Original Research Article

The effects of sociodemographic factors on the use of supplementary vitamins and the follow hygiene rules in the Covid-19 pandemic in TRNC.

Abstract

Background

In order to reduce the spread of the disease and death rates in the Covid-19 Pandemic, it is important to use supplementary vitamins that increase body resistance, such as vitamin D and vitamin C, and to following some hygiene rules. In the Covid-19 pandemic, some sociodemographic factors of the people in the community may affect the rate of use of such supplementary vitamins and the rate of follow some hygiene rules.

Aim

The aim of this study is to investigate the effects of sociodemographic characteristics of people living in the Turkish Republic of Northern Cyprus (TRNC) on the rates of supplementary drug use and follow the some hygiene rules during the Covid-19 Pandemic.

Materials and methods

In our study, an online survey was conducted on 308 people voluntarily selected from TRNC citizens, the results were compared and evaluated with the SPSS program.

Results

A statistically significant difference was found between some sociodemographic characteristics and the use of supplementary drugs and the following some hygiene rules during the pandemic period in the TRNC.

Conclusions

Responsible public institutions should carry out awareness-raising activities, especially for people who do not have social security, and health materials and supplementary drugs should be provided free of charge.

Keywords: Covid-19 pandemic, supplementary drugs, sociodemographic factors, hygiene rules.

Introduction

Covid-19 pandemic (P) has been one of the most common causes of death in the world for the last 2 years. For this reason, scientists in the world are working hard to reduce the spread of the disease and death rates.

It has been revealed that using some supplementary drugs (vitamin D, vitamin C) from the first days of P and following some hygiene rules such as wearing masks and social distance can reduce the rate of spread of P and death rates.

In P, there may be some factors that affect the using supplementary drugs(USD) and following some hygiene rules(FHR). In our study, the effects of some sociodemographic characteristics (SC) such as education level, age, gender and occupation on the rate of USD and FHRs were investigated in Turkish Republic of Northern Cyprus (TRNC).

In some studies conducted since the onset of P, it was revealed that serum vitamin D and vitamin C levels of Covid-19 (C-19) patients hospitalized in the intensive care unit affect the prognosis of the disease[1]. Likewise, it has been revealed that FHRs in the P period; reduces the spread and death rates of the disease. SCs of societies living in different countries are likely to affect the rate of use of supplementary vitamins and FHRs in the fight against P. [2, 3, 4].

Therefore, in our study, the effects of some SCs of the society in the TRNC on USDs (Vitamin C, Vitamin -D) and FHRs rates were investigated.

Materials And Methods

The population of the research is TRNC citizens. A sample group of 308 people over the age of 18 who voluntarily participated in the research and agreed to fill out an online questionnaire was formed from this research universe. The adequacy of this sample obtained was evaluated in the context of the statistical analysis method to be used in the study. An online survey form was used to collect the data needed in the research. When $p<0.05$, it was accepted that there was a significant relationship between the variables.

IBM SPSS Package Program was used for the reliability and validity studies of the 5-point Likert type questionnaire developed for the purpose of the research, and the Cronbach Alpha coefficient of the scale developed with this tool was calculated, thus the reliability and validity degrees of the scale were determined.

The analyzes in the study were made using the SPSS package program. The compatibility of the data with normal distribution was examined with the Kolmogorov-Smirnov and Shapiro Wilk test. For independent group comparisons of continuous variables, Mann Whitney U test was used when there were two independent groups and Kruskal Wallis test was used when there were more than two independent groups. For the reliability analysis of the scales used in the research, the internal consistency coefficient 'Cronbach's Alpha' was calculated. While analyzing the relationship between continuous variables for the scales used in the research, Spearman rank correlation coefficient was used.

Social media platforms and digital communication applications were used to deliver the questionnaires to the determined sample. The survey form was tried to be delivered to the participants who formed the sample through social media and digital communication applications that were transferred to the digital environment with the survey management system called Google Forms. The online questionnaire form was used so that the participants could easily answer it. When the participants completed the survey and clicked on the finished option, the survey form was automatically recorded in the database in excel format.

Results

The SCs of the volunteers participating in our study are shown in (Table 1).

Table 1. Sociodemographic characteristics of the participants.

Sociodemographic Characteristics (n=308)	**Number (n)**	**Percent (%)**

Sex	Female	170	55,2
	Male	138	44,8
Age	20-30	105	34,1
	31-40	76	24,7
	41-50	59	19,2
	51-60	41	13,3
	61-65	15	4,9
	65+	12	3,9
Living Place	Metropolis	167	54,2
	City	83	26,9
	Country	49	15,9
	Village	9	2,9
Social Security	No	46	14,9
	Special İnsurance	44	14,3
	Social Security İnstituon	218	70,8
Marital Status	Married	177	57,5
	Single Wife/Husband	106	34,4
	Decased	5	1,6
	Divorced	20	6,5
Level of Education	Primary school and below	16	5,2
	Middle school student	6	1,9
	High school graduate	78	25,3
	Graduated from a University	208	67,5
The house she/he lived in	Apartment	223	72,4
	Private	80	26,0
	Guesthouse- hotel	5	1,6
House of Stay	His own	140	45,5
	familial	81	26,3
	Rent	87	28,2
Living Environment	Alone	116	37,7
	with his wife	62	20,1
	With his wife and children	125	40,6
	With the caregiver	5	1,6
Work	Not working	72	23,4
	Retired	54	17,5
	Desk job	129	41,9
	Physical work	53	17,2
Monthly income	Below Minimum Wage	40	13,0
	Minimum wage	99	32,1
	2 times the minimum wage	112	36,4

	3 times the minimum wage	**57**	**18,5**

When the USD-FHR rates of the volunteers participating in the study were compared with those who did not have social security, USD-FHR rates were found to be statistically significantly lower in those without social security (Table 2).

Table 2. The relationship between the social security status of the volunteers participating in the study and USD- FHR rates.

	Social Security	**n**	**Medyan (min-max)**	**Ki kare**	**p**	**Dual comparisons**
Mask, social distancing and hand hygiene behaviors	a.No	46	4,25 (1,38-5,00)	6,498	**0,039**	a-b p=0,104
	b.Special İnsurance	44	4,50 (3,13-5,00)			b-c p=0,012
	c.Social Security İnstituon	218	4,63 (1,00-5,00)			a-c p=0,572

Supplementary drug Usage	a.No b.Special İnsurance c.Social Security İnstituon	42 46 220	4,22 (1,36-5.00) 4,48 (3,26-5,00) 4,63 (1,00-5,00)	6,506	**0,036**	a-b p=0,102 b-c p=0,010 a-c p=0,584

According to the marital status variable, FHR rates were found to be higher in married participants than in single, widowed and divorced participants (P=0.028).
According to the findings obtained in our study, the FHR rates of individuals working at desk jobs were found to be statistically significantly higher than those who were unemployed and those working at other jobs (p=0.010).
According to the findings we obtained in our study, no statistically significant difference was found between the other SCs of the volunteers participating in our study and USD- FHR rates(p>0.05).

Discussion

According to the findings we obtained in our study, USD - FHR rates were found to be higher in adults over the age of 18 in the TRNC who only have social security, compared to those without social security (Table 2).

Studies have shown that USDs have a positive effect on the fight against C-19 in the pandemic [**3,4**]. However, according to the results we obtained in our study, although the rate of graduated from an university among the participants was quite high (Table 1) and they probably knew the beneficial effect of USDs in the fight against C-19, the rate of USD was found to be statistically significantly higher only in those with social security compared to those without.

The low income level and high drug prices in the TRNC may explain the low USD rate of people who do not have social security.

In a study by Khalili et al., it was shown that the countries that USD most in the P period are rich countries such as USA, England, France, Italy, and Spain [**4**].

According to the results we obtained in our study, health expenditures of people with social security were found to be higher than those without.

Likewise, especially in the first days of P, mask prices were quite high and difficult to find, as there was not enough mask stock. The lower FHR rates of people without social security in our study can also be explained by their lower income levels. In addition, people who do not have social security in general may have lower health awareness rates than those who do.

In many studies, it has been reported that awareness of health and hygiene is parallel to the socioeconomic level of individuals [5,6].

According to the results obtained in our study, FHR rates was found to be higher statistically in married people than in divorced or single people ($p=0.028$). Similar results have been obtained in some studies [7,8]. This may be due to the fact that married people are more careful about hygiene for fear of infecting their spouses.

It has been revealed that closed areas are risky areas in terms of the risk of transmission of the disease during the pandemic period[**9**].In our study, the fact that the FHR ratios of those working at a desk indoors were higher than those who did not work or those who worked outdoors ($p=0.010$), can be explained by this reason.

In a study conducted by Macaya et al., it was reported that young people and male gender were affected more by the disease in people with vitamin D deficiency, but vitamin deficiency was more common in older ages[3]. Again, in a meta-analysis by Oscanoa et al., the mean age of people with vitamin D deficiency in C-19 patients was 60.8 and 53% were male patients[10]. In our study, however, no statistically significant relationship was found between sociodemographic characteristics, age and gender, and USD-FHR rates ($p<0.005$). Although a study by Lüdecke et al. did not find a significant relationship between age and gender and FHR[11],in some other studies, it has been reported that FHR rates gradually decrease in advanced ages[12,13,14].

One of the SC that we investigated in our study that might affect USD-FHR rates is the place where people live (Table 1).

If we think with the assumption that people living in city centers are more educated, have easier access to information, and have better access to health materials due to their better economic situation, it is expected that the rates of USD- FHR will be higher than in rural areas. However, according to the results we obtained in our study, there was no statistically significant difference between the rates of USD-FHR between those living in rural areas and those living in city centers ($p<0.05$). Nevertheless, in a study conducted in Egypt, P; It has been determined that FHR rates are lower in those living in rural areas[15].

In a study conducted in Slovenia, it was determined that the awareness of people living in rural areas about SDU is lower[16].
In our study, the effects of immigrants on SDU and FDU rates were not investigated. However, many studies have found that immigrants have lower FHR rates[17,18,19].
According to the findings obtained in our study, no significant relationship was found between the economic status of individuals and the rates of USD- FHR. However, in studies conducted in some other countries, it has been found that USD awareness and FHR rates are lower in low-income individuals[16, 17].
Since the high level of education of the society, which is one of the important sociodemographic characteristics, will increase awareness and increase access to information, it is expected to increase the rates of USD- FHR in the P period. However, according to the findings of our study, education levels in the TRNC did not affect USD awareness and FHR rates in a statistically significantly($p<0.05$).
In a study by Zmitek et al. in Slovenia, it was revealed that USD awareness was lower in those who had only primary school or lower education in the P period[16]. Although the FHR rates of individuals with higher education levels were found to be higher in a study conducted in the P period in Turkey[20], in studies conducted in Saudi Arabia and Lebanon, no statistically significant difference was found between the FHR ratios of individuals with a low level of education and those with higher education levels[21,22,23].

The most important factor affecting these results obtained in our study in the TRNC may be that the TRNC has a small population of 600 000 and that public health institutions can easily raise awareness of this small population through radio-television and digital media.

The limited aspect of our study is that it is done online and only for adults. More comprehensive studies are required to obtain more accurate results.

Conclusion

According to the results of our study, the most important factor affecting the USD- FHR rates in the TRNC is the social security of individuals. For this reason, responsible public institutions should carry out awareness-raising activities, especially for people who do not have social security, and health materials and SDs should be provided free of charge.

Ethical approval

The Health Sciences Ethical Committee of Girne American University gave approval to this study. Approval number: 2020-21/011

Consent

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

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