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Original Article

How Do Parents' Experiences Affect Children's Use of the Traditional Korean Medical Services? A Regression Analysis Using Cross-Sectional Data

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Objectives: Medical services are closely related to individual health and welfare, and health status in childhood or adolescence is widely recognized to be related to many socioeconomic outcomes. Therefore, providing appropriate medical services in childhood and adolescence is important. We aimed to investigate the determinants of traditional Korean medical services (TKMS) usage by children aged < 19 years. The focus was on the role of their parents' experiences with TKMS in determining TKMS use by children.
Methods: Using a representative sample in South Korea, we conducted a regression analysis to assess how parents' experience with TKMS affects the probability of their children using TKMS.
Results: We found parents' experience with TKMS to have a significantly positive effect on the probability of TKMS use by children and parents' biological information, such as age and sex, to affect the probability of TKMS use. Specifically, parents' experiences with TKMS generally increased the probability of children using TKMS by approximately 20%.
Conclusion: This study's results suggest that considering parents' opinions and providing them the opportunity to participate in programs that enhance young children's use of TKMS may be effective.

Keywords: traditional korean medical service (TKMS), national survey on TKMS, parent's experiences on TKMS, children's use of TKMS, linear probability models, logistic models

INTRODUCTION

The issues surrounding an aging population are well-recognized worldwide. These issues have become some of the most serious topics in South Korea, as its population has experience more rapid aging than other Organisation for Economic Co-operation and Development countries [1]. Since medical services use increases with the number of aged individuals, an aging population directly impacts issues regarding medical services. Medical services directly affect an individual's health status, and health is an important, well-known factor that affects individuals' welfare and productivity [2-4]. In particular, several studies have revealed that an individual's health status in their childhood or adolescent period is an important factor that impacts various outcomes, including mortality rates, long-term academic achievement, and health service/care utilization [3, 5-9]. Resultantly, the provision of medical services in these periods is crucial.

A previous study on lifetime medical expenditure based on a survey dataset demonstrated that approximately half of a person's lifetime medical expenditure is spent within the 50-70-year age range [10]. Medical expenditure has also been shown to be relatively high for ages 0-4. After this period, the overall trend of medical expenditure decreases over time, and the minimum level of expenditure is attained at age 11-15 [10]. Based on a survey conducted by the Ministry of Health and Welfare in 2016, inpatients and outpatients aged 15-24 years were the fewest, whereas those aged 55-64 years were the most [11]. The

overall pattern of medical services usage across ages is J-shaped. However, when evaluating the use of traditional Korean medical services (TKMS), an overall upward trend is observed, that is, the older people are, the more they use TKMS [12].

Various factors determine the use of a medical service. They include income and education levels, health status, types of diseases, age, sex, marital status, and medical insurance and pensions [13-15]. Numerous studies have investigated the factors affecting TKMS use; however, these studies have extensively focused on the entire population. Moreover, the existing results are inconsistent. Educational and income levels have been demonstrated to have no significant effect TKMS use [16, 17]; nonetheless, it has also been argued that people with a low education level tend to use TKMS more than those with a high education level [18, 19]. In contrast, people with a high educational level have been shown to be more likely to use TKMS than those with a low or middle educational level [20]. Some studies argue that people who use TKMS have a lower educational or income level than those who do not [20-25].

While several studies have examined the factors determining individuals' use of medical services, studies regarding children's patterns of medical service usage are limited. These studies focused on the relationship between parental socioeconomic status and orthodontic treatment of the children [26] and that between family characteristics and children's usage of dental services [27]. Other studies have investigated the factors affecting the selection of medical care facilities for children [28]. Regarding expenditure on TKMS, relatively few studies have examined TKMS use among children, though TKMS is believed to be effective for the improvement of health status and treatment of allergic diseases, obesity, or growth disturbance [29]. In this study, we investigated the pattern of TKMS use by children aged < 19 years and the factors determining their use. We extensively focused on the parents' role in encouraging their children to use TKMS.

This study focused on the < 19-year-old population and investigated the potential factors determining its use of TKMS. In particular, since people aged < 19 years are considerably influenced by their parents, we focused on the role that parents play in its use. Ultimately, we expect policymakers to use our findings to formulate effective policies that encourage TKMS use.

MATERIALS AND METHODS

1. Data sources

This study's main data source was the 2017 National Survey for the Usage of Korean Medicine. This dataset was originated from the 2008 National Survey for the Usage of Korean Medicine and 2009 National Survey for Consumption of Korean Medicine. We requested the use of the dataset from the National Development Institute of Korean Medicine, which conducts

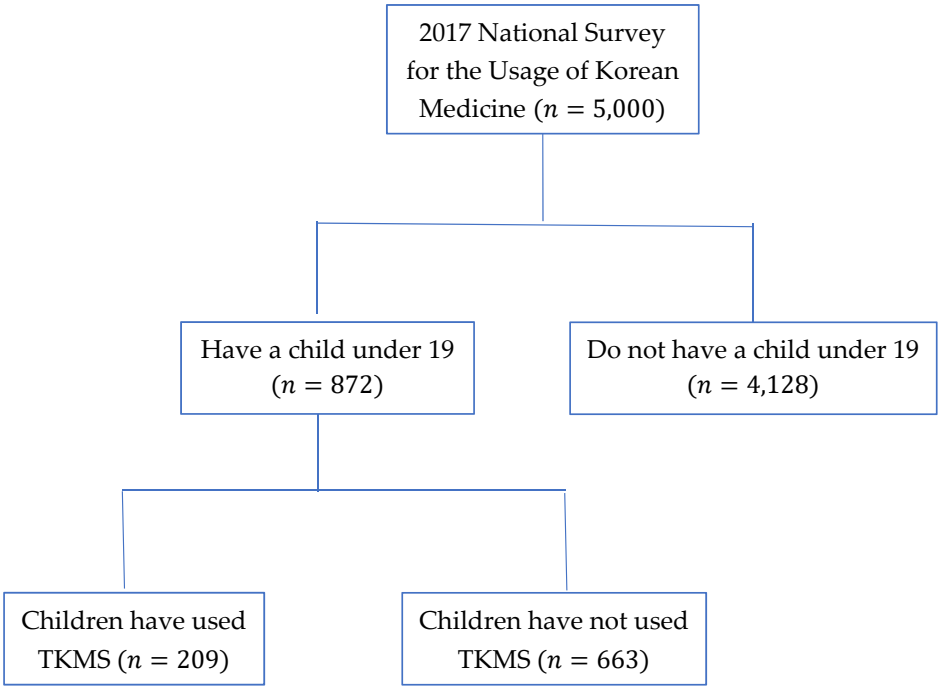

Figure 1. Sample construction process.

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research on Korean medicine and manages the data.

In this study, we focused on the fourth survey dataset, which was collected in 2017. The dataset contains detailed information on TKMS. Specifically, we were able to extract data on experiences with TKMS use, TKMS awareness, the likelihood of recommending TKMS to other people, and children's use of TKMS. Moreover, various biological and socioeconomic variables that we could use to control for some observed individual characteristics were available. This survey's main purpose was to collect data and provide them to researchers in order to develop effective policies regarding TKMS use. The survey's population comprised households with individuals aged ≥ 19 years in South Korea, indicating that the dataset we used in this study represented the entire South Korean population.

2. Sample selection

Since we were interested in children's use of TKMS, a questionnaire asking whether the household had a child aged < 19 years was administered, and we used the information gathered to restrict the sample to households with a child or children aged < 19 years. This yielded a sample of 872 households, among which 209 had a child aged < 19 years who had used TKMS, as shown in Fig. 1.

3. Analysis items

The dependent variable in our analysis was a binary variable indicating whether a child aged < 19 years had utilized TKMS. The main independent variable was a binary variable indicating whether a household had utilized TKMS. To determine a household's health status, we generated a binary independent variable indicating whether an individual's health status was "good" or "very good" and denoted the variable as "good health." Similarly, we classified individuals into two groups based on their family income level. The "high-income group" comprised individuals with an income level ≥ 4.5 million KRW. Parental educational levels were categorized into three groups: (i) high school graduates or below, (ii) college graduates, and (iii) university graduates and above. Regarding household age, we included a square term of the variable to capture the potential nonlinear effects of age.

4. Statistical analysis

We considered two regression models: (i) linear probability and (ii) logistic regression models.

The linear probability model is a standard linear regression model that can be estimated using the ordinary least squares (OLS) estimation. Although the dependent variable was a binary variable, we were able to adopt the linear regression model [30].

Logistic models can effectively capture the potential nonlinear effects of covariates. To compare the estimates of these models, we also reported the average partial effects derived from the logistic models. Average partial effects constitute a summary measure of the marginal effects of the independent variable of interest that is widely used for logistic regression models [30]. We let $F(\cdot)$ be the standard logistic cumulative distribution function and Y denote whether children have used TKMS or not. Subsequently, the fitted probability of $Y = 1$ given observed covariates D and X in a logistic model was determined as follows:

$$\Pr(Y = 1|D, X) = F(D\delta + X'\beta), \quad (1)$$

where δ and β were coefficients to be estimated. When D was a binary covariate (i.e., a dummy variable indicating whether parents had used TKMS), the average partial effect of D on Y could be estimated as follows:

$$\frac{1}{n}\sum_{i=1}^{n}\{F(\hat{\delta} + X_i'\hat{\beta}) - F(X_i'\hat{\beta})\}, \quad (2)$$

where $\hat{\delta}$ and $\hat{\beta}$ were the logit estimators of δ and β, respectively, and n was the number of observations in the data. Note that the estimated average partial effect of D on Y in linear probability models was $\hat{\delta}$, the estimated coefficient on D.

RESULTS

1. Summary statistics

Table 1 shows the summary statistics of certain variables in the dataset. In our sample, 23.97% of 872 children had experienced using TKMS. In contrast, 76.61% of parents had experienced using TKMS. Regarding health status, approximately 73.51% of parents in the sample reported their health status as

Table 1. Summary statistics

Description	Category	n (%)
The use of TKMS by children	Yes	209 (23.97)
	No	663 (76.03)
Parent's experience on TKMS	Yes	668 (76.61)
	No	204 (23.39)
Parent's health status	Good	641 (73.51)
	Not good	231 (26.49)
Parent having a chronic disease	Yes	81 (9.29)
	No	791 (90.71)
Parent being disabled	Yes	10 (1.15)
	No	862 (98.85)
Parent's gender	Male	292 (33.49)
	Female	580 (66.51)
Parent being employed	Yes	588 (67.43)
	No	284 (32.57)
Family income	High	387 (44.38)
	Not high	485 (55.62)
Parent's education	≤ High school	285 (32.68)
	College	237 (27.18)
	≥ University	350 (40.14)
Private insurance	Yes	771 (88.42)
	No	101 (11.58)
Recommendation	Yes	605 (69.38)
	No	267 (30.62)
Parent's satisfaction	Yes	512 (58.72)
	No	360 (41.28)
Parent considering TKMS expensive	Yes	521 (59.75)
	No	351 (40.25)
Parent aware of TKMS	Yes	326 (37.39)
	No	546 (62.61)

being "very good" or "good." Approximately 9.29% of parents had a chronic disease, and 1.15% of parents were classified as being disabled. Furthermore, 33.49% of parents in our sample were men, and 67.43% were employed at the time of survey.

As regards socioeconomic status, 485 parents (55.62%) were classified as earning a high family income. Regarding education level, 32.68% of parents in our sample (n = 285) had earned a high school diploma or had an educational level lower than high school, while 237 were college graduates, and 350 had an education level higher than or equal to that of a university graduate.

With regard to socioeconomic status, 485 parents were classified as earning a high family income. Approximately 44.38% of parents in the sample were earning a monthly income ≥ 4.5 million KRW. Moreover, 88.4% of parents had private insurance.

In terms of the parents' perception of TKMS, approximately 69.38% of parents were willing to recommend TKMS to other people. In addition, 58.72% of parents in the sample indicated that their TKMS experience was satisfactory or very satisfactory. A similar proportion of parents considered TKMS to be expensive or very expensive. Finally, 37.39% of parents in the sample indicated that they were sufficiently aware of TKMS.

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2. The effect of parents' experience on children's use of TKMS

With regard to the regression results, Table 2 shows the estimation results of the linear probability and logistic models. The covariate of interest was "parent use," a binary variable indicating whether an individual's parent had ever used TKMS. The first three columns in Table 2 report the OLS estimation results for the linear probability models. The model in Column (1) only includes the regressor of interest, while that in Column (2) contains the variable as well as the parents' biological information. The model in Column (3) contains the regressors in Column (2) as well as parental socioeconomic statuses. Our most preferred specification is the one in Column (3). Regardless of whether biological or socioeconomic status variables were included or not, a parent's medical experience had a positive effect on an individual's use of TKMS. In particular, from the OLS estimate in Column (1), we found a parent's medical experience to increase the probability of the child's use of TKMS by 19.8%, on average. On including a parent's biological status (Column (2)), the estimated coefficient for "parental use" was 0.169, suggesting that the probability of a child using TKMS increased by 16.9%, on average. In our most preferred specification (Column (3)), the probability increased by 16.5%, on average. Overall, parental use of TKMS was positively associated with a child's use of TKMS. The sex of the parent who had recommended TKMS had a significant effect on the probability that the child would use the medical service.

Columns (4)-(6) in Table 2 provide the estimation results of the logistic models. Column (4) in Table 2 indicates that the estimated coefficient for "parental use" was 1.420, which was statistically significant. Since logistic models are nonlinear models,

Table 2. Regression results: OLS and logit estimation

Variables	(1) OLS	(2) OLS	(3) OLS	(4) Logistic	(5) Logistic	(6) Logistic
Parent use	0.198*** (0.0265)	0.169*** (0.0274)	0.165*** (0.0273)	1.420*** (0.261)	1.276*** (0.265)	1.263*** (0.267)
Good health		−0.0490 (0.0356)	−0.0497 (0.0356)		−0.259 (0.188)	−0.266 (0.189)
Chronic		0.0957 (0.0593)	0.0958 (0.0600)		0.476* (0.271)	0.479* (0.273)
Disabled		0.135 (0.147)	0.156 (0.148)		0.685 (0.687)	0.823 (0.693)
Male		−0.0786*** (0.0296)	−0.0850** (0.0359)		−0.466** (0.186)	−0.504** (0.212)
Age		0.0474*** (0.0101)	0.0423*** (0.0106)		0.405*** (0.151)	0.380** (0.153)
$Age^2/100$		−0.049*** (0.0113)	−0.043*** (0.0119)		−0.432** (0.174)	−0.400** (0.176)
Employed			0.00469 (0.0369)			0.00970 (0.200)
High income			0.00661 (0.0318)			0.0301 (0.178)
Insurance			0.0668 (0.0409)			0.447 (0.291)
Constant	0.0882*** (0.0199)	−0.940*** (0.223)	−0.900*** (0.232)	−2.335*** (0.247)	−11.20*** (3.266)	−11.00*** (3.304)
Education levels	N	N	Y	N	N	Y
APE of parent use	0.198*** (0.0265)	0.169*** (0.0274)	0.165*** (0.0273)	0.249*** (0.0443)	0.217*** (0.0438)	0.213*** (0.0438)
Observations	872	872	872	872	872	872

Standard errors in parentheses, ***p < 0.01, **p < 0.05, *p < 0.1.

the magnitudes of the estimated coefficients were inconsequential. The estimated average partial effect of "parental use" based on the model in Column (4) was 0.2488, suggesting that a parent's use of TKMS increased the probability of a child's use of the medical service at an average of 24.88%. When we relied on the model estimates in Column (5), the average partial effect was 0.217 (21.7%). Finally, when we used the model estimates in Column (6), the estimated average partial effect was 0.213 (21.3%).

Although the estimated positive effects varied across the models, they ranged from 16% to 25%. Considering that 24% of children in the sample had experienced using TKMS, these estimates indicate that a parent's experience with TKMS significantly affects and alters their children's medical behavior.

3. The effect of parents' perception on children's use of TKMS

With respect to how the parents' perception of TKMS affects their children's use of it, we considered four additional variables that reflect a parent's perception of TKMS: (i) whether they would recommend TKMS to others ("recommend"), (ii) how satisfied they were with their use of TKMS ("parent satisfaction"), (iii) whether they consider TKMS expensive ("expensive"), and (iv) how much they know about TKMS ("awareness").

Table 3 shows the estimation results of the linear probability and logistic models. The average partial effects in Table 3 are those of a given perception variable on a child's use of TKMS. Columns (1) and (2) in Table 3 report the estimation results for the "recommend" variable. The signs of the estimated coefficients for parental TKMS use were similar to those without the recommendation variable. Notably, the estimated effects of "parental use" on the dependent variables in Columns (1) and (2) remained positive and statistically significant even after controlling for the "recommend" variable. Those in Table 3 were smaller than those in Columns (3) and (6) of Table 2. Nevertheless, the estimated effects of "parental use" remained positive and statistically significant, even after controlling for the "recommend" variable. Moreover, when parents would recommend TKMS use to others, the probability of a child using TKMS increased. From the OLS estimate reported in Column (1) of Table 3, where parents were willing to recommend TKMS use to others, the probability of a child using TKMS increased by 10.6%. On using the logistic model, we found the estimated average partial effect of "recommend" to be approximately 0.12, suggesting that the probability of children using TKMS increased by 12%.

On including a dummy variable indicating whether parents were satisfied or very satisfied with their use of TKMS, we found no statistically significant effects of parental satisfaction with TKMS on the probability of children using TKMS. The OLS estimate of this variable in Column (3) of Table 3 was a small, negative value; however, it was not statistically significant. Similarly, the average partial effect of "parent satisfaction" in Column (4) of Table 3 indicates that "parent satisfaction" did not affect the probability of a child using TKMS in a statistically significant way.

In terms of the effect of parents' perception of the price of TKMS on TKMS use by children aged < 19 years, Columns (5) and (6) in Table 3 provide the estimation results while including a binary variable indicating whether parents consider TKMS expensive or not. Consistent with the estimation results in Columns (3) and (4) of Table 3, parents' perceptions of the price of TKMS did not affect TKMS use by children in a significant way. The OLS estimate of the "expensive" variable was 0.0193; nevertheless, this positive effect was not statistically significant. The average partial effect based on the logistic model in Column (6) was approximately 0.0176, suggesting a positive effect on the dependent variable. However, this average partial effect was also not statistically significant.

Finally, we investigated whether parents' awareness of TKMS affects the use of TKMS by children. The OLS estimate of the coefficient for "awareness" was 0.0252, which is positive. However, this estimate did not have a statistically significant effect on the dependent variable. The average partial effect from the corresponding logistic model reported in Column (8) demonstrates that the estimated average partial effect using the logistic model (0.0285) was similar to the OLS estimate in Column (7); nonetheless, this estimate was not statistically significant.

The "recommend" and "parental use" variables possessed certain commonalities in that parents were in favor of TKMS use. Moreover, they could be considered measures of an active behavior that encouraged TKMS use. Consequently, we could infer that one of the most important factors that affects children's use of TKMS is their parents' use of TKMS.

DISCUSSION

We examined the factors that potentially affect TKMS use by

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Table 3. Regression results: OLS and logit estimation with parent's perceptions on TKMS

Variables	(1) OLS	(2) Logit	(3) OLS	(4) Logit	(5) OLS	(6) Logit	(7) OLS	(8) Logit
Parent use	0.120***	0.972***	0.168***	1.264***	0.164***	1.255***	0.158***	1.216***
	(0.0319)	(0.280)	(0.0439)	(0.312)	(0.0274)	(0.267)	(0.0286)	(0.271)
Good health	-0.0501	-0.280	-0.0492	-0.266	-0.0480	-0.256	-0.0537	-0.299
	(0.0354)	(0.190)	(0.0360)	(0.191)	(0.0357)	(0.190)	(0.0360)	(0.192)
Chronic	0.0866	0.436	0.0955	0.479*	0.0944	0.472*	0.0951	0.475*
	(0.0599)	(0.274)	(0.0602)	(0.273)	(0.0599)	(0.273)	(0.0602)	(0.273)
Disabled	0.177	1.000	0.155	0.823	0.155	0.819	0.155	0.823
	(0.144)	(0.696)	(0.149)	(0.696)	(0.148)	(0.692)	(0.148)	(0.693)
Male	-0.0826**	-0.496**	-0.0849**	-0.504**	-0.0846**	-0.505**	-0.0857**	-0.516**
	(0.0357)	(0.213)	(0.0359)	(0.212)	(0.0360)	(0.212)	(0.0359)	(0.212)
Age	0.0380***	0.376**	0.0423***	0.380**	0.0418***	0.372**	0.0422***	0.378**
	(0.0110)	(0.155)	(0.0106)	(0.153)	(0.0105)	(0.153)	(0.0106)	(0.152)
$Age^2/100$	-0.0388***	-0.399**	-0.043***	-0.400**	-0.043***	-0.391**	-0.043***	-0.398**
	(0.0124)	(0.178)	(0.0119)	(0.176)	(0.0118)	(0.175)	(0.0118)	(0.175)
Employed	0.00777	0.0221	0.00467	0.00969	0.00659	0.0199	0.00534	0.0141
	(0.0367)	(0.202)	(0.0369)	(0.200)	(0.0369)	(0.201)	(0.0369)	(0.200)
High income	0.00587	0.0228	0.00664	0.0301	0.00642	0.0291	0.00540	0.0192
	(0.0317)	(0.179)	(0.0318)	(0.178)	(0.0318)	(0.178)	(0.0318)	(0.178)
Insurance	0.0529	0.370	0.0668	0.447	0.0656	0.434	0.0649	0.433
	(0.0410)	(0.294)	(0.0409)	(0.291)	(0.0409)	(0.292)	(0.0409)	(0.291)
Recommend	0.106***	0.758***						
	(0.0322)	(0.230)						
Parent satisfied			-0.00322	-0.00130				
			(0.0425)	(0.209)				
Expensive					0.0193	0.105		
					(0.0287)	(0.174)		
Awareness							0.0252	0.169
							(0.0319)	(0.173)
Constant	-0.816***	-11.14***	-0.900***	-11.00***	-0.902***	-10.90***	-0.893***	-10.94***
	(0.242)	(3.350)	(0.232)	(3.304)	(0.231)	(3.291)	(0.231)	(3.293)
APE	0.106***	0.126***	-0.00322	-0.0002	0.0193	0.0176	0.0252	0.0285
	(0.0322)	(0.0377)	(0.0425)	(0.0353)	(0.0287)	(0.0293)	(0.0319)	(0.0291)
Observations	872	872	872	872	872	872	872	872

Standard errors in parentheses, ***p < 0.01, **p < 0.05, *p < 0.1.

people aged < 19 years using a representative dataset in South Korea. Motivated by the fact that young people are immensely influenced by their parents during childhood or adolescence, we focused on the roles of their parents' experiences with TKMS use, including their satisfaction, awareness, and socioeconomic statuses, in determining their children's decision to use TKMS. We conducted a regression analysis using linear probability and logistic regression models, where the dependent variable was a binary variable indicating whether a child aged < 19 years had used TKMS or not, and the independent variables were the potential factors we believed would affect the dependent variable.

The regression results suggest that parents' experiences with TKMS had a statistically significant impact on their children's use of TKMS. The use of medical services among children is commonly dependent upon their parents' decisions; therefore, the socioeconomic status of parents tends to affect children's use of medical services [31, 32]. Maternal physician utilization is closely associated with child utilization, and maternal use ap-

pears to be a more powerful predictor of child use than several other family and maternal variables [33]. Specifically, a parent's prior experience with TKMS increases the probability of their child using TKMS. This result is robust to model specifications considered in this study. This positive and significant effect of parents' experience with TKMS may be driven by the fact that children's decisions are considerably affected by their parents, especially when they are young. Parents are in charge of taking care of their young children. Hence, those with a satisfactory experience with TKMS are very likely to recommend its use to their children. In addition, young people have limited information on medical services as they do not have a sufficient level of experience in using them. Consequently, they tend to use a medical service based on parental advice, and their parents' prior experience with TKMS can affect this decision. This finding suggests that providing numerous opportunities for TKMS access to adults is essential to promoting TKMS use among young people. Accordingly, the Ministry of Health and Welfare in South Korea has initiated a program that provides TKMS to children [25], and this program has been extended to local public health centers [34]. To increase the effectiveness of such programs, providing opportunities for the parents of young people to experience TKMS is desirable.

In addition, programs wherein parents and children can use TKMS together need to be developed to increase the use of TKMS by children. Several examples of such programs exist, including meridian-points massage classes and moxibustion treatments for dysmenorrhea, for both parents and children [34]. A diversity of TKMS-related health programs designed for both parents and children may increase children's familiarity with and use of TKMS.

Interestingly, the regression results highlight that a child's probability of using TKMS increases when their parents are willing to recommend the system's use. The level of satisfaction with a service or willingness to recommend it to other people is one of the most influential factors affecting a person's choice of medical services [35-37]. The willingness to recommend is probably the most powerful predictor of a positive experience. Our regression analysis results imply that providing a high level of TKMS to senior people or parents potentially leads to an increased use of TKMS by young people.

We also found the probability of TKMS use by children to be higher when mothers are respondents to the survey. This finding is consistent with existing results in the literature [38]. It is also closely related to a previous finding wherein the choice of medical service in childhood was found to be predominantly affected by parents [28]. However, since it was not clear whether the survey respondents were the ones in charge of their children's medical care, these results should be interpreted with caution. In relation to the above, a previous study revealed that 79.1% of women had used TKMS, whereas 68.4% of interviewed men had done so [12]. In addition, mothers are typically considered responsible for the children in their families [39]. When focusing on medical services for young children in a family, mothers have been shown to be significantly more involved than fathers (specifically, mothers are in charge of the medical care for young children in 70.9% of the families) [39].

The regression results also indicate that the parents' ages are an important factor that determines children's use of TKMS. In particular, the results imply that when parents are old, the probability of their children using TKMS is high. TKMS use tends to increase with age [17].

This study has certain limitations. First, since the dataset we used merely contained limited information on children, we could not exhaustively control for observed characteristics. Such variables are expected to be useful in designing an effective policy that encourages TKMS use among young people. Second, data on the health statuses of parents and children were lacking; therefore, we could not determine whether TKMS use caused any improvements. Such limitations can be resolved with the inclusion of relevant questionnaires in future surveys.

Despite the foregoing limitations, this study contributes to the literature in multiple ways. Although few TKMS data sources exist, we used a representative sample to identify factors affecting TKMS use by young people based on various econometric models. Our results are robust to the model specifications, and they have policy implications. The regression analysis conducted in this study provided a clear relationship between dependent and independent variables and the estimates of marginal effects, which were of interest. Ultimately, our empirical results and suggested policy implications are expected to be beneficial for developing policies regarding TKMS use among young people.

CONCLUSION

In this study, we investigated the factors that potentially affect young people's use of TKMS based on a representative sample in South Korea. Using various econometric models, we found parents' experience with TKMS use to increase the like-

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lihood of their children using TKMS. We also found that the parent's sex, age, and willingness to recommend TKMS to others increase the probability of a child using TKMS. This study's findings suggest that considering parents' opinions and providing opportunities for them to participate in programs that enhance young children's use of TKMS may be effective.

INFORMED CONSENT STATEMENT

Not applicable.

DATA AVAILABILITY STATEMENT

The data used in this article were provided by National Institute for Korean Medicine Development. The data are confidential, and can be used for analysis upon approval by the institute.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHORS' CONTRIBUTIONS

Conceptualization, J. K. and S. L..; methodology, S. L.; software, S.L.; validation, J.K. and S.L.; formal analysis, S.L.; investigation, J.K. and S.L.; resources, J.K.; data curation, J.K.; writing—original draft preparation, J.K. and S.L.; writing—review and editing, J.K. and S.L.; visualization, J.K.; supervision, J.K and S.L..; project administration, J.K.; funding acquisition, N/A. All authors have read and agreed to the published version of the manuscript.

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