

Findings of COVID-19 Outbreak Investigation in a Rehabilitation Center: How SARS-CoV-2 Affects Disabled Persons

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Article Info

Received: 2022/07/28; Accepted: 2023/02/01; Published Online: 26 June 2023;

 [10.30699/jambs.31.146.291](https://doi.org/10.30699/jambs.31.146.291)

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Dear Editor

All age groups are at risk of contracting and dying of Coronavirus disease (COVID-19). However, older people and those with underlying conditions, comorbidities and disability levels are at higher risk of developing a serious illness, especially those living in enclosed spaces such as nursing homes and care centers, are more vulnerable to getting this disease, which can become fatal during this pandemic (1-5). Other reasons that make them more susceptible include population density, sharing equipment, poor public health measurements and infection controlling and close contact with roommates, which may all these factors increase the transmission rate and risk of infection (6-8). Therefore, we aimed to investigate the outbreak of COVID-19 in a chronic psychiatric rehabilitation center called Behboud center in Hamadan, west of Iran. It is a rehabilitation center with 85 women clients and 16 staff. An epidemiological investigation was conducted on April 7, 2020. All clients and staff were screened for clinical symptoms and signs. Further surveys were performed by laboratory sampling and confirmation tests by real-time polymerase chain

reaction (RT-PCR) and compiling designed questionnaires to collect more information. In response to the occurred outbreak in the rehabilitation center, the required control measures were taken, including educating staff about observing health protocols such as hand washing, physical distance, distribution of masks, and healthy packs among staff and clients. The other measures were isolating positive cases, transferring negative cases to another building, re-testing negative cases (diagnosing new cases), and continue monitoring and tracing contacts, by health experts.

The primary source of the outbreak was one of the center's staff. Totally, 65 out of 85 clients and 7 out of 16 staff were positive based on the RT-PCR test. In addition, the median age of positive clients was 46 years, and more than 80% of them were asymptomatic. The most prevalent reported symptoms were fatigue, fever, and hypoxemia. There was no death, and all patients recovered completely (Table 1).

Table 1. Demographic characteristics and clinical manifestation of COVID-19 among clients and staff in Behboud Center

Variable	Category	RT-PCR test (clients)		RT-PCR test (staff)	
		N= 85		N= 16	
		Positive N=65 (%)	Negative N= 20	Positive N= 7 (%)	Negative N= 9 (%)
Sex	Female	65 (100.0)	20 (100.0)	7 (100.0)	7 (77.8)
	Male	0	0	0	2 (22.2)
	Median (25 th -75 th)	46 (42-55)	45.5 (36-55.25)	41 (38-43)	43 (39-44)
	Year				
Age group	20-39	14 (21.5)	6 (30.0)	3 (42.9)	3 (33.3)
	40-59	44 (67.7)	11 (55.0)	4 (57.1)	6 (66.7)
	>=60	7 (10.8)	3 (15.0)	0	0
Underlying diseases	No	58 (89.2)	17 (85.0)	5 (71.4)	8 (88.9)
	Diabetes	2 (3.1)	0	0	0
	Heart disease	1 (1.5)	1 (5.0)	1 (14.3)	0
	Hypertension	1 (1.5)	1 (5.0)	0	0
	Hypothyroidism	0	0	1 (14.3)	1 (11.1)
	Diabetes and Hypertension	1 (1.5)	0	0	0
	Epilepsy	0	1 (5.0)	0	0
	Cancer and Diabetes	1 (1.5)	0	0	0
	Immunodeficiency	1 (1.5)	0	0	0
Clinical manifestations	Yes	12 (18.5)	3 (15.0)	3 (42.9)	0
	No	53 (81.5)	17 (75.0)	4 (57.1)	9 (100.0)
Typical symptoms and signs	Fever	5 (7.7)	1 (5.0)	1 (14.3)	0
	Fatigue	8 (12.3)	2 (10.0)	1 (14.3)	0
	Cough	0	0	3 (42.9)	0
	Diarrhea	1 (1.5)	0	0	0
	Hypoxemia	5 (7.7)	0	0	0
	Difficulty breathing	0	0	0	0
	Myalgia	0	0	1 (14.3)	0
Clinical condition	Outpatient	58 (89.2)		7 (100.0)	
	Hospitalized	7 (10.8)		0	
Chronic conditions of Hospitalized patients	Diabetes	1 (14.3%)			
	Cancer and diabetes	1 (14.3%)			
	Hypertension and Diabetes	1 (14.3%)			
	Immunodeficiency	1 (14.3%)			
	No	3 (42.8%)			

COVID-19 is a contagious and asymptomatic disease in most cases; therefore, we should concentrate on two sides of symptomatic and asymptomatic persons that may be contracted to the disease. Older and disabled people

living in social homes with a high transmission rate need more attention and care; workers in these places are at risk as well. Therefore, providing adequate protective equipment for residents is essential and helpful.

Consequently, there is a need to schedule a daily symptom tracking plan to diagnose patients quickly and then isolate them to reduce their contacts and prevent the spread of the disease.

Conflict of Interest

The authors declare that there is no conflict of interest.

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How to Cite This Article:

Jashaninejad R, Mirzaei M, Karami M, Keramat F, Madrakian A, Bathaei J et al. Findings of COVID-19 outbreak investigation in a rehabilitation center: How SARS-CoV-2 affects disabled persons. *J Adv Med Biomed Res*. 2023; 31 (146):291-3.

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