

A Literature Study on Usage of and Satisfaction Levels with Combined Treatment Including Oriental and Western Medicine

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Key Words

combined treatment; Oriental and Western medicine; usage; satisfaction levels

Abstract

Objective: This study aimed to summarize and analyze the usage of and the satisfaction levels with combined treatment including Oriental and Western medicine.

Methods: We searched studies on the usage of and the satisfaction levels with combined treatment including Oriental and Western medicine over the past 10 yrs (2001-2011) from 3 Korean databases (National Assembly Library, Research Information Service System, and National Discovery for Science Leaders). The reviewers also conducted a summarizing analysis by sampling the literature according to the type of study, study period, region, study subjects, sample size, type of sampling, research method, data analysis, study instruments, main results, etc.

Results: When the main results of six studies on combined treatment usage and satisfaction levels were considered together, the most important decisive factor in determining the usage of combined treatment was the illness of the patient, followed by the patient's occupation, sex, age, education, marital status, religion, treatment cost, and treatment results. In addition, the most important factor that determined satisfaction levels with combined treatment was age, followed by education, religion, income, health status, treatment procedures, staff attitude, and cleanliness.

Conclusions: Elderly patients with musculoskeletal, cerebro-

vascular, and circulatory system illnesses are more likely to prefer combined treatment over independent Oriental or Western treatment and are more likely to request specialized, adjusted medical care.

1. Introduction

Combined treatment in Korea is a type of treatment system that offers combined medical care through mutual cooperation between Oriental and Western medicine; under this system, Oriental and Western medicine doctors together decide on the most appropriate course of treatment after establishing the diagnosis and examining the patient [1]. According to studies, combined treatment was offered in 20.6% of Western hospitals in 2004 and in 82% of Oriental hospitals in 2008 [2]. Although Korea is the first country to systematically support combined treatment, incorporating alternative medicine to improve medical services is encouraged in all parts of the world. The World Health Organization (WHO) is also encouraging each country to adopt policies that lower the burden of rising medical treatment costs on citizens by developing health promotion laws that employ traditional medicine according to the circumstances of each country [3].

The use of treatment is modulated by various influences, such as demographic, socioeconomic, cultural, psychological factors, etc. These factors are reported as being non-independent, influencing the use of treatment together through mutual interactions. The satisfaction level of a patient making use of medical institutions is determined by the difference between his/her expectations and real treatment experience, which means that it is based on a subjective judgment. However, the patient's satisfaction level is an

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important factor in estimating the quality of medical services, and it is especially important, because it influences the adjustment of the patient to treatment and the probability the patient will come to the same hospital again or recommend his/her doctor to others [4].

Countries in which public confidence is placed on combined treatment still suffer from a lack of statistical data on the system. Most research on usage of and satisfaction levels with combined treatment including Oriental and Western medicine consists of studies that used cross-sectional surveys. Deeper studies, such as secondary analyses or systematic literature reviews, are rare. We reviewed the literature on the usage of and the satisfaction levels with combined treatment over the past 10 yrs and present preliminary data on this topic.

2. Research methods

In this study, we have summarized and analyzed the results of independent studies on the usage of and the satisfaction levels with combined treatment including Oriental and Western medicine in Korea that have been presented in previously published papers. We searched for papers through three databases: the National Assembly Library (<http://www.nanet.go.kr/>), the Research Information Service System (<http://www.riss.kr/index.do>), and National Discovery for Science Leaders (<http://www.ndsl.kr/index.do>). Our search was limited to the search strings (“combined treatment” OR “East-West” OR “Oriental-Western”) AND (“usage” OR “use” OR “utilization”) and (“combined treatment” OR “East-West” OR “Oriental-Western”) AND (“satisfaction levels” OR “satisfaction”) in the full titles of dissertations and academic articles published over the past 10 yrs (2001-2011).

Literature selection was conducted independently by two reviewers. During the first stage of selection/exclusion, titles and abstracts were analyzed, and literature that had no relevance to the current study was excluded. The second stage of selection/exclusion dealt with the cases in which the full text was analyzed because the abstract did not make it possible to clearly determine the relevance to the current study. In cases in which the reviewers had different opinions, a joint opinion was reached through discussion. In case a compromise could not be reached, a third person was introduced, and a decision was made by majority vote.

The two reviewers independently sampled the data according to a procedure designated in advance. The reviewers conducted a summarizing analysis by sampling the literature according to the type of study, study period, region, study subjects, sample size, type of sampling, research method, data analysis, study instruments, main results, etc.

3. Research results

This study conducted a literature review by comprehensive comparison and analysis of the results of previous independent studies on the usage of and the satisfaction levels with combined treatment including Oriental and Western medicine. Of the six papers chosen for review, two were published in academic journals and four were dissertations. All of the dissertations were for Master’s degrees, with health sciences being the most common field of study. With the exception of one paper that investigated treatment information on the basis of electronic medical records, the other papers all used the cross-sectional survey method. The data were collected through postal and direct surveys. The geographical scope in one of the previous studies included various important regions in the country, but in each of the other five cases, the data were collected in one city. In five of the previous studies, the research subjects were patients of Oriental hospitals and Oriental medical clinics; in one paper, they were citizens residing in the region. The sample sizes were between 100 and 200, between 200 and 500, and over 500 people in 2 studies, 3 studies, and 1 study, respectively. Random sampling was applied in the majority of the papers (5 out of 6). The research method applied self-filled surveys in three papers, both interviews and self-filled surveys in one paper, and both self-filled and guardian-filled surveys in one paper. Each paper used various methods of statistical analyses, mostly t verification and χ^2 verification. In addition to those methods, variance analysis, correlation analysis, regression analysis, etc. were also applied [Table 1].

The most important determinant for the usage of combined treatment was the illness of the patient, followed by the patient’s occupation, sex, age, education, marital status, religion, treatment cost, and treatment results [Table 2]. In addition, the most important determinant for the satisfaction level with combined treatment was age, followed by education, religion, income, health status, treatment procedures, staff attitude, and cleanliness [Table 3].

Research instruments varied depending on the goals of the researchers and included such various variables as general characteristics, demographic characteristics, socioeconomic characteristics, health status, illness, treatment costs, treatment results, treatment procedures, staff expertise, staff attitude, convenience, hospital cleanliness, etc. The main results of studies on the usage of and the satisfaction levels with combined treatment are summarized in Table 4.

Table 1 Descriptions of studies on the usage of and the satisfaction levels with combined treatment including Oriental and Western medicine

Study	Period	Sample region	Sample	Sampling type	Sample size (patients)	Research method	Method of statistical analysis	Form of publication
Lee [5] (2010)	2009. 11. 1. - 2009. 11. 10.	Seoul	Patients in 3 Oriental-Western medicine hospitals	Random sampling	194	Self-filled survey	Frequency analysis, t -verification, variance analysis, correlation analysis, multiple regression analysis	Master’s thesis (Public Administration)
Jeong et al. [6] (2010)	2008. 5. 1. - 2008. 5. 30.	Busan	Family medicine department outpatients and participants in first aid training in 1 university hospital	Random sampling	245	Self-filled survey, interview	Descriptive statistical analysis, χ^2 -test	Journal of Oriental Medical Preventive, published article

Study	Period	Sample region	Sample	Sampling type	Sample size (patients)	Research method	Method of statistical analysis	Form of publication
Yoon and Park [7] (2010)	2005. 3. 10.- 2005. 3. 19.	11 city and county regions	Region residents who visited 11 health centers	Random sampling	417	Self-filled survey	χ^2 -test	Journal of Oriental Medical Preventive, published article
Kim [8] (2009)	2007. 7. - 2008. 6.	Seoul	Patients undergoing combined treatment in 1 hospital	-	7,412	Survey of medical information using electronic medical records	χ^2 -test, <i>t</i> -test, logistic regression analysis	Master's thesis (Healthcare Management)
Kim [9] (2004)	2003. 9. 13. - 2003. 9. 17	Seoul	Outpatients in 1 combined treatment hospital	Random sampling	215	Self-filled survey	χ^2 verification	Master's thesis (Public Administration)
Kim [10] (2002)	2002. 3. 30. - 2002. 4. 4.	Busan	Stroke inpatients in 1 medical center	Random sampling	170	Self-filled survey, guardian-filled survey	χ^2 verification, <i>t</i> verification, variance analysis	Master's thesis (Public Health)

Table 2 Determinants of usage of combined treatment including Oriental and Western medicine

	Study	Sex	Age	Educa-tion	Occu-pation	Marital status	Area of Resi-dence	Reli-gion	Income	Medical Insur-ance status	Health status	Ill-ness	Travel time to the treat-ment facility	1st visit treat-ment facility	Treat-ment cost	Treat-ment results
1	Lee [5] (2010)	○	○	○	○	○			○		○	○	○			
2	Jeong et al. [6] (2010)	○	○	○	●				○	○		●		○		
3	Yoon and Park [7] (2010)	○	○	○	○				○	○		●				
4	Kim [8] (2009)	●	●	●	●	●	○	○		○		●			●	
5	Kim [10] (2002)	○	○	○	○			●	○							●

○ Variables used in studies of combined treatment usage

● Significant variables (according to the results of studies on combined treatment usage)

Table 3 Determinants of satisfaction levels with combined treatment including Oriental and Western medicine

Study	Sex	Age	Educa-tion	Occu-pation	Marital status	Area of Resi-dence	Reli-gion	Income	Health status	Ill-ness	Travel time to the treat-ment facility	Treat-ment proced-ures	Ex-pertise	Staff Atti-tude	Con-venience	Clean-liness
1 Lee [5] (2010)	○	●	●	○	○			●	●	○	○	●	○	○	○	●
2 Kim [9] (2004)	○	○	○	○		○		○						●		
3 Kim [10] (2002)	○	●	○	○			●	○								

○ Variables used in studies on satisfaction levels with combined treatment

● Significant variables [according to the results of studies on satisfaction levels with combined treatment]

Table 4 Main research instruments and results of studies on the usage of and the satisfaction levels with combined treatment including Oriental and Western medicine

Study	Research instruments	Main results
Lee [5] (2010)	Treatment procedures in Oriental-Western combined treatment hospitals, professionalism, staff attitude, convenience, cleanliness, satisfaction level	The most requested services were examinations and tests on the Western medicine side and acupuncture on the Oriental medicine side. The most preferred form of cooperation was Western and Oriental medicine doctors discussing treatment options together from the very beginning (receiving Western and Oriental treatment simultaneously). The biggest problem reported with combined treatment was difficulties in usage; the biggest reported advantage after Oriental-Western treatment was peace of mind. Hospital cleanliness had the biggest influence on patient satisfaction level, followed by hospital treatment procedures.
Jeong et al. [6] (2010)	General characteristics, characteristics related to experience of combined treatment, attitude toward combined treatment	Despite their low level of experience with combined treatment, the number of doctors who would use it was high. The necessity of education and promotion of combined treatment is indicated. The preferred form of combined treatment was reported to be simultaneous treatment. Patients with musculoskeletal or circulatory system illnesses had especially high expectations of combined treatment.
Yoon and Park [7] (2010)	General characteristics, relationship with treatment usage, relationship with Western-Oriental combined treatment, combined treatment in health centers, the form of combined treatment in health centers	Patients who had already experienced combined treatment were more likely to prefer it than those who had no such experience. Patients who suffered from aftereffects of accidents, high blood pressure, heart problems, stroke, arthritis, or disc problems were more likely to prefer combined treatment.
Kim [8] (2009)	Sociodemographic characteristics, treatment characteristics, treatment usage characteristics	The older the patient was and the longer he/she had been hospitalized, the probability of applying combined treatment was greater, when the patient was hospitalized at the Oriental hospital of a combined treatment facility. During the course of treatment, patients received both Oriental and Western treatments at the hospital if they were not having surgery.
Kim [9] (2004)	Personal data, data related to hospital usage, satisfaction levels, data related to illness	There is a need to develop effective treatment activities and systems. Staff attitude during the course of treatment was important. There was a need for reform regarding treatment costs.
Kim [10] (2002)	Treatment usage conditions, combined treatment usage conditions, attitude toward combined treatment, general data	Physical therapy was the most popular service on the Western medicine side while acupuncture was the most frequently used on the Oriental medicine side. Patients older than 71 yrs of age who had no religion showed the most general satisfaction with combined treatment services. Patients thought that combined treatment was most helpful during rehabilitation, and the most important reason for ineffectiveness of combined treatment was the mutual prejudices of Oriental and Western medical traditions about each other.

4. Discussion

The recent revised bill on medical legislation allows cooperation between Oriental and Western medicine doctors in medical facilities at the hospital level and higher. The bill aims to increase patient convenience and ensure competition between treatment facilities through mutual cooperation between medical professionals while easing control. Combined treatment is established as a desirable form of cooperation that increases treatment effectiveness and quality of treatment services. Oriental and Western medicine doctors are expected to conduct treatment together after establishing the method and the course of treatment through consultation [11].

Typically, in research on treatment usage, researchers aim to estimate the type and the duration of treatment, after which they analyze the various factors that had influenced treatment and the strength of that influence. Such research can not only investigate the differences in treatment usage between different groups and assess the patient's satisfaction level and output results through comprehensive understanding of the factors that influence treatment usage; but also can be of great help when establishing healthcare policy and business plans that can enable the provision of cost-effective treatment by promoting favorable factors and limiting the impact of unfavorable ones [12].

When the main results of the six studies on the usage of and the satisfaction levels with combined treatment were considered together, the most important decisive factor in determining usage of combined treatment was the illness of the patient, followed by the patient's occupation, sex, age, education, marital status, religion, treatment cost, and treatment results. Kim [8], using 7,412 samples of medical information, reported many significant variables according to the results of studies on combined treatment usage.

The most important factor that determined satisfaction levels with combined treatment was age, followed by education, religion, income, health status, treatment procedures, staff attitude, and cleanliness. Using the results of studies on satisfaction levels with combined treatment by verifying a previously prepared hypothesis and increasing the statistical validity and reliability, Lee [5] reported many significant variables.

Patient illness was determined to be the chief factor determining the use of combined treatment. Combined treatment was reported to be preferred by patients with cases of musculoskeletal or circulatory system illnesses [6], aftereffects of accidents, high blood pressure, heart problems, stroke, arthritis, and disc problems [7], cerebrovascular illnesses, disorders of nerve roots and nerve plexuses, and malignant neoplasms of the digestive system [8].

Age was determined to be the most important variable determining the patient's satisfaction level. Lee [5] mentions that patients older than 60 yrs of age exhibit the highest level of satisfaction while the satisfaction levels in patients in their 30s-40s are low. Kim [10] observes the highest satisfaction level in patients over 71 yrs of age while patients aged 51-60 appear to be the least satisfied.

In conclusion, elderly patients with musculoskeletal, cerebrovascular, and circulatory system illnesses are more likely to prefer combined treatment over independent Oriental or Western treatment and are more likely to request specialized, adjusted medical care. Combined treatment is not just a means of hospital management or of overcoming the limitations of separate treatment systems — its main idea is to encourage a genuine relationship between Oriental and Western medicine doctors founded on mutual understanding and close cooperation.

The stable establishment of such combined treatment systems

is expected to increase the convenience of treatment usage for patients with complex diseases by offering them combined Oriental Western treatment in one package. Mutual sharing of treatment technologies and medical knowledge can help supplement the shortcomings of both medical systems and increase the quality of care provided to patients. From a business standpoint, advancing the synergistic effects of a high level of mutual cooperation and fusion between Oriental and Western medicine in new fields of medicine is expected to attract patients from abroad and to promote the overseas expansion and adoption of Korean hospital medical technologies.

This study, which integrated the independent results of previous studies on the usage of and the satisfaction levels with combined treatment, has the following limitations: only databases indexing general academic journals were used in the data collection process. Research found by searching more specialized databases or "gray literature" articles could yield more fruitful results. Moreover, a need exists for an alternative to interpretation on the basis of results from small subject pools created by random sampling of patients from Oriental hospitals and medical clinics in limited areas. A need also exists to increase the statistical validity and reliability of our data through verification of the previously prepared hypothesis, as the statistical methods used in this study were predominantly simple descriptive or comparative analyses. Also, the quality of the literature needs to be estimated, and in-depth analyses of the results of articles chosen through strict selection need to be conducted.

5. Conclusion

The most important decisive factor in determining usage of combined treatment was the illness of the patient. In addition, the most important factor that determined satisfaction levels with combined treatment was age. Taken together, elderly patients with musculoskeletal, cerebrovascular, and circulatory system illnesses are more likely to prefer combined treatment over independent Oriental or Western treatment and are more likely to request specialized, adjusted medical care.

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