

Clinical skills in job analysis of Korean Medicine professionals: acupuncture, Chuna manual medicine, and herbal medication

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Purpose: This study aims to identify the clinical skills of Korean Medicine professionals.

Methods: Skill contents reported in job analysis were systematically classified and analysed by (1) four main criteria of examination, procedural, communication, and management skills, and (2) the criteria of clinical skills stipulated in *Korean Medicine Education Accreditation Standards 2021* (KAS2021).

Results: In a total of 794 clinical skill contents, procedural and examination skills were found to account for 97.0% of four main criteria. Non-pharmacological intervention skills such as acupuncture and Chuna manual medicine, physical examination skills, and herbal medication skills accounted for 83.6% of the KAS2021 criteria.

Conclusion: Korean Medicine doctors' clinical skills were analysed to centre around acupuncture, Chuna manual medicine, and herbal medication that are unique to the Korean Medicine profession. These clinical skills will serve as core components of Korean Medicine education programs and national licensure examinations

Indexing terms: Job analysis, Korean Medicine, clinical skills, acupuncture, Chuna manual medicine

Introduction

A job analysis is a procedure that identifies the experience, function, ability, and responsibility that is required for professionals in a certain professional field and the factors that distinguish the job from others when performing the job. (1) The duties of Korean Medicine doctors are defined in the *Medical Act* (Article 2 paragraph 2) as '*Korean medical practice and Korean Medicine Health Guidance*'. To clarify the job or the duties in detail, the first job analysis study was conducted in 2000 and the second job analysis study was conducted in 2013. (2) Through the studies, the specific range and contents of knowledge, skills, and attitudes which are necessary for the duties of Korean Medicine doctors were suggested.

In general, knowledge can be classified as declarative (factual knowledge, knowing what), procedural knowledge (knowing how to perform certain tasks), and conditional knowledge (knowing when and why to apply declarative or procedural knowledge. (3) It is considered that practical techniques of procedural knowledge usually define a certain profession. In other words, a profession is usually distinguished from others by the practical techniques they show to the

... Chuna manual medicine is a manual adjustive approach practiced in Korea, corresponding to Chiropractic or Osteopathic manual medicine in the West. This analysis shows an increasing demand in the Republic of Korea ...'



general public. Health professionals including Korean medical doctors are not an exception.

As the recent educational trend recommends competency-based education, Korean Medicine education is also shifting from conventional subject-based education to competency-based education and competency-based assessment. Therefore, identifying clinical skills has important significance in Korean medical education programs and assessment programs for those who have completed Korean Medicine education programs. However, the specific breadth and depth of clinical skills required for the basic Korean Medicine education programs and assessment programs have not yet been clarified, which may lead to confusion and inefficiency in educational and clinical situations.

Therefore, in this study, we tried to identify the specific details of the Korean Medicine clinical skills that will be performed in the field after completing basic Korean Medicine education (Korean Medicine training before sitting for national licensure examination to practice). By systematically classifying and analyzing the tasks reported in the job analysis study, we found that representative elements of clinical skills are classified by four main criteria of examination skills, procedural skills, communication skills, and management skills, (4) or by the criteria of clinical skills stipulated in *Korean Medicine education Accreditation Standards 2021* (KAS2021). Examination skills and procedural skills were further sub-classified and analysed to clearly show the core elements of clinical skills.

Methods

Data analysed

The data analysed in this study was the skill contents described in the second job analysis study of Korean Medicine doctors, a comprehensive job analysis of Korean medicine doctors. (2) The skill contents are considered to be necessary skills for Korean Medicine professionals.

Analysis Method

The classification and analysis were performed by four main criteria of Clinical Skills (4) including examination, procedural, communication, and management skills, or by the clinical skills criteria stipulated in *Korean Medicine education Accreditation Standards 2021* (KAS2021)⁵ including history taking, physical examination, communication, reasoning treatment planning, testing, emergency care, medication, and procedures.

Systematically classified skill contents were tabulated for representative elements of skill contents to be easily recognised. More specifically, examination and procedural skills were further sub-classified and analysed to show more concrete elements of clinical skills.

Results

Skill contents in the job analysis study

In the second job analysis study of Korean Medicine doctors, tasks of Korean Medicine professionals consisted of 6 duties (history taking, physical examination, examination, diagnosis and treatment, prevention, management), 37 tasks, and 223 work elements. Among these, a total of 794 skill contents were identified.

Classification of clinical skills

By four main categories of clinical skills, the skill contents were classified into 36.4% of examination skills, 60.6% of procedural skills, 0.8% of communication skills, and 2.2% of management skills. The examination skills and procedural skills composed 97% of the skill contents. (Table 1)

Table 1: Classification of skill contents according to four main criteria

Clinical Skills	n	%
Examination skills	289	36.4%
Procedural skills	481	60.6%
Communication skills	6	0.8%
Management skills	18	2.2%
Total	794	100%

When the skill contents were classified by the clinical skills criteria of KAS2021, 0.8% of history taking, 25.2% of physical examination, 0.8% of communication, 4.8% of reasoning, 1.3% of treatment planning, 7.9% of testing, 0.8% of emergency care, 16.6% of medication and 41.8% of procedural skills were found. The physical examination, medication, and procedural skills composed 83.6% of the total skill contents. (Table 2)

Table 2: Classification of skill contents according to the clinical skills criteria of Korean medicine education Accreditation Standards 2021 (KAS2021)

Clinical skills	n	%
History taking	6	0.8%
Physical examination skills	200	25.2%
Communication skills	6	0.8%
Reasoning skills	38	4.8%
Treatment planning skills	11	1.3%
Testing skills	64	7.9%
Emergency care skills	6	0.8%
Medication	132	16.6%
Procedures	331	41.8%
total	794	100%

Our sub-classification of examination and procedural clinical skills is given in Table 3.

Table 3: Sub-classification of examination and procedural skill contents

Clinical skills (N)	Subclassification (n, %)	Representative elements of skill contents
Examination skills (289)	Physical examination (215, 74.4%)	Palpation, percussion, auscultation, superficial reflex, etc.
	Request and interpretation of biomedical tests (46, 15.9%)	Electrocardiogram, blood test, urinary test, x-ray, CT, MRI, ultrasound, bone densitometry, etc.
	Biofunctional tests (22, 7.6%)	Ryodoraku test, Pulse examination, EAV examination, nutritional assessment, etc.
	History taking (6, 2.1%)	Past history, family history, social history, chief complaints
Procedural skills (481)	Nonpharmacological and related interventions (153, 31.8%)	Acupuncture, Chuna manual medicine, pharmacopuncture, etc.
	Herbal medication (138, 28.7%)	herbal medication, herbal ointment
	Physiotherapy (122, 25.4%)	Hot and cold therapy, fragrance therapy, phototherapy, ultrasound treatment, etc.
	Other treatments (68, 14.1%)	Psychotherapy, exercise therapy, dressing, , speech therapy, etc.

The skill contents corresponding to examination skills and procedural skills in four main criteria were further sub-classified and analysed to show a more concrete picture of representative elements of clinical skills.

Examination skills were sub-classified into physical examinations, request and interpretation of biomedical tests, biofunctional tests, and history taking with representative elements of clinical skills identified. Among these, physical examination skills were 74.4% with representative elements such as palpation and auscultation, among others. Procedural skills were sub-classified into Non-pharmacological and related interventions, herbal medication, physiotherapy, and other treatments. Among these, non-pharmacological and related interventions were 31.8% with representative elements such as acupuncture and Chuna manual medicine, among others. Herbal medication was 28.7%. (Table 3)

Discussion

This study is the first attempt to identify the clinical skills by analysing the tasks described in job analysis, which are required skills for the Korean Medicine professionals who completed the basic Korean Medicine education program. This study systematically classified and analysed the skill contents of the secondary job analysis study of Korean Medicine doctors according to four major criteria of clinical skills and the clinical skills criteria of KAS2021 to identify the specific details of the clinical skills required for Korean Medicine professionals.

Examination and procedural skills accounted for 97% of all the skill contents. physical examination, medication, and procedural skills composed 83.6% of all the skill contents. When procedural and examination skills were further sub-classified, Korean Medicine doctors' clinical

skills were analysed to centre around acupuncture, Chuna manual medicine, and herbal medication that are unique to the Korean Medicine profession.

Acupuncture and herbal medication have been considered to be the most characteristic skills. However, as the *Ministry of Health and Welfare's* revised *National Health Insurance Act* and *Health Benefit Act enforcement ordinance* covered health insurance and health benefits on April 8th 2019, (5) the need for Chuna manual medicine is expected to increase. The number of patients receiving Chuna manual medicine has increased when comparing before and after Chuna insurance policies. (6) The tasks of Korean medical doctors are changing according to the changing environment. (7) Chuna manual medicine is a manual adjustive approach practiced in Korea, corresponding to Chiropractic or Osteopathic manual medicine in the West.

Physical examination is critical in primary care where first physical contact between a health professional and a patient occurs and biomedical laboratory testing or ancillary diagnostic manoeuvres are not easily accessible. The results of this study show that physical examination accounts for 74.4% of examination skills. Considering the importance of physical examination, it is suggested that emphasising and fostering competencies related to physical examination may contribute to enhancing the overall competencies of Korean Medicine trainees and reducing the gap between the education or assessment programs and the actual job environment of Korean Medicine professionals.

Request and interpretation of biomedical tests account for 15.9% of examination skills. The number of East-West medicine hospitals, where the clinical activities of Korean Medicine professionals and biomedicine professionals are intentionally coordinated, increased from 11 in 1989 to 118 in 2004. The number of Korean Medicine hospitals also increase by 80%. These trends may mean that Korean Medicine doctors are required to expand their understanding of the duty of biomedicine doctors. (2) It is another example that the education and assessment programs for Korean Medicine doctors had better be continuously adjusted to reflect the ever-changing clinical situation.

The situation as of 2021 may have changed a lot since the secondary job analysis study of Korean Medicine doctors was conducted in 2013. As time goes on, there may exist differences in patients' needs and clinicians' competencies. New diagnostic and therapeutic techniques may show up. The social and natural environment may change. Considering this possibility, the job analysis had better be contiguously reviewed and revised. In addition, the education program and assessment strategy for Korean Medicine trainees should be continuously adjusted to maintain a dynamic balance between needs and competencies, thereby contributing to the high-quality education and national licensure examination.

Suggestions

Clarification of the clinical skills based on job analysis may contribute to the improvement of effective educational programs reflecting changes in the job environment. For the successful implementation of the national licensure examination, the examinee must be assessed based upon a comprehensive job analysis and core competencies required for the profession.

Conclusion

Clinical skills of the Korean Medicine profession were found to centre around acupuncture, Chuna manual medicine, and herbal medication that are unique to the Korean Medicine profession. Clarification of the clinical skills required for Korean Medicine doctors will contribute to the improvement of effective educational programs and assessment strategies, reflecting ever-changing job environments.

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Conflict of interest

No potential conflict of interest relevant to this article was reported.

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