

Changes in the Consumption of Forest Products and Services during the COVID-19 Era in the Republic of Korea

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Introduction

- ❖ Forest can contribute to human health by offering products and services such as fresh foods, psychological relaxation and physical activities.
- ❖ Demand for the forest products and services was affected by the external shock of the COVID-19 pandemic declared in March 2020.
- ❖ The main purpose of this study is to identify how the consumption of forest products and services has changed since the COVID-19 outbreak, and then to suggest the forest policies for the post COVID-19 era in the Republic of Korea.

Method and material

- ❖ **Data collection:** surveying 1,000 people online based on proportionate quota and systematic sampling during 27 August to 4 September 2020
- ❖ **Data analysis:** frequency analysis, paired t-test

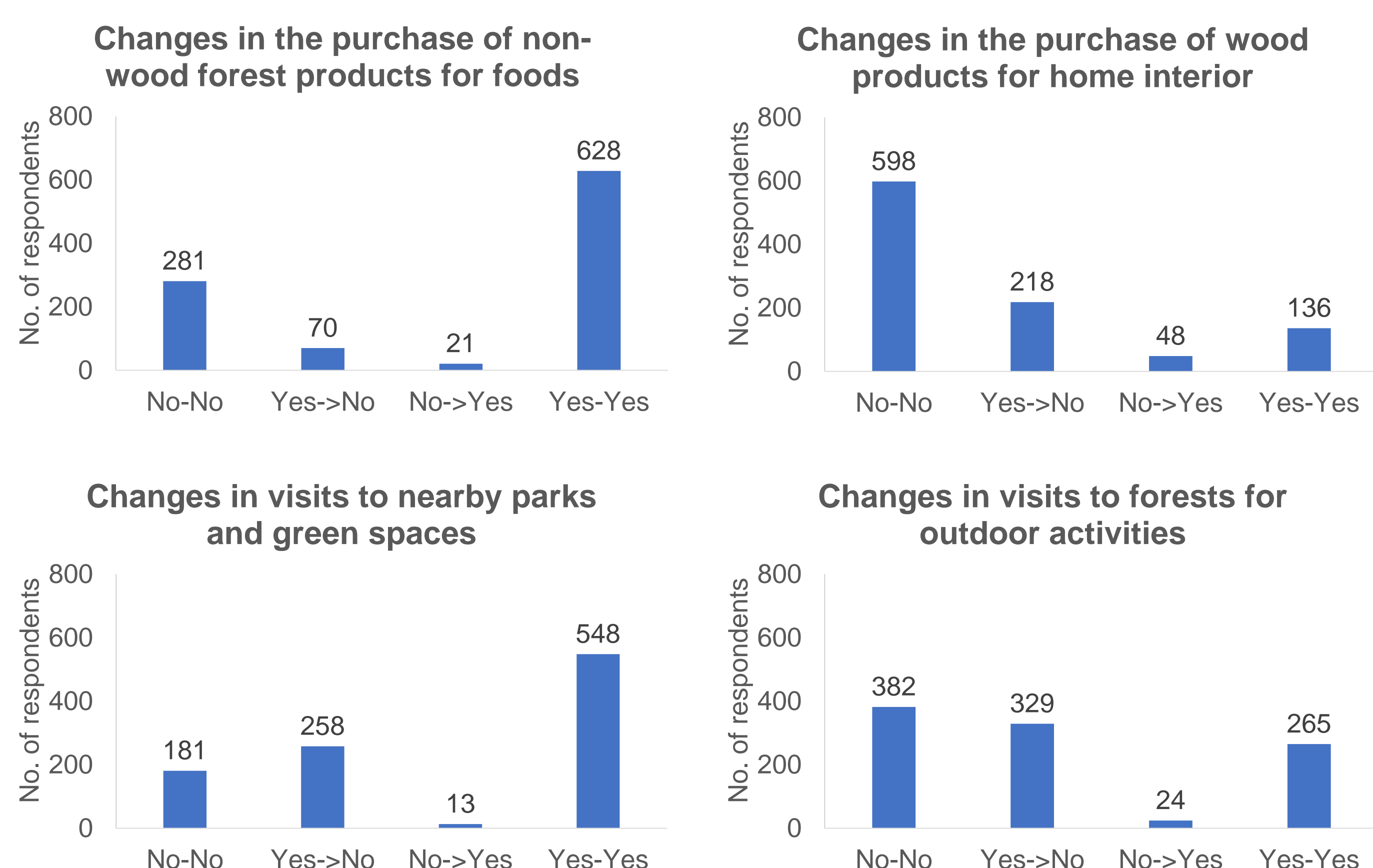
Main questions in the questionnaire	Unit
Frequency of the purchase of non-wood forest products for foods such as mushroom, wild vegetables, and chest nut before the COVID-19 (August 2019 to the middle of February 2020) and after the COVID-19 (the middle of February 2020 to August 2020)	times/month
Frequency of the purchase of wood products for home interior such as furniture and wood crafts before the COVID-19 (August 2019 to the middle of February 2020) and after the COVID-19 (the middle of February 2020 to August 2020)	times/ 6 months
Frequency of visits to nearby parks and green spaces such as a walk in the urban forests before the COVID-19 (August 2019 to the middle of February 2020) and after the COVID-19 (the middle of February 2020 to August 2020)	times/month
Frequency of visits to forests for outdoor activities including camping, hiking and meditation before the COVID-19 (August 2019 to the middle of February 2020) and after the COVID-19 (the middle of February 2020 to August 2020)	times/month

Characteristics of respondents

Variable	Category	Percent (%)	Variable	Category	Percent (%)
Total		100.0	Marital status	Single	31.9
Gender	Male	50.7	Marital status	Married	68.1
	Female	49.3		1	5.5
Age	19~29	18.3	Number of family	2	23.8
	30~39	19.1		3	29.0
	40~49	22.3		4	33.9
	50~59	23.0		5 or more	7.8
	60~69	17.3		Less than 2 million KRW	12.1
Education	< Highschool graduate	22.1	Household income	2~4 million KRW	32.0
	College/college graduate	15.2		4~6 million KRW	30.4
	University/university graduate	52.4		6~8 million KRW	15.0
	>Graduate school	10.3		Over 8 million KRW	10.5

Results

- ❖ Respondents never have purchased wood products for home interior or were more likely to reduce the purchase of them than non-wood forest products for foods during the survey period because the former is luxuries and long-lived products while the latter is necessities.
- ❖ Respondents were less likely to reduce their visits to nearby parks and green spaces than visits to forests for outdoor activities due to better accessibility.



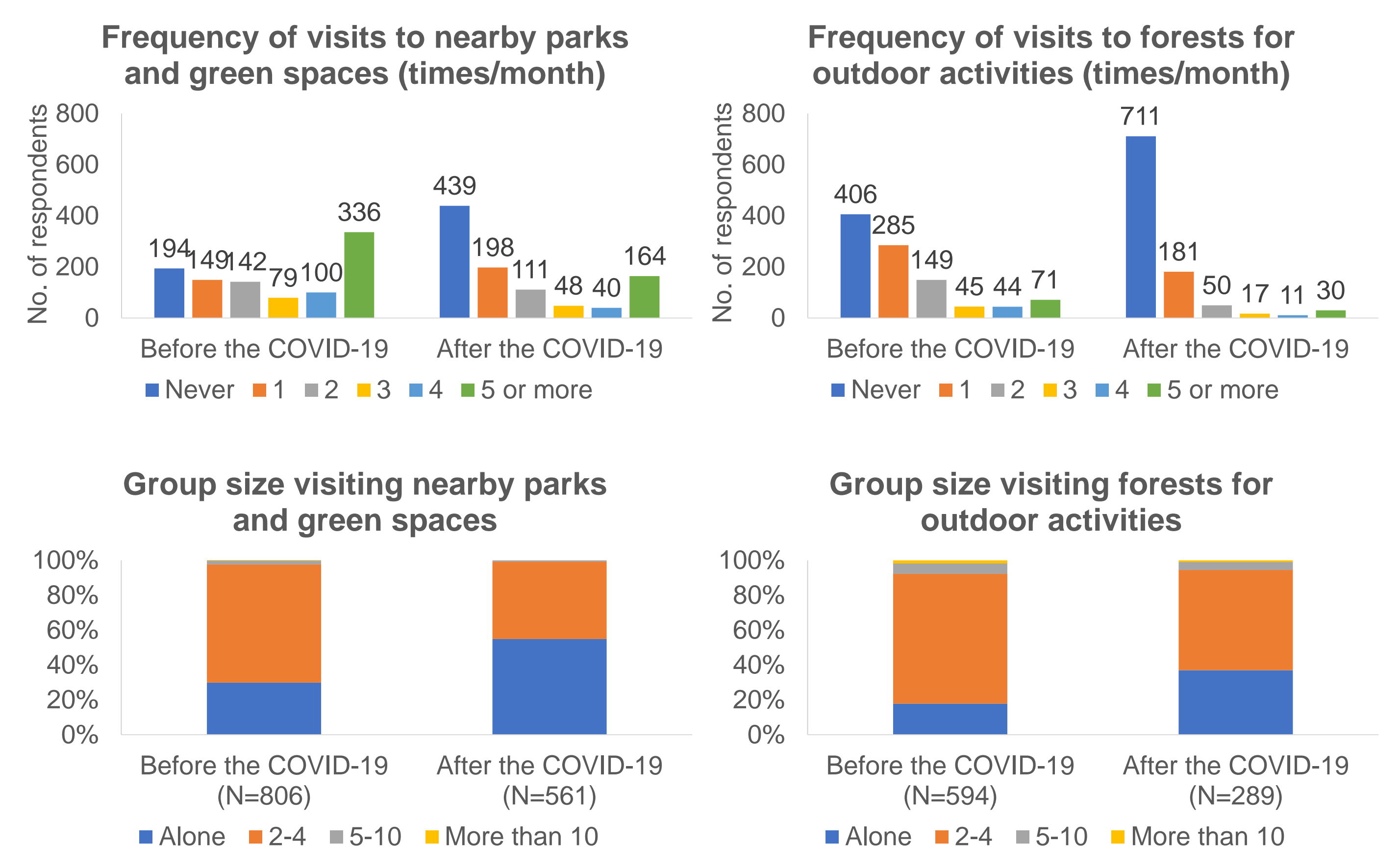
Responses to the changes in the consumption of forest products and services during the COVID-19 era

- ❖ There was a significant difference in the average frequency of purchasing wood and non-wood forest products and visiting nearby parks, and forests for outdoor activities before and after the COVID-19 outbreak due to a decline in income and social distancing measures during the survey period.

Mean difference in the frequency of forest product and service consumption before and after the COVID-19 using a paired t-test

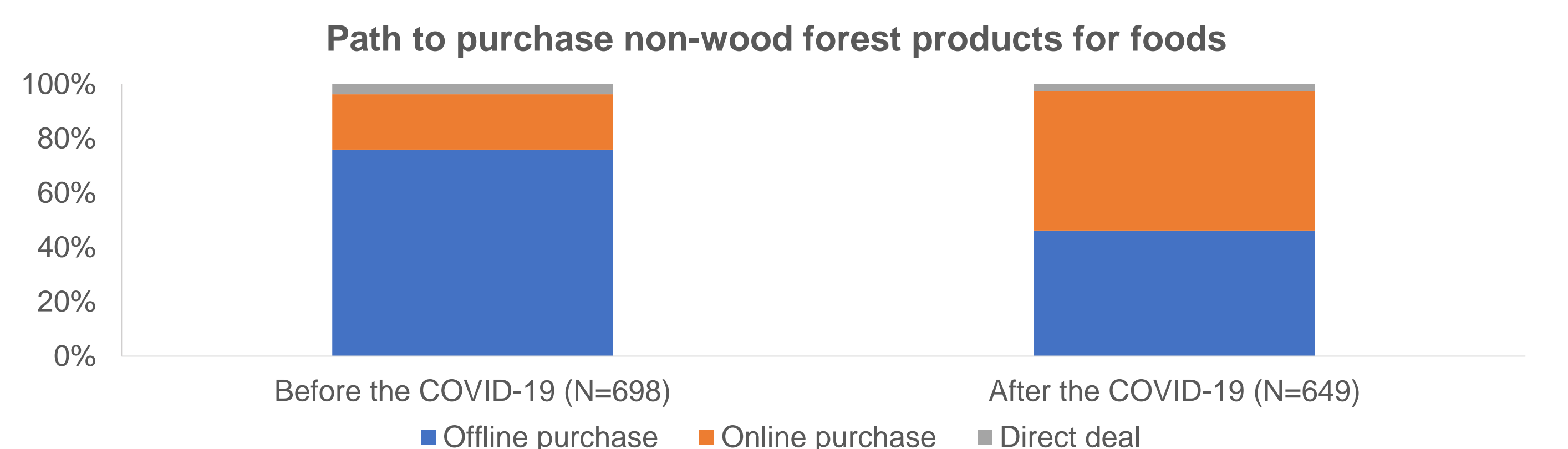
	Before the COVID-19 (A)	After the COVID-19 (B)	Difference (A-B)	T-value (p-value)
The purchase of non-wood products for foods	2.131	1.936	0.195	3.5402 (0.000)
The purchase of wood products for home interior	0.569	0.288	0.281	9.2394 (0.000)
Visits to nearby parks and green spaces	4.855	2.549	2.306	15.1046 (0.000)
Visits to forests for outdoor activities	1.511	0.638	0.873	12.9773 (0.000)

- ❖ The number of frequent visitors to nearby parks and green spaces and to forests for outdoor activities decreased after the COVID-19.
- ❖ As outdoor activities have replaced indoor activities due to the restrictions on indoor activities, the number of visitors who visited nearby parks and green spaces once a month increased after the COVID-19.
- ❖ The proportion of visitors who visited nearby parks and green spaces, and forests for outdoor activities alone increased, but the proportion of visitors who visited there with their friends or families decreased after the COVID-19.



Responses to the use patterns of forest services before and after the COVID-19

- ❖ The proportion of consumers who purchased non-wood forest products for foods online, rather than visiting the hyper markets, supermarkets, traditional markets and department stores increased after the COVID-19.



Responses to the use patterns of forest products before and after the COVID-19

Conclusion

- ❖ During the COVID-19 era, the frequency of the consumption in forest products and services decreased, but demands for nearby natural areas and fresh food materials remain high with changing the consumption patterns in the safer and contactless manner.
- ❖ The expansion of urban forests and the provision of forest therapy and recreation services for small groups or individuals are needed to meet the demand for a safe outdoor environment.
- ❖ The development of contactless technologies in the forest industry, including digital currency and block chain, is required for the efficient and transparent online purchase of forest products for the post COVID-19 era.