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Attitude and practice of Khark Islanders regarding self-quarantine during Covid-19 pandemic

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Abstract

Background and Aim: One of the methods to prevent the spread of the COVID-19 virus is self-quarantine. Measuring people's attitudes and practices about it is important for the effectiveness of this method. This study aimed to determine the attitude and practice of Khark Islanders regarding self-quarantine during covid-19 pandemic in 2022.

Materials and methods: This descriptive cross-sectional study was conducted on native and surrounding residents of Khark Island in south of Iran. 370 subjects were selected with cluster sampling. A demographic and clinical questionnaire and a questionnaire regarding attitude and practice for self-quarantine were used for data collection. Data were analyzed using descriptive statistics and independent t-tests, analysis of variance, and multiple regression in SPSS26 software.

Results: Attitudes of 65.4% (242) of the subjects were negative, and the rest had a positive attitude. Also, the practice of most subjects (65.4%) was undesirable. There were significant differences between age, gender, education level, occupation, concerns about home quarantine, and sources of information with attitude and practice about self-quarantine ($P<0.05$).

Conclusion: Self-quarantine during COVID-19 was a recommended way to reduce transmission and discontinuation of disease chain. Since attitudes and especially practices of individuals, in this case, is of great importance, appropriate and effective methods should be used to improve them in individuals.

Keywords: COVID-19, Self-quarantine, Attitude, Practice.

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Introduction

Many human diseases have been discovered with unknown etiology with suspicion of a viral origin for them [1]. In early December of 2019, a pneumonia of unknown origin was identified in Wuhan, China, like SARS-COV in phylogenetics [2,3]. Infected patients were identified at hospitals and families [4]. The spread of COVID-19 was a significant problem for public health worldwide. On March 11, 2020, the World Health Organization (WHO) identified the disease as a pandemic; the most reported cases were from the United States and countries such as India and Brazil [5]. On February 19, 2020, two confirmed cases of COVID-19 were reported in Qom, a city in Iran. As of July 6, 2021, there were 183,700,343 infected individuals and 3,981,756 cases of death reported due to COVID-19 worldwide [6,7].

The coronavirus outbreak and its health-related consequences are one of the most important social events of the 21st century [8]. What distinguishes this outbreak was the irrational behaviors of individuals due to fear of exposure to the disease. The COVID-19 pandemic was not only a health threat but also a socio-economic threat. Change in lifestyle and economic relationships testifies to this claim [9,10]. Staying at home during the outbreak was recommended, especially for unnecessary occupations. Quarantine is a way to prevent the epidemics [11,12]. Quarantine was first used in Italy following an outbreak of plague. Following medical advances, isolation of people for disease prevention decreased so that it was not used, for example, in Canada for half a century until the reuse of quarantine following the outbreak of acute respiratory syndrome because of insufficient information about the mechanisms of retransmission [13]. One of the most important measures taken by public health authorities to reduce the spread of COVID-19 was self-quarantine and home confinement, avoidance of close interactions and public places for at least 14 days [14].

Accordingly, to create public acceptance and support for quarantine, health authorities should inform them about the nature of the disease and the situation when confronted with an epidemic of a communicable disease. Subsequently, those who are in charge must provide people in quarantine with appropriate support services to comply with the guidelines [15]. An unprecedented number of people worldwide have been affected by quarantine or isolation; therefore, their mental health is also at risk; thus, it is crucial to identify these individuals [16]. Measuring knowledge, attitude and performance of

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individuals about quarantine and its imposed limitations is essential in cutting disease chain. In the Yang et al. (2022) study at China and the United States, the results revealed that people's attitudes about quarantine could be a strong indicator for executing protocols [17].

The researchers found that although the residents of Khark Island, south of Iran, were aware of Covid and its transmission routes, health guidelines were not taken seriously; therefore, the disease spread rapidly all over the island. Since hospitals in Khark island lacked intensive care units, these patients were transferred to Bushehr city (south of Iran) with a nurse in a ship, which took at least 10 hours and caused physical, mental, and social pressures on the patients and their families. In addition, it put additional pressure on medical staff. Therefore, preventing or controlling the disease was one of the reasons for the importance of this study. This study was conducted to determine the attitudes and practices of Khark Islanders about self-quarantine during Covid-19 pandemic.

Materials and Methods

In this descriptive cross-sectional study, the population consisted of all native and surrounding residents of Khark Island in the south of Iran in 2022. With cluster method, sample size was calculated 370 with 95% confidence and a ratio of 0.5 with desired accuracy of 0.05. Inclusion criteria were age over 18 and being a native or surrounding resident of Khark Island. Exclusion criteria were cancellation of cooperation and incomplete completion of questionnaires. A demographic and clinical questionnaire and a researcher-made questionnaire for attitude and practice in self-quarantine during Covid-19 were used to collect data. Demographics including age, sex, marital status, educational level, occupation, being at a high-risk group, and concerns about quarantine were inquired.

The attitude and practice questionnaire consisted of two parts. The first part was related to attitude scored consisted of 17 items with Likert scale: from 1 (I completely agree) to 5(I completely disagree). The higher the degree, the more positive the attitude was. The second part consisted of 16 practice items reported by the subjects with a Likert scale from 1 (I fully observe) to 5 (I do not observe at all). The sum of scores indicated the performance level of the subjects.

For face and content validities, the researchers asked 10 faculty members in School of Nursing and Midwifery of Islamic Azad University of Medical Sciences in

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Tehran to comment on the tools; applied all the comments and made amendments and provided a tool that its content was complete and each of its questions correctly measured the desired variables. Test-retest was used for reliability and Cronbach's alpha for internal consistency, Standardized Cronbach's alphas were calculated (0.976) and (0.985) for attitude and practice respectively. For data collection, the first author introduced herself and talked with the subjects face-to-face or on the phone. The talking times were set with the subjects to have their full cooperation. Research objectives were first explained to them, and they were informed about all ethical considerations including voluntary participation and confidentiality. After obtaining their consent, the tools were completed by the researchers by asking all the questions from the subjects. The self-report method was used for practice questions, and after responding, the answers were written in the questionnaire by the researchers. After this stage, data were collected and analyzed. The ethics committee of the Islamic Azad University of Medical Sciences in Tehran confirmed this study (IR.IAU.TMU.REC.1399.063) for implementation.

Results

Mean age of the samples was 35.52±10.27 years. 195 subjects (52.7%) were male, 142 (38.4%) was in the range of 20-30 years, 296 (80%) was married, 241 (65.1%) had bachelor degree or higher, 213 (57.6%) had freelance jobs, and 186 (50.3%) was from families with 3 members. 78.4% (290) of the samples had concern about self-quarantine, and 56.2% (208) received the required information about coronavirus through radio, TV, and magazines. Clinical variables are shown in Table 1.

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Table 1: Clinical variables of the sample

Variable (N=370)	Frequency	Percentage
High-risk group	106	28.6
Diabetes	96	25.9
Hypertension	119	32.2
Cardiovascular disease	25	6.8
PCR test positive	242	65.4
Injection of vaccine (Three doses)	282	76.2

Mean and standard deviation of attitude and overall practice score regarding self-quarantine during Covid-19 are shown in Table 2.

Table 2: Score of attitude and practice about self-quarantine

Variable	Mean (SD)	Rating *	
		Positive/favorable	Negative/unfavorable
Attitude	39.22(10.27)	128 (34.6)	242 (65.4)
Practice	45.96(28.71)	128 (34.6)	242 (65.4)

***** *The cut of point is 16-42 for negative attitude and 43-70 for positive attitude. The cut of point is17-51for unfavorable practice and 52-85 for favorable practice.*

To investigate the relationship between demographic and clinical variables (gender, marital status, occupation, educational level, PCR test, sources of information, concerns about self-quarantine, high-risk group member, number of underlying diseases, and doses of vaccination for Corona) and quantitative variables, multiple regression was used with the stepwise method. Independent variables (demographic and clinical variables of patients and attitude) were included in five models. The diagnosis of COVID-19 was entered in the first model based on a PCR test and explained 96% of the practice changes. Also, in the second model, with the arrival of attitude, occupation, the number of doses of the injected coronavirus vaccine, and concerns about self- quarantine

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variables, finally 98% of the changes in the practice of Khark Island residents were explained. The results indicated that diagnosis of corona disease based on a PCR test with a standard beta coefficient (-0.514) and then attitude, occupation, doses of vaccination, concerns about self-quarantine had the highest regression effect on the practice of Khark Island residents regarding self-quarantine in the face of COVID-19. Therefore, by 1-unit increase in standard deviation of attitude, 0.495 increase could be predicted in practice. practice in employees was 0.040 units compared to other jobs, in residents with an injection of more than one dose of vaccine was 0.023 units compared to other residents, and in residents who were concerns about self- quarantine, it was 0.025 units more than residents without concerns. Table 3 shows the final model (the fifth model).

Table 3. Relationships between attitude as well as demographic and clinical variables and practice based on the results of multiple regression by step-by-step method

Variable	beta coefficient (β)		t- test	significance level	95% confidence interval	
	Non-standard	Standard			lower limit	upper Limit
Diagnosis of corona disease based on PCR test	-30.975	-0.514	-12.433	<0.001	-35.874	-26.076
Attitude	0.649	0.495	12.123	<0.001	0.544	0.755
Job	2.804	0.040	5.185	<0.001	1.740	3.867
Doses of vaccination	3.667	0.023	2.996	<0.001	1.260	6.073
Concerns about self- quarantine	1.719	0.025	2.913	<0.004	0.559	2.879
Summary of the fifth model		F= 3792.521 ، P<0.001		R-square=0.981	adjusted- R-square=0.981	

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Discussion

Although more than two years have passed since the onset of the Covid-19 pandemic with the invention of several vaccines injected globally and significant reduction in mortality and morbidity, all scientific sources still recommend observing protocols and emphasize on wearing masks, avoiding close contacts, maintaining social distancing in public places, and continuously disinfecting the hands. In this regard, having a positive attitude toward observing the guidelines is essential in achieving the primary goal, namely cutting the disease chain [18]. Therefore, studies have been conducted to determine the attitudes of people in different societies with similar results of this study. Zalsos et al. in the Philippines found that people with age 60 and over had a relatively low attitude toward quarantine [19]. In a cross-sectional study by Lee et al. regarding knowledge, attitude, and practice of individuals about Covid-19 in South Korea, only 42.2% of the subjects had a positive attitude [20].

It is important to investigate people's attitudes, awareness and practice about Covid-19 as well as strategies for cutting the chain of disease, such as quarantine. Understanding people's attitudes about a disease is necessary to know it better [21]. A sudden outbreak of an unknown disease shocks many people, especially in an era of medical advances. On the other hand, the events surrounding cyberspace and mass media as well as policies of some countries have led many people not to believe the disease. In addition, the current economic situation and pressure on people are other reasons for the researchers why people's attitudes are negative.

Studies with contrary results can also be found. In the study of Teng et al. in China, 94.7% of the participants had positive attitudes toward Covid-19 [22]. In addition, Bautista et al. (2020) found that participants had a positive attitude toward the need for education about Covid-19 and self-quarantine [23]. In another study by Kakemam et al., the results through virtual media showed that the subjects had a positive attitude toward Covid-19 pandemic and prevention guidelines [24], which also indicate inconsistency with ours. In fact, time is one of the crucial differences between the present study and other studies. The present study was conducted when the vaccine had been synthesized in some countries, and some of the public's concerns had been diminished. Besides, the study of Kakemam et al. was in the early pandemic period when

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quarantine conditions and protocols were stricter and more difficult to follow.

Another result of this study was that the average practice of the subjects in self-quarantine was undesirable. Although In the study of Azlan et al. in Malaysia, people's performance during Covid-19 pandemic was desirable contrary to the results of this study, the rate of wearing masks was lower [25]. Since wearing mask is one of the main priorities in preventing Covid-19, which is a respiratory disease, it can be said that it is the foundation of all protocols; thus, much more emphasis should be put on this topic. Also, in a study by Al Ahdab in Syria, the results indicated that the attitudes and practices during Covid-19 was moderate [26]. Despite the importance of self- quarantine as well as the warnings of Ministry of Health and Medical Education, physicians and other health workers, it seems that, in our study, due to various reasons such as the lack of positive attitudes toward the disease, rumors of the cyberspace and people's weakness in critical thinking as well as high rate of distrust in health care systems, the overall performance of most people was estimated undesirable.

On the contrary, in a study by Zalsos et al., participants had better performance regarding protocols and used personal protective equipment [19]. Also, in the study of Bautista et al., the subjects stated that they had satisfactory practice in self-quarantine and compliance with health guidelines [23]. As stated above, difference in time of studies may justify contrary results. Diversity of places should also put into consideration. Pandemic specifications varied in different countries. The same applied to medical facilities, access to resources, ways of controlling the disease, vaccination, and prevailing conditions. Countries that could take quicker measures in both control and vaccination have been reported to have higher performance, which can justify the differences of results.

Regarding the relationship between attitudes as well as practice and demographic characteristics, residents between 20-30, females, subjects with high school diploma or higher, and employees had better attitudes and practice. There was also a significant relationship between being at the high-risk group as well as the number of systemic diseases and attitude and practice regarding PCR test. The findings also revealed that attitudes toward self-quarantine were more positive in residents without Corona. Information about all the events regarding Covid-19 through mass media and the easily

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accessible Internet has led younger people to have more positive attitude toward the disease and self-quarantine. Consistent with the results of this study, Haftom et al. found that education was one of the factors affecting attitude. Participants with higher education had more positive attitudes [27].

Gender and occupation were also found to be effective on people's attitudes toward Covid-19 in the study of Pascawati and Satoto, in their study, attitudes and practices of females and self-employed participants were better [28]. In the study of Shams Ghahfarokhi and Shams Ghahfarokhi, educational level was significantly correlated with practice, and those with higher education had better practice [29]. The results of studies on the relationship between attitude as well as practice and demographic characteristics are different. Thus, one variable cannot be considered as important to influence on practice. It seems that, in planning and policymaking, while paying particular attention to demographic variables, measures in the field must be taken cautiously. It means that planning and interventions must be performed based on the same results while measuring the relationship between people's attitudes and demographic variables in each field.

Some of the limitations of this study included the subjects' mental states such as fatigue as well as anxiety and its coincidence with economic problems resulting in impatience over answering the tools, which could affect their response. These limitations were largely controlled by careful planning for having more time to answer the questions and being with the subjects to support them and solve their possible ambiguities. Individual, social, and cultural differences of the participants were limitations beyond the researchers' control.

Conclusion

The attitude and practice of Khark Islanders about self-quarantine during Covid-19 were weak. Self-quarantine is a standard and recommended way to reduce transmission and discontinuation of disease chain. Since attitude and, especially, practice of individuals in this regard is of great importance, appropriate and effective methods should be used to improve them. Thus, effective factors such as age, gender, educational level, and occupation should be considered. The health system and policymakers are recommended to pay attention to these findings for planning and implementing effective interventions. Also, the relationship between attitude and practice

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was positive and significant; therefore, people should promote their attitudes to have better practice.

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Conflict of Interest

There was no conflict of interest for the authors in writing this article.

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