 연구도구 개발 및 점검이 요구되며, 전공분야별 연구 수는 간호계열의 연구 수가 가장 높게 나타나 타전공 융합연구 및 보건계열 전공학과의 활발한 연구진행이 필요하다. 온라인 수업 운영에 관한 주요 검색어는 온라인수업, LMS수업, 비대면 수업, 웹기반 등 다양하게 사용되어 시대적 상황과 교육 트렌드에 따라 용어 사용의 변화가 있었고, 사용된 주요 변수는 만족도와 자기효능감이 주로 사용되어 선정된 문헌에 비해 조사변수가 제한적이어서 다양한 변수를 이용한 연구가 필요하다.

이와 같이 본 연구에서 확인된 비대면 원격수업에 관련된 논문을 분석한 결과를 바탕으로 추후 간호·보건계열 대학생에 대한 효율적이고, 체계적인 비대면 원격수업 운영에 필요한 프로그램 개발에 본 연구가 기초자료로 유용하게 활용될 수 있을 것이라 기대하며, 다음 세 가지 제언을 하고자 한다.

첫째, 비대면 원격수업에 대한 메타분석, 실험연구 등의 다양한 연구설계 방법을 시도하여 온라인 수업의 효과성을 높일 수 있는 교수법 개발의 유용한 기초자료로써 활용될 만한 연구가 필요하다.

둘째, 비대면 원격수업에서 학생의 참여도를 높이고 학습격차를 줄이기 위한 연구를 확대하여 추후 원격수업의 질을 향상할 수 있는 연구가 진행되어야 할

것이다.

셋째, 대면실습(임상실습) 수업 수준에 가까운 비대면 원격 실습수업 방법을 모색하여 표준화된 비대면 실습수업 개발 연구가 필요하다.

References

1. WHO: Corona19, worst health emergency ever. The BBC 2020. July28 <https://www.bbc.com/korean/international-53563340>.
2. Ministry of Education: To respond to the novel coronavirus infection. Academic Operating Guidelines, Seoul: Ministry of Education; 2020.
3. Korean Association of Private University Presidents: (2020, 3, 16). The current status of academic management after the opening of the Covid-19 related university, Seoul: Korean Association of Private University Presidents; 2020.
http://kapup.org/sub/sub02_02.php?boardid=no-tice&mode=view&idx=28&sk=28&sw=&offset=&category=&goPage
4. Do JW, An investigation of design constraints in the process of converting face-to-face course into online course. Journal of Education & Culture. 2020;26(2):153-173.
5. Kang MH. Managing E-Learning strategies: Seohyunsa; 2004. p. 25-30.
6. Shin SY, Kwon, SY, A Study on the development and validity verification of a measurement Tool for Educational Satisfaction in University. The journal of Educational Studies. 2013;44(3):107-132. UCI : G704-001618.2013.44.3.001
7. MacLaren CJ, Twycross A, Mifflin K, Archibald K. Can we improve parents' management of their children's postoperative pain at home?. Pain Research Management.2014;19(4):115-123,DOI:<https://doi.org/10.1155/2014/938352>
8. Choi EH, Jang EH, Choi JY, Lee SJ, Seo HK, Park KS. Comparison of domestic and international research (1992-2011):Intensive Care Nursing Studies. Korean Journal of Adult Nursing. 2015;27(4):384-396. DOI:10.7475/kjan.2015.27.4.38
9. Kim JH, Choi HS. Research trends in korea on integrated nursing care service: A scoping review. Korean Journal of Adult Nursing. 2020;32(5):455-471.DOI: 10.7475/kjan.2020.32.5.455
10. Kim KT. Domestic research trends and cases of university education and operation in the era of the fourth industrial revolution. Journal of Digital Convergence2019;17(8):15-26.DOI:10.14400/JDC.2019.17.8.015
11. Choi JY, Jung HK. A study on the dental technology student's recognition for non-face-to-face classes. Journal of Korean Acedemy of Dental Technology. Korean Academy of Dental Technology. 2020;42(4):402-408. <https://doi.org/10.14347/jtd.2020.42.4.402>
12. Choi HS, A study on the non-face-to-face teaching experience of college freshmen due to Covid-19. Korean Journal of General Education. 2021;15(1) :273-286. DOI:<https://doi.org/10.46392/kjge.2021.15.1.273>
13. Kim YS, Review and critique of adult learners' motivation research. Interdisciplinary Journal of Adult & Continuing Education. 2012;15(1):31-62. DOI:10.22955/ace.15.1.201202.31
14. Lee N, Contents and Effects of and upon the Character of Students Enrolled in Liberal Arts Character-based Classes. Korean Journal of General Education.2020;14(2):205. DOI:10.46392/kjks.2020.14.2.205
15. Hong YS, Implementation of smart E-learning based on blended learning. The Journal of The Institute of Internet, Broadcasting and Communication. 2020;20(2):171-178. DOI:<https://doi.org/10.7236/JIIBC.2020.20.2.171>
16. Lee BK. A study on learners' response to online col-

- lege English class as general education due to the COVID-19 pandemic. Korean Journal of General Education. 2020;14(4):97-112. DOI: <https://doi.org/10.46392/kjge.2020.14.4.97>
17. Ju ES, Oh EJ, Bang YS. The relationship among academic self-efficacy, achievement level in online classes, and satisfaction of college students majoring in health sciences. The Journal of Humanities and Social science. 2021;12(2) :1713-1723. DOI: <http://dx.doi.org/10.22143/HSS21.12.2.120>
18. Lee GH, Kim JY. A Study on the Relationships between Academic Self-efficacy, Learning Motivation, Course Satisfaction, and Academic Achievement of College Students. Interdisciplinary Journal of Adult & Continuing Education. 2014;17(4):33-57. DOI : [10.22955/ace.17.4.201411.33](https://doi.org/10.22955/ace.17.4.201411.33)
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