Study Protocol
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COVID-19 Population Survey of Iran (COPSIR) study protocol: Repeated survey on knowledge, risk perception, preventive behaviors, psychological problems, essential needs, and public trust during COVID-19 epidemic

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Abstract

Background: The worldwide emergence and rapid expansion of COVID-19 emphasizes the need to assess the knowledge gap and to predict the disease-related behaviors and reactions during this epidemic.

Methods and design: COVID19 Population Survey of Iran (COPSIR) is a repeated cross sectional survey that will be conducted in 8 waves. In each wave, 515 Iranian adults aged 18 years or older will be randomly selected and interviewed by phone. The study waves will be performed at approximately weekly intervals. The survey tool is adapted from COSMO (COVID-19 Snapshot MOnitoring) study. This study will provide information on trends of knowledge, risk perception, preventive behaviors, psychological problems, essential needs, and public trust among Iranian adults during COVID-19 epidemic.

Discussion: The key findings of each wave will be immediately reported to the National Headquarters for Coronavirus Control to set better policies for disease control and prevention. Moreover, if a message is extracted from the results of this study that needs to be communicated to the public, it will be done through the mass media.

Keywords: COVID-19, Knowledge, Risk perception, Preventive behaviors, Psychological problems, Public trust

Conflicts of Interest: None declared
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Introduction

In December 2019, the new Coronavirus was detected in patients with viral pneumonia in Wuhan, China, by the China Centers for Disease Control and Prevention (1), and it was named as COVID-19 by the World Health Organization (WHO) on February 2020 (2). However, the rapid and sudden increase in the number of cases in Wuhan and some other provinces in China and outside China prompted the WHO to declare COVID-19 as a pandemic on March 11, 2020 (3). The first confirmed cases of COVID-19 in Iran were officially reported on February 19, 2020 (4). The identified cases rapidly increased, so that on March 19, 2020 the number of laboratory-confirmed cases reached 18 407 and

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↑What is "already known" in this topic:
Understanding population behaviors is the key element to stop the spread of COVID-19 during the pandemic.

→What this article adds:
COVID-19 Population Survey of Iran (COPSIR) is a repeated national cross sectional survey that will be conducted in 8 waves. This study will provide information on trends of knowledge, risk perception, preventive behaviors, psychological problems, essential needs, and public trust among Iranian adults during COVID-19 epidemic.

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Table 1. COPSIR sample size for different provinces of I.R. of Iran in each week

Province	N	Province	n	Province	N
Alborz	17	Ilam	4	Lorestan	12
Ardabil	8	Isfahan	33	Markazi	9
Azerbaijan, East	25	Kerman	20	Mazandaran	21
Azerbaijan, West	21	Kermanshah	13	Qazvin	8
Bushehr	8	Khorasan, North	6	Qom	9
Chahar Mahaal and Bakhtiari	6	Khorasan, Razavi	41	Semnan	5
Fars	31	Khorasan, South	5	Sistan and Baluchestan	18
Gilan	16	Khuzestan	30	Tehran	83
Golestan	12	Kohgiluyeh and Boyer-Ahmad	5	Yazd	8
Hamadan	11	Kurdistan	11	Zanjan	7
Hormozgān	12				

1284 died of COVID-19 (5). Only behavioral change can help stop the spread of this disease, and understanding behaviors is the key to change them. Several studies have been conducted in different countries; for instance, Eurobarometer on Influenza H1N1 in EU region (6) and COVID-19 Snapshot Monitoring in Germany and other countries (e.g., Argentina, Denmark) (7, 8).

The aims of this study are to monitor knowledge, risk perception, preventive behaviors, psychological reactions, essential needs, and public trust among Iranian adult population during COVID-19 epidemic.

Methods

Study design

The COVID-19 Population Survey of Iran (COPSIR) is designed as a repeated cross sectional survey and will be conducted in 8 consecutive waves in the first week of April 2020. The study waves will be performed at approximately weekly intervals, which may be shorter or longer according to the spread of changes during this epidemic.

Study population and sampling

The study population includes all Iranian adults aged 18 years or older who have been registered in the National Integrated Health System (SIB), which includes the data of 95% of Iran's population. For each wave of the repeated survey, 515 Iranian adults will be randomly selected from SIB database proportionally to the size of each province (Table 1). Thus, the total sample size, which is assigned based on COSMO study protocol, will be 4120 participants.

Survey instrument

The study questionnaire is adapted from COSMO (COVID-19 Snapshot MOnitoring) study protocol (1, 2). COSMO study questionnaire was translated into Persian language. Then, 6 experts assessed the content validity of the translated version and modified it for COPSIR study questionnaire. Essential needs related to COVD-19 epidemic were added as a new dimension to the study questionnaire. The dimensions of COPSIR study questionnaire and the number of its items are summarized in Table 2.

Telephone interviews

In each province, at least 1 mental health officer will be trained to conduct the telephone interviews. In each week, interviewers in each province will be provided with a list of an average number of 16 to 17 randomly selected adults who live in the same or near provinces. If anyone refuses to participate or is unavailable in at least 3 phone calls, that person will be replaced by another adult from the same district. Based on the findings of the pilot study, each telephone interview takes approximately 25 to 30 minutes. The interviews will be conducted in 2 consecutive days (Sunday and Monday) in each week. The nationwide 4030 Call Center, which has recently been developed to improve public awareness and provide telephone consultations about COVID-19, will be used to facilitate the telephone interviews.

Quality control procedures

After completion of each of the 8 waves of telephone interviews, the collected data will be reviewed and the contradictory data will be identified and corrected. In addition, after each wave of interviews, national supervisors will contact at least 5% of the participants and ask a number of key questions again to compare with the reported responses.

Ethical considerations

The study protocol was approved by the ethics committee of Iran University of Medical Sciences (IR.IUMS.REC.1399.004). After providing a brief explanation about

Table 2. Dimensions and items of COPSIR study questionnaire (adapted from COSMO study)

Dimension	Number of items	Item format
Knowledge about COVID-19	45	Yes/No, MCQ
Risk perception	6	7-point Likert scale
Preventive behaviors	43	33 items Yes/No 10 items 7-point Likert scale
Psychological problems	17	7-point Likert scale
Media trust and usage	22	7-point Likert scale
Trust to responsible organizations	9	7-point Likert scale
Agreement on public policies	10	7-point Likert scale
Panic behavior/ panic buying	12	Yes/No
Rumors	1	String
Essential needs	7	7-point Likert scale

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the study objectives, interviewers will obtain verbal informed consents from all participants before the interview. All questionnaires and databases used in this study will be kept confidential.

Project implementation and management

COPSIR project was designed and will be implemented by Psychosocial Health Research Institute of Iran University of Medical Sciences, with the support and collaboration of Deputy for Health of the Ministry of Health and Medical Education and National Headquarters for Coronavirus Control.

Discussion

The findings of COPSIR project will be used for disease modelling and prediction of trend of COVID-19 in the country. After each wave of the study, a summary report and recommendations based on study findings will be presented to National Headquarters for Coronavirus. If any important message that requires public awareness is extracted from the study findings, it will be publicly announced through the mass media. Moreover, the findings will be compared with those of other countries that have used the same protocol. Finally, time series and other appropriate analysis methods will be used to analyze the trend after the 8-wave period.

Acknowledgement

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Conflict of Interests

The authors declare that they have no competing interests.

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