

# World Journal of *Clinical Cases*

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**OPINION REVIEW**

- 4966 Flexner has fallen: Transitions in medical education system across time, a gradual return to pre-Flexnerian state (de-Flexnerization)  
*Alzerwi NAN*

**REVIEW**

- 4975 Manipulation of the intestinal microbiome-a slow journey to primetime  
*Kruger-Sharabi O, Malnick SDH, Fisher D*

**MINIREVIEWS**

- 4989 Menstrual cycle abnormalities in women with inflammatory bowel disease and effects of biological therapy on gynecological pathology  
*Malinauskiene V, Zuzo A, Liakina V, Kazenaite E, Stundiene I*
- 4996 Exhaled volatile organic compounds for diagnosis and monitoring of asthma  
*Savito L, Scarlata S, Bikov A, Carratù P, Carpagnano GE, Dragonieri S*

**ORIGINAL ARTICLE****Retrospective Cohort Study**

- 5014 Cohort analysis of pediatric intussusception score to diagnose intussusception  
*Rukwong P, Wangviwat N, Phewplung T, Sintusek P*

**Retrospective Study**

- 5023 Identification of functional genes regulating gastric cancer progression using integrated bioinformatics analysis  
*Yu K, Zhang D, Yao Q, Pan X, Wang G, Qian HY, Xiao Y, Chen Q, Mei K*
- 5035 Clinical outcomes and complications of single anastomosis duodenal-ileal bypass with sleeve gastrectomy: A 2-year follow-up study in Bogotá, Colombia  
*Ospina Jaramillo A, Riscanevo Bobadilla AC, Espinosa MO, Valencia A, Jiménez H, Montilla Velásquez MDP, Bastidas M*
- 5047 Image-based visualization of stents in mechanical thrombectomy for acute ischemic stroke: Preliminary findings from a series of cases  
*Yao QY, Fu ML, Zhao Q, Zheng XM, Tang K, Cao LM*
- 5056 Clinical effects of a traditional Chinese medicine nursing programme to intervene in gastric pain of the spleen and stomach with Qi deficiency  
*Yu YH, Yu YS, Cheng XH*

- 5063** Behavior analysis and formative assessments in online oral medicine education during the COVID-19 pandemic

*Ye JJ, Zhao YK, Teng ZS, Ye HW, Yuan Q, Nie X*

- 5073** Clinical study of acupuncture combined with surface anesthesia using proparacaine in geriatric cataract phacoemulsification

*Dong P, Wang LF, Zhang LX, Li F, Yin HS, Dou ZX, Huang XJ, Xu R, Zhang WL*

### Clinical Trials Study

- 5083** Safety evaluation of human umbilical cord-mesenchymal stem cells in type 2 diabetes mellitus treatment: A phase 2 clinical trial

*Lian XF, Lu DH, Liu HL, Liu YJ, Yang Y, Lin Y, Xie F, Huang CH, Wu HM, Long AM, Hui CJ, Shi Y, Chen Y, Gao YF, Zhang F*

### Observational Study

- 5097** Time usage analysis and satisfaction comparison by occupational area according to the sex of single-parent families

*Jang WH, Jang JS, Bang JH*

- 5108** Evaluation of bronchoscopic direct vision glottis anesthesia method in bronchoscopy

*Lang J, Guo ZZ, Xing SS, Sun J, Qiu B, Shu Y, Wang ZQ, Liu GX*

### CASE REPORT

- 5115** Type I Mirizzi syndrome treated by electrohydraulic lithotripsy under the direct view of SpyGlass: A case report

*Liang SN, Jia GF, Wu LY, Wang JZ, Fang Z, Wang SH*

- 5122** Primary ovarian angiosarcoma: Two case reports and review of literature

*Zhou Y, Sun YW, Liu XY, Shen DH*

- 5129** Acute myelomonocytic leukemia and T-lymphoblastic lymphoma as simultaneous bilineage hematologic malignancy treated with decitabine: A case report

*Jeon SY, Lee NR, Cha S, Yhim HY, Kwak JY, Jang KY, Kim N, Cho YG, Lee CH*

- 5136** Systematic review of fibroblastic rheumatism: A case report

*Guo H, Liang Q, Dong C, Zhang Q, Gu ZF*

- 5147** Improved super-elastic Ti-Ni alloy wire for treating adult skeletal class III with facial asymmetry: A case report

*Huang CY, Chen YH, Lin CC, Yu JH*

- 5160** Neuroendocrine carcinoma of the endometrium concomitant with Lynch syndrome: A case report

*Siu WYS, Hong MK, Ding DC*

- 5167** Myeloperoxidase-antineutrophil cytoplasmic antibody-associated vasculitis with headache and kidney involvement at presentation and with arthralgia at relapse: A case report

*Zhang X, Zhao GB, Li LK, Wang WD, Lin HL, Yang N*

- 5173** Rare combination of traumatic subarachnoid-pleural fistula and intracranial subdural hygromas: A case report  
*Chen PH, Li CR, Gan CW, Yang TH, Chang CS, Chan FH*
- 5179** *ADAMTS3* and *FLT4* gene mutations result in congenital lymphangiectasia in newborns: A case report  
*Liang ZW, Gao WL*
- 5187** Brucellosis presenting with pancytopenia and hearing loss: A case report  
*Chen X, Yang FB, Liang JY*

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Editorial Board Member of *World Journal of Clinical Cases*, Baharudin Ibrahim, BPharm, PhD, Associate Professor, Pharmacist, Department of Clinical Pharmacy and Pharmacy Practice, Faculty of Pharmacy, Universiti Malaya, Kuala Lumpur 50603, Malaysia. baharudin.ibrahim@um.edu.my

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## Observational Study

## Time usage analysis and satisfaction comparison by occupational area according to the sex of single-parent families

Woo-Hyuk Jang, Jong-Sik Jang, Jin-Hyuk Bang

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Single-parent families are burdened with dual roles as parents amidst economic poverty due to the lack of a spouse. Single parents also face the complications of time poverty.

**AIM**

To examine the time use of single-parent families by dividing their time into occupational area and explore the differences in time deficiency and life satisfaction.

**METHODS**

In this study, the time usage in the '2019 time of life survey' data of the National Statistical Office is classified based on the fourth edition of the Occupational Therapy Practice Framework, and the time use and satisfaction of single-parent families classified according to sex. In the '2019 time of life survey' of the National Statistical Office, the subjects who selected single-parent families in the 'single parent-parent-grandchild households' item were first selected. The data of 404 parents from single-parent families were selected next. The time usage, time deficiency, and life satisfaction were analyzed by occupational area.

**RESULTS**

The subjects spent the most time resting and sleeping, followed by engaging in instrumental activities of daily living (IADLs), work, and health management. As a result of comparing the subjects by sex, it was found that the male subjects spent more time on work than the female subjects, and the female subjects spent more time on IADLs, education and social participation. As a result of comparing time deficiency and life satisfaction, the male subjects felt that they lacked time compared to the female subjects. There was no significant difference in life satisfaction. By examining whether single-parent families' time use by occupa-

tional area affected the time deficiency, it was found that male's working time make them feel they have less time, while female's leisure time makes them feel they have more time.

## CONCLUSION

This study made it possible to determine the characteristics of single-parent households' time use and sex differences. Furthermore, it is expected to be used as basic data for measures to solve not only time poverty, but also economic poverty in single-parent families.

**Key Words:** Life satisfaction; Occupational area; Single-parent; Time deficiency; Time use

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**Core Tip:** Based on the Occupational Therapy Practice Framework-4, it was possible to find out the time use of single-parent family parents by dividing the occupational area. In addition, by examining the difference in time use according to sex, we felt the need to find an approach to solve the problem.

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## INTRODUCTION

Our society has emerged as a diverse family, breaking away from the traditional form of parents and children living together due to urbanization, nuclear familyization, and increased women's social advancement[1]. In recent years, there has been a rapid increase in the number of single-person households due to celibacy and unmarried status, single-parent families due to bereavement and divorce, and multicultural families across borders[2]. In addition, single-parent families are no longer considered as an exceptional family type[3]. Single-parent families were formed as a result of the spouse's bereavement. However, there is a recent increase in the proportion of divorce and separation[4]. As the number of artificial single-parent families increases (*e.g.*, divorce and spontaneous bereavement), single-parent family members face more difficulties than two-parent families due to relationships within the family and problems with children[5]. In general, single-parent families suffer from dual roles as parents amidst economic poverty because of the lack of a spouse [1]. Among them, single-father families often complain of greater difficulties in raising children and housework than in terms of economic difficulties, while single-mother families experience greater economic difficulties[6]. Nevertheless, both families are solely responsible for paid work and housework, so they also face the complications of time poverty[7].

Time is the most basic element of everyday life[8], and its efficient use refers to the careful planning and use of time[9]. Efficient use of time prevents stress, promotes health, and helps achieve self-realization[10]. In other words, the planned use of time is essential for achieving a more balanced life and a higher level of life satisfaction[11]. In addition, recognizing the current situation is important because a person's awareness of their use of time can affect their quality of life[12]. These characteristics show that time is closely linked to occupation[13].

Consequently, studies were conducted to determine how different the participants use their time based on occupational area[13-17]. First, one study examined the use of time by occupational area for mothers with young children, thereby suggesting that the group that used time in a balanced manner had less parenting time and spent more time on sleep and leisure than the other group[13]. Another study was conducted on adolescents with disabilities regarding the use of time and satisfaction[14]. The study results showed that disabled adolescents used the majority of their time on rest and sleep, followed by activities of daily living (ADLs), education, leisure, social participation, and play[14]. It was also found that the group that used time in a balanced manner showed the highest satisfaction[14]. A comparative study was conducted on the elderly regarding the difference in time use between the local community of the elderly and the nursing home of the elderly[15]. Studies have shown that the nursing homes for the elderly spend less time than the local community of the elderly on self-management, work/education, play, and leisure activities[15]. According to a study comparing spinal cord injury patients with time use by the general public, patients with spinal cord injury had increased eating and bathing time due to physical difficulties, but had less leisure activities[16]. Finally, one study on time use by life cycle found that early adolescents spend the most time on education and play, while the elderly spend more time on rest, sleep, and leisure than the other periods[17]. In contrast, the studies presented above classified the occupational area based on the researcher's criteria without any special criteria, and investigated the use of time accordingly[13,14,16]. Studies have also shown that the criteria classified occupational areas and investigated time use in accordance with the third edition of the Occupational Therapy Practice Framework, which was published in 2014[14,17].

Studies have also been conducted on the use of time in single-parent families[6,18-20]. First, single-parent families were found to have less parenting and care time for their children, and devoted more of their time to work than ordinary families[18]. A study comparing the use of time in single-parent families based on sex showed that, when compared to

single-father families and single-mother families, household labor reduced usage time and increased leisure time[6,19]. On the other hand, it was reported that single-mother families spend more time on housework than single-father families, regardless of whether they are employed or not. They also spend more time on housework during non-working days, resulting in a greater lack of time[6,20]. Subsequently, there were studies examining the use of time in single-parent families based on the sex of the parent[6,19,20]. In addition, no research has been conducted on the use of time for single-parent families by classifying occupational areas in accordance with the fourth edition of the newly published Occupational Therapy Practice Framework in 2020. Single-parent families are expected to differ in their time use by occupational area based on sex, as well as differences in time deficiency and life satisfaction.

Therefore, the time usage data of the National Statistical Office from the '2019 time of life survey' is classified in this study based on the fourth edition of the Occupational Therapy Practice Framework, as well as the time use and satisfaction of single-parent families according to sex.

## MATERIALS AND METHODS

### Study subjects

This study used the raw data from the '2019 time of life survey' of the National Statistical Office. In a nationwide sample of 12345 households, those who selected single-parent families in the 'single parent-parent-grandchild households' item were first selected out of approximately 27,000 members of households 10 years of age and older. Among them, a total of 404 subjects were selected next and analyzed, all of whom were single parents (Figure 1). The characteristics of the study subjects were classified into sex, age, marital status, education level, and job status. This study was carried out after the approval of the Kangwon National Institutional Review Board (Approval No. KWNUIRB-2021-07-002).

### Study tool

**2019 time of life survey:** The time of life survey, which began in 1999, is a nationwide survey conducted every 5 years in order to determine how the subjects use the 24 h in a day and to measure the lifestyle and quality of life of the people[21]. The survey was prepared by dividing the daily behavior into main and simultaneous behavior in a time log with 10-min intervals. In the '2019 time of life survey', behavior was largely classified into 'Personal maintenance', 'Work', 'Learning', 'Home management', 'Care of family and members', 'Volunteer and unpaid training', 'Relationship activities and participating activities', 'Cultural and leisure activities', and 'Locomotion'.

**Time deficiency and life satisfaction:** The raw data on time deficiency and life satisfaction surveyed together with the time diary of the National Statistical Office were used. Time deficiency was reverse-coded using a 4-point Likert scale to facilitate interpretation in the items of 'Always feeling inadequate' (1 point) to 'Always feeling free' (4 points). Therefore, a higher score indicates time deficiency. Life satisfaction refers to a state of satisfaction with one's life, and a 5-point Likert scale was used with 'very satisfied' (1 point) to 'very dissatisfied' (5 points), and reverse-coded for the same reason. Consequently, a higher score indicates more satisfaction with life.

### Procedure: Classification of behaviors according to occupational area

In studies related to time use, behavioral classification varies depending on the purpose of the study[17]. In the '2019 time of life survey' of the National Statistical Office, the behavior of the subjects was classified into 'required time', 'duty time', and 'leisure time'. However, the subject's behavior was reclassified in this study and used under the following: ADLs, instrumental ADLs (IADLs), health management, rest and sleep, education, work, leisure, and social participation based on the Occupational Therapy Practice Framework-4[22] (Figure 1). The following is a classification of behavior according to the occupational area (Table 1).

### Statistical analysis

The data collected in this study were analyzed using SPSS 25.0 Version. The general characteristics and time usage of the study subjects were presented using frequency analysis and descriptive statistics, respectively. Independent *t*-test was used to compare time usage by occupational area, time deficiency and life satisfaction between sexes. In addition, multiple linear regression analysis was used to determine whether time usage by occupational area affects time deficiency. The stepwise analysis method was used with  $P < 0.05$  as the cut-off for statistical significance.

## RESULTS

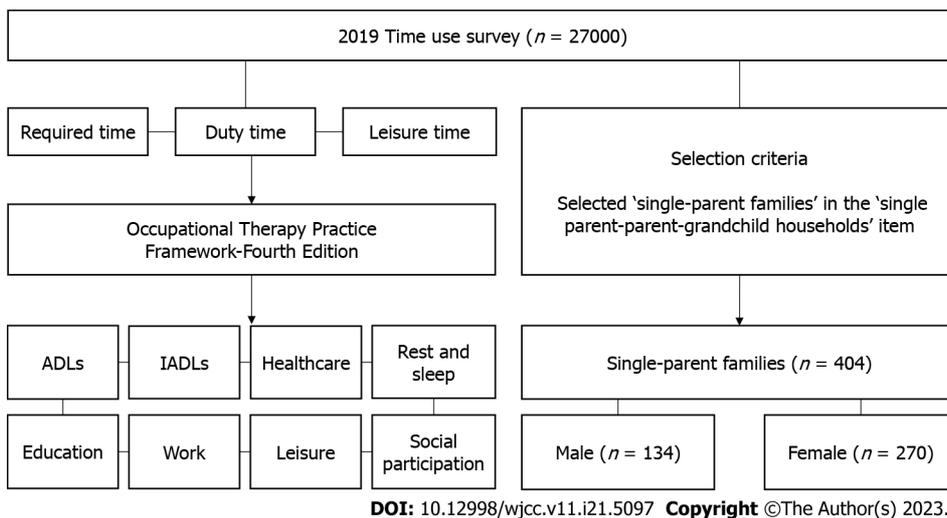
### General characteristics of the subjects

The total number of subjects was 404, with 134 male subjects (33.2%) and 270 female subjects (66.8%). The subjects in their 40s were the most common with 250 subjects (61.9%). In terms of marital status, divorced [336 subjects (83.2%)] was the highest, followed by bereavement [64 subjects (15.8%)], and single [4 subjects (1.0%)]. In terms of education level, high school graduates [166 subjects (41.1%)] were the most common, while 320 subjects (79.2%) were working and 84 subjects (20.8%) were not working. The following is the detailed general characteristics of the study subjects (Table 2).

**Table 1** Categorization of life time based on Occupational Therapy Practice Framework-4

Occupational area	Code	Activities	Code	Activities	Code	Activities
ADLs	12	Meals and snacks	14	Personal maintenance		
IADLs	41	Food preparation	42	Clothes care	43	Cleaning
	44	Management of housing	45	Vehicle care	46	Care of animals and plants
	47	Purchase of items and services	49	Other home management	51	Care for children under 10 years of age
	52	Care for elementary, middle, and high school students over 10 years of age	53	Care for adult families and household members with long-term care needs	54	Care of independent adult families
	73	Religious activities	74	Ritual activities	91-98	Locomotion
Health management	13	Personal medical care				
Rest and sleep	11	Sleep	85	Rest		
Education	31	School activities	32	Out-of-school learning		
Work	21	Employed work	22	Self-employment work	23	Unpaid work in family business
	24	Other work	25	Job-seeking activity	26	Purchasing goods related to job
	61	Non-organization-based volunteer work	62	Organization-based volunteer work	63	Unpaid training
Leisure	81	Leisure activities using media	82	Cultural and tourism activities	83	Sports and leisure sports
	84	Game and play	89	Other leisure		
Social participation	71	Relationship activities	72	Participating activities		

ADLs: Activities of daily living; IADLs: Instrumental activities of daily living.



**Figure 1** Flowchart of behavioral classification and subject selection. Categorize behaviors based on occupational area. ADLs: Activities of daily living; IADLs: Instrumental activities of daily living.

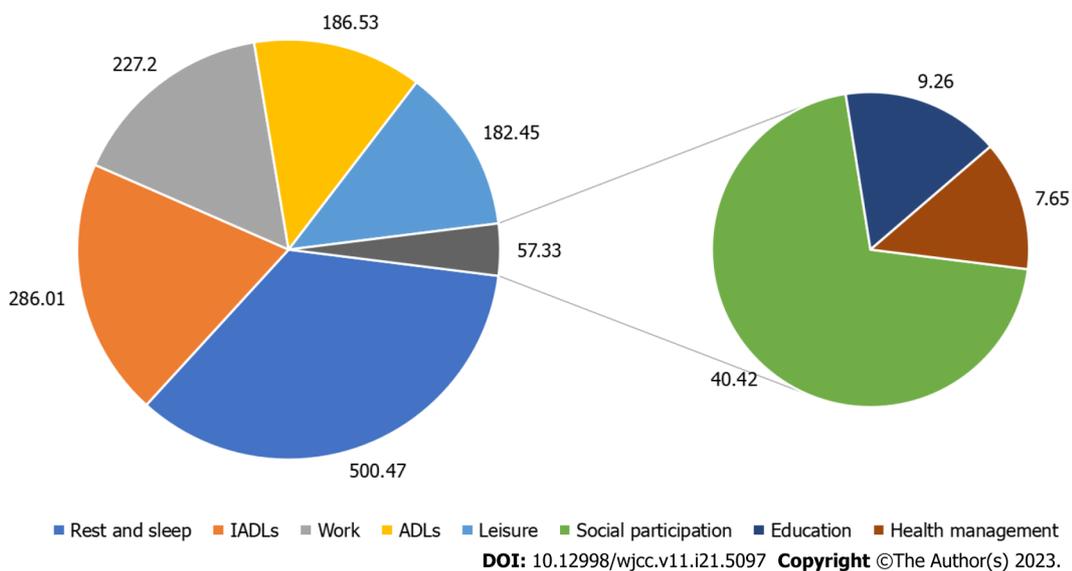
**Time usage by single-parent family's occupational area**

As a result of classifying the time usage of single-parent families according to the occupational area, sleep and rest were most frequently used in an average of 500.47 min (34.8%), followed by work (15.8%), ADLs (13.0%), leisure (12.7%), social participation (2.8%), education (0.5%), and health management (0.5%) (Table 3, Figure 2).

**Table 2** General characteristics, *n* = 404

Characteristics		Total, <i>n</i> (%)	M:F (%:%)
Sex	Male	134 (33.2)	
	Female	270 (66.8)	
Age	20-29	14 (3.5)	0:14 (0:100)
	30-39	76 (18.8)	16:60 (21.1:78.9)
	40-49	250 (61.9)	74:176 (29.6:70.4)
	50-59	62 (15.3)	42:20 (67.7:32.3)
	60-	2 (0.5)	2:0 (100:0)
Marital status	Single	4 (1.0)	0:4 (0:100)
	Bereavement	64 (15.8)	6:58 (9.4:90.6)
	Divorced	336 (83.2)	128:208 (38.1:61.9)
Education level	Elementary	4 (1.0)	2:2 (50:50)
	Middle school	20 (5.0)	10:10 (50:50)
	High school	166 (41.1)	58:108 (34.9:65.1)
	College	114 (28.2)	40:74 (35.1:64.9)
	University	84 (20.8)	18:66 (21.4:78.6)
	Master's degree or higher	16 (4.0)	6:10 (37.5:62.5)
Job status	Yes	320 (79.2)	122:198 (38.1:61.9)
	No	84 (20.8)	12:72 (14.3:85.7)

F: Female; M: Male.



**Figure 2** Time usage by occupational area. Pie chart of time usage for a single-parent family. ADLs: Activities of daily living; IADLs: Instrumental activities of daily living.

**Comparison of time usage by occupational area according to sex**

As a result of comparing the amount of time spent by occupational area according to the sex of single-parent families, the male subjects spent more time on work ( $P < 0.001$ ) than the female subjects, while the female subjects spent more time on IADLs ( $P < 0.001$ ), education ( $P < 0.05$ ), and social participation ( $P < 0.05$ ) (Table 4). In the sub-item, the male subjects showed significantly higher time usage in rest ( $P < 0.01$ ), Paid work ( $P < 0.001$ ), other work ( $P < 0.001$ ) and other leisure ( $P < 0.01$ ) than the female subjects. On the other hand, the female subjects spent significantly more time in personal

**Table 3** Time usage in minutes by occupational area, *n* = 404

Area	mean ± SD	(%)
ADLs	186.53 ± 80.35	(13.0)
Eating	107.95 ± 44.08	(57.9)
Personal maintenance	78.59 ± 36.27	(42.1)
IADLs	286.01 ± 286.93	(19.9)
Locomotion	94.21 ± 72.59	(32.9)
Home management	139.23 ± 108.31	(48.7)
Care of family and members	43.81 ± 68.38	(15.3)
Other	8.76 ± 37.64	(3.1)
Health management	7.65 ± 30.06	(0.5)
Personal medical care	7.65 ± 30.06	(100.0)
Rest and sleep	500.47 ± 136.43	(34.8)
Rest	13.07 ± 25.22	(2.6)
Sleep	487.40 ± 111.21	(97.4)
Education	9.26 ± 60.31	(0.6)
School activities	0.59 ± 11.94	(6.4)
Out-of-school learning	8.66 ± 48.36	(93.6)
Work	227.20 ± 263.66	(15.8)
Paid work	215.54 ± 219.58	(94.9)
Unpaid work		
Volunteer work	0.84 ± 10.39	(0.4)
Job-seeking activity	0.82 ± 8.55	(0.4)
Other	10.00 ± 25.14	(4.4)
Leisure	182.45 ± 270.12	(12.7)
Cultural and tourism activities	4.95 ± 25.98	(2.7)
Sports and leisure sports	21.83 ± 52.19	(12.0)
Leisure activities using media	139.51 ± 130.95	(76.5)
Game and play	7.52 ± 26.01	(4.1)
Other	8.64 ± 34.98	(4.7)
Social participation	40.42 ± 62.32	(2.8)
Relationship activities	28.39 ± 43.21	(70.2)
Participating activities	12.03 ± 19.11	(29.8)

ADLs: Activities of daily living; IADLs: Instrumental activities of daily living; SD: Standard deviation.

maintenance ( $P < 0.05$ ), home management ( $P < 0.001$ ), other IADLs ( $P < 0.01$ ), sleep ( $P < 0.05$ ), out-of-school learning ( $P < 0.05$ ), and relationship activities ( $P < 0.01$ ) compared to the male subjects (Table 4).

### **Analysis of time deficiency and life satisfaction according to sex**

Based on the comparison of time deficiency and life satisfaction according to the sex of single-parent families, there was a significant difference between sexes in terms of time deficiency. The male subjects felt that they lacked time than the female subjects ( $P < 0.05$ ). There was no significant difference in life satisfaction (Table 5).

### **Effects of time usage by occupational area on time deficiency**

Multiple linear regression analyses were conducted to determine whether time use by occupational area influenced their perception of time deficiency. The stepwise analysis method was used (Table 6).

Table 4 Time usage in minutes by occupational area according to sex

Area	Males, <i>n</i> = 134	Females, <i>n</i> = 270	Male-female	<i>t</i>
	mean ± SD	mean ± SD		
ADLs	183.73 ± 49.47	187.93 ± 57.07	-4.2	-0.726
Eating	111.42 ± 38.39	106.22 ± 43.62	5.2	1.116
Personal maintenance	72.31 ± 31.17	81.7 ± 38.23	-9.39	-2.465 <sup>a</sup>
IADLs	219.78 ± 125.57	318.89 ± 141.55	-99.11	-6.873 <sup>c</sup>
Locomotion	99.03 ± 74.22	91.81 ± 71.79	7.22	0.94
Home management	85.22 ± 81.26	166.04 ± 110.17	-80.82	-7.533 <sup>c</sup>
Care of family and members	34.78 ± 52.3	48.3 ± 74.78	-13.52	-1.877
Other	0.75 ± 8.64	12.74 ± 45.14	-11.99	-3.046 <sup>b</sup>
Health management	9.48 ± 41.39	6.74 ± 22.45	2.74	0.861
Personal medical care	9.48 ± 41.39	6.74 ± 22.45	2.74	0.861
Rest and sleep	489.1 ± 95.94	506.11 ± 116.96	-17.01	-1.457
Rest	18.36 ± 33.94	10.44 ± 19.04	7.92	2.998 <sup>b</sup>
Sleep	470.75 ± 98.63	495.67 ± 116.24	-24.92	-2.13 <sup>a</sup>
Education	1.64 ± 13.39	13.04 ± 61.52	-11.4	-2.118 <sup>a</sup>
School activities	0 ± 0	0.89 ± 14.61	-0.89	-0.704
Out-of-school learning	1.64 ± 13.39	12.15 ± 58.13	-10.51	-2.064 <sup>a</sup>
Work	301.72 ± 243.18	190.22 ± 208.29	111.5	4.786 <sup>c</sup>
Paid work	286.27 ± 235.17	180.44 ± 202.88	105.83	4.677 <sup>c</sup>
Unpaid work	-	-		
Volunteer work	0 ± 0	1.26 ± 12.7	-1.26	-1.147
Job-seeking activity	0.45 ± 5.18	1 ± 9.8	-0.55	-0.611
Other	15 ± 32.14	7.52 ± 20.44	7.48	2.84 <sup>c</sup>
Leisure	202.01 ± 162.91	172.74 ± 134.54	29.27	1.917
Cultural and tourism activities	7.24 ± 35.91	3.81 ± 19.24	3.43	1.248
Sports and leisure sports	25.82 ± 52.76	19.85 ± 51.89	5.97	1.083
Leisure activities using media	143.51 ± 144.36	137.52 ± 124	5.99	0.432
Game and play	10.22 ± 32.59	6.19 ± 21.98	4.03	1.471
Other	15.22 ± 44.48	5.37 ± 28.68	9.85	2.686 <sup>b</sup>
Social participation	32.54 ± 41.25	44.33 ± 49.6	-11.79	-2.375 <sup>a</sup>
Relationship activities	20.15 ± 37.32	32.48 ± 45.37	-12.33	-2.722 <sup>b</sup>
Participating activities	12.39 ± 19.36	11.85 ± 19.02	0.54	0.265

<sup>a</sup>*P* < 0.05.<sup>b</sup>*P* < 0.01.<sup>c</sup>*P* < 0.001.

ADLs: Activities of daily living; IADLs: Instrumental activities of daily living; SD: Standard deviation.

For the males, results of the analysis showed that the regression model was appropriate with  $F = 6.461$  ( $P < 0.05$ ), and work had a significant positive effect on the feeling of time deficiency with  $B = 0.001$  ( $P < 0.05$ ). Therefore, an increase in male's time use for Work by 1 min increases the time deficiency by 0.001 (Table 6).

For females,  $F = 4.946$  ( $P < 0.05$ ) can be said to be suitable for this regression model, and leisure is  $B = -0.001$  ( $P < 0.05$ ), which had a significant negative effect on the time deficiency. Therefore, it was found that an increase in time usage for leisure by 1 min decreased the time deficiency by 0.001 (Table 6).

**Table 5 Time deficiency and life satisfaction according to sex (Unit: Score)**

Parameter	Males, n = 134	Females, n = 270	t
	mean ± SD	mean ± SD	
Time deficiency	2.18 ± 0.83	1.97 ± 0.93	2.202 <sup>a</sup>
Life satisfaction	3.04 ± 0.87	2.96 ± 0.91	0.939

<sup>a</sup>P < 0.05.

SD: Standard deviation.

**Table 6 Effects of time usage by occupational area on time deficiency**

Parameter	Males, n = 134	Parameter	Females, n = 270
	B		B
Work	0.001 <sup>a</sup>	Leisure	-0.001 <sup>a</sup>
(Constant)	2.598	(Constant)	3.190
F	6.461 <sup>a</sup>	F	4.946 <sup>a</sup>
Adjusted R <sup>2</sup>	0.039	Adjusted R <sup>2</sup>	0.014

<sup>a</sup>P < 0.05.

B: Unstandardized coefficients.

## DISCUSSION

The purpose of this study was to determine the time use and satisfaction of single-parent families according to sex.

For this reason, the National Statistical Office's '2019 time of life survey' classified occupational areas based on Occupational Therapy Practice Framework-4 and analyzed their characteristics. The following summarizes the results of this study.

First, by examining the general characteristics of the subjects, it was found that there were more female subjects [270 (66.8%)] than male subjects [134 (33.2%)]. Those in their 40s were the most common with 250 subjects (61.9%). In terms of marital status, divorced [336 subjects (83.2%)] was the highest, followed by bereavement [64 subjects (15.8%)], and single [4 subjects (1.0%)]. In terms of education level, high school graduates [166 subjects (41.1%)] were the most common, while 320 subjects (79.2%) were working and 84 subjects (20.8%) were not working. In terms of sex, the number of female subjects was about twice that of the male subjects. Although studies have recently reported that the number of single-father families is increasing[23,24], it is believed that single-mother families still occupy a higher percentage due to the fact that the role of childbirth is limited to women. In terms of marital status, divorced accounted for the highest percentage at 83.2%. Due to changes in people's values over time, it appears that the number of artificial single-parent families, such as those divorced, is increasing, in comparison to spontaneous single-parent families caused by bereavement in the past. This is supported by the results of previous studies that the proportion of divorce is increasing [4].

Based on the result of examining the time consumption by occupational area of single-parent families, sleep and rest were the highest at 34.8%, followed by IADLs (19.9%), work (15.8%), ADLs (13.0%), leisure (12.7%), social participation (2.8%), education (0.6%), and health management (0.5%). Sleep is the highest because it is one of the basic human needs and approximately 80% of the subjects in this study are middle-aged people aged 40 and above. Furthermore, IADLs and work, which showed the next highest areas, were found to be essential elements for the subjects to perform both roles as domestic workers and paid workers simultaneously. This is supported by the results of another study on time use among middle-aged people, showing that sleep and rest were the highest, followed by work and IADLs[23]. In the case of a married couple with a spouse, the division of labor allows for more flexible use of time, and the results of that study are compared with the results of this study[25-27].

When the difference in time usage by occupational area according to the sex of single-parent families was compared, the male subjects were found to spend 111.5 min more on work than the female subjects, and the female subjects spent 99.11 min on IADLs, 11.4 min on education, and 11.79 min more on social participation. The female subjects spent about 1.5 times more time on IADLs, which included housework, than the male subjects, while women spent less time on paid working hours and most leisure activities. According to these results, the female subjects are more likely to face a greater risk of time and economic poverty than the male subjects. There was also a significant difference between sexes in the field of social participation, but there was no difference in participation activities. However, the male subjects spent 12.33 min less on relationship activities than the female subjects. These results show that after the formation of a single-parent family, the male subjects have less exchanges with people around them than the female subjects. This is supported by the results of a study that single-parent families suffer psychological atrophy due to social prejudice, *etc*, and that the male

subjects have more difficulty participating in society than the female subjects[24].

Comparison of time deficiency and life satisfaction according to the sex of single-parent families showed no significant difference in life satisfaction. However, there was a significant difference between sexes regarding time deficiency, and the male subjects felt that they lacked time compared to the female subjects ( $P < 0.05$ ). In this study, both men and women received scores corresponding to the 4-point Likert scale, 'Sometimes feeling insufficient' (2 points), indicating that both single-parent families feel insufficient time use. In the case of single-parent families, they are simultaneously playing the roles of domestic and paid workers, thus feeling the lack of time use. In addition, it is believed that the results of this study showed slightly lower results because the male subjects spent more time in the work area than the female subjects. Previous studies have shown that when single-parent families work, the female subjects feel that they have less time than the male subjects[20]. This study's classification of the occupational area based on the Occupational Therapy Practice Framework-4 is thought to have yielded different results from the previous one.

By examining whether single-parent families' time use by occupational area affected the time deficiency, significant differences between sexes were observed, with the male's working time making them feel they have less time, while the female's leisure time makes them feel they have more time. In the case of men, they felt that as working time increased, time deficiency increased, and for women, the lack of time decreased as the time spent on leisure increased. These results are consistent with the results of previous studies that show that working hours are a factor that consistently makes people feel short of time regardless of weekdays and weekends[28]. Based on this, it is thought that economic support is needed to reduce working hours to resolve men's time deficiency. In addition, various ways to spend leisure time should be sought to reduce women's time deficiency.

The limitation of this study is that the survey days were not distinguished between weekdays and weekends, and the raw data of the National Statistical Office were analyzed as secondary data. As a result, the sex ratio of single-parent families was not met. It was difficult to determine what factors were related to the lack of time use and life satisfaction. However, despite these limitations, it was possible to identify the use of time by single-parent families by dividing the occupational area based on the Occupational Therapy Practice Framework-4. In addition, by examining the differences in time use according to sex, I became aware of the need to find an approach to solving problems and solutions. Therefore, it is important that single-parent families understand their grievances by indicating the areas they are having difficulty using time, and that this information can be used as basic data for policy establishment in order to address both time poverty and economic support.

## CONCLUSION

Single-parent families spent the most time on sleep and rest, followed by IADLs and work, with the least time spent on health management. When comparing the time usage between single-parent families by sex, the male subjects spent significantly more time on rest, paid work, and other leisure activities than the female subjects, while the female subjects spent significantly more time on personal maintenance, home management, other IADLs, sleep, out-of-school learning, and relationship activities. There was no significant difference in life satisfaction; but it was higher among the male subjects, and time deficiency showed that the male subjects were significantly lacking.

Based on these results, it was possible to determine the characteristics of single-parent families' use of time and differences according to sex. Finally, the findings are expected to be used as basic data for measures to solve not only economic poverty, but also time poverty in single-parent families.

## ARTICLE HIGHLIGHTS

### **Research background**

Single-parent families face not only economic poverty but also time poverty due to the absence of a spouse.

### **Research motivation**

Single-parent families have time issues for a variety of reasons, so it's important to identify what time issues they have so that you can address them.

### **Research objectives**

We wanted to categorize single-parent families by occupational area to examine their time use and understand their sense of time deficiency and life satisfaction.

### **Research methods**

This study utilized microdata from Statistics Korea to categorize single-parent households and understand their time use.

### **Research results**

Single-parent families differed in the amount of time spent on each occupational area by sex, and while they did not differ in life satisfaction, they did differ in their perceived lack of time.

### Research conclusions

The findings on the time use characteristics of single-parent families by sex should be used to explore ways to address time poverty.

### Research perspectives

It is hoped that our findings on the time use of single-parent families by occupational area will serve as a basis for addressing time poverty.

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## FOOTNOTES

**Author contributions:** Jang WH was the guarantor and designed the study; Bang JH participated in the acquisition, analysis, interpretation of the data, and drafted the initial manuscript; Jang WH and Jang JS revised the article critically for important intellectual content; all authors have read and approved the final manuscript.

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**Informed consent statement:** Patients were not required to give informed consent to the study because the analysis used anonymous clinical data that were obtained after each patient agreed to treatment by written consent.

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**Country/Territory of origin:** South Korea

**ORCID number:** Woo-Hyuk Jang 0000-0002-7012-4565; Jong-Sik Jang 0000-0002-7712-8518; Jin-Hyuk Bang 0000-0002-0431-458X.

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**L-Editor:** Filipodia

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