CSCanada
Management Science and Engineering
Vol. 14, No. 2, 2020, pp. 9-13
DOI:10.3968/11806

ISSN 1913-0341 [Print]
ISSN 1913-035X [Online]
www.cscanada.net
www.cscanada.org

The Status of Practicing COVID-19 Prevention Measures Among a Sample of Persons With Disabilities in Jordan

Ibrahim El-Zraigat[a],*

[a]The University of Jordan, Amman, Jordan.
*Corresponding author.

Received 11 October 2020; accepted 3 December 2020
Published online 26 December 2020

Abstract
The main aim of present study was to examine practicing COVID-19 prevention measures among persons with disabilities in Jordan. The sample of study consisted of 101 from various disabilities and ages. To achieve the goal of the study, the researcher constructed and designed the study tool which contained 36 items (practices) were distributed into 3 dimensions as follows: outside home measures, inside home measures, and personal daily health practices. The validity and reliability of the scale have been verified. The results indicated that the vast majority of participants were practicing preventive measures in a moderate ratio and a small number of their practices were low. The study recommended the necessity of following the COVID-19 prevention instructions to prevent the spread of the virus and avoid infection.

Key words: COVID-19 prevention measures; Persons with disabilities; Jordan

Ibrahim El-Zraigat (2020). The Status of Practicing COVID-19 Prevention Measures Among a Sample of Persons With Disabilities in Jordan. *Management Science and Engineering*, *14*(2), 9-13. Available from: URL: http://www.cscanada.net/index.php/mse/article/view/11806
DOI: http://dx.doi.org/10.3968/11806

INTRODUCTION
COVID-19 is an infectious disease caused by a newly discovered virus. Symptoms appear as mild to moderate respiratory diseases. Patients may recover without special treatment, but it may lead to dangerous consequences for the elderly. COVID-19 is mainly spread through saliva drops or secretions from the nose in case of coughing or sneezing of an infected person. It is possible to avoid infection and prevent its spread through good knowledge of the virus and how it spreads (World Health Organization (WHO), 2020). One of the best ways to prevent it from spreading or getting infected is to maintain personal hygiene, such as washing hands well, using sterilizers, and following prevention instructions (Centers for Disease Control and Prevention (CDC), 2020).

A number of studies indicated that the COVID-19 negatively affects the psychological, social and educational aspects of people, including persons with disabilities (American Psychological Association (APA), 2020; Cheng, 2020; El-Zraigat and Alshammari, 2020; and Güzel et al., 2020). To prevent the spread of the outbreak, several international agencies such as; Centers for Disease Control and Prevention (CDC) (2020), World Health Organization (WHO) (2020), and *Harvard Health Publishing* (2020) have issued a set of instructions and practices to achieve prevention and limit its spread.

Research results have reported the importance of preventive measures and the importance of health care in preventing diseases with people with disabilities. However; Kung et al., (2012) identified factors for accessing preventive health services among adults with disabilities in Taiwan. The study aimed to understand this use of preventive health services and the factors that affect it. The main conclusion of the study was that although the Taiwan Ministry of Health has provided free preventive health services for more than 15 years, the utilization rate of this care among the disabled is still low. They were reported that demographic features, health status, and type of disability are the main factors affecting the use of preventive health care services. In another study in Taiwan, Tsai et al. (2012) indicated that there were disparities in the use of preventive health care among children with disabilities. The results showed that children with severe disabilities are less likely to use preventive

care than those with moderate severity. The health preventive practices of children with disabilities from low-income families were less than other income groups. Also, urbanization has been strongly associated with receiving preventive health care. However, the overall use of preventive health care remains low among children with disabilities. The study emphasized the need for policymakers to target low socio-economic groups and to encourage education about the importance of preventive care.

Lin et al. (2018) emphasized that personal factors and personal relationships may influence the protective behavior of people to avoid influenza during epidemics. They studied how personal and personal factors influenced the adoption of NPIs and vaccine absorption during the 2009 A(H1N1) pandemic. The study concluded that interpersonal communication factors, such as social health related networks and consultations with physicians, and personal factors, such as anxiety and knowledge, play a crucial role in NPIs, vaccine absorption during epidemics, and provides methods for intervention. Ouellette-Kuntz et al. (2015) stressed that secondary prevention is extremely important for people with intellectual and developmental disabilities as they may not have the awareness about early signs and symptoms of the disease or lack opportunities related to accessibility of information about it. There results reported that Ontario adults with intellectual and developmental disabilities suffer from disparities in secondary prevention. The study recommended the importance of continuing to provide primary care and secondary prevention. In addition, the review of Heller and Sorensen (2013) found evidence that health promotion interventions, physical activity and exercise, health education and health care and screening services can play a role in reducing health disparities for adults with developmental disabilities. Also, Jensen et al. (2013) noted that inconsistent preventive care in adults with Down syndrome during 8.5-year study. This finding has been alarming, given that the negative effects of many of these conditions can be improved if they are discovered in time.

Ubani (2020) clearly discussed the importance of modern food culture in reducing the COVID-19. He also suggested that the nature of society and its response to the outbreak depends primarily on the method of information communication, people's perception, the quality of education, and the development. The Centers for Disease Control and Prevention (CDC) responded to the outbreak of respiratory diseases caused by a new coronavirus called coronavirus 2019 (COVID-19) and issued interim guidance to assist managers of public and private childcare programs and K-12 schools in planning and preventing the spread of COVID-19 between students and staff. The questions and answers document outlines the responsibilities of states towards infants, young children, children with disabilities and their families, and the workers who serve these children. It emphasized the need to cooperate with the State Educational Agency (SEA) or the local public health department, to address questions about how, what and when services should be provided to children with disabilities (US Department of Education, 2020). Furthermore, the Office for Civil Rights, US Department of Education (2020) emphasized the role of schools in disseminating information about the spread and reduction of the COVID-19. Also, focused on the importance of school officials to maintain students' safety, taking into account the requirements of federal civil rights and to respond appropriately to allegations of discrimination based on race, gender, or disability. This is in addition to the measures that must be taken to prevent possible risks of transmission of viruses in schools.

OBJECTIVES OF THE STUDY

The main aim of present study was to examine practicing COVID-19 prevention measures among persons with disabilities in Jordan. In addition to suggesting recommendations related to the results.

The rationale of studying

In a study on the psychological and social effects of the COVID-19 outbreak on people with disabilities carried out by El-Zraigat and Alshammari (2020), the results of which indicated that those surrounded by fears of the spread of the virus and infection with it. This confirms the importance of preventive measures to avoid infection or transmission of the virus. On the other hand, a number of international organizations have published instructions to prevent infection or transmission of the virus, such as; Centers for Disease Control and Prevention (CDC) (2020), World Health Organization (WHO) (2020), and *Harvard Health Publishing* (2020). Therefore, the importance of this study arises from the reality of practicing these measures among persons with disabilities. Furthermore, the current study is one of the first studies that aimed to examine the extent of using these instructions by persons with disabilities in the COVID-19 pandemic.

Participants

The sample of study consisted of 101 persons with disabilities in Jordan of various disabilities and ages.

The scale of study

The researcher was designed and developed a special scale to meet the purpose of study throughout reviewing related literature. The literature review was contained the following: Centers for Disease Control and Prevention (CDC) (2020), World Health Organization (WHO) (2020), Harvard Health Publishing (2020), Ubani (2020), and El-Zraigat and Alshammari (2020).

The scale consisted of 47 items divided into five main

dimensions. The following table shows the dimensions and the numbers of items that consisted of each one.

Table 1
Dimensions and the numbers of items that consisted of each one.

Dimensions	Number of items
Inside home measures	9
Outside home measures	8
Personal daily health practices	19
total	36

Validity of the tool:
Content validity was used to verify the appropriateness of the tool for the aims of the study, as the scale was presented to 10 experts in the fields of health care, education and psychology, and 80% were approved to accept the items.

Reliability of the tool:
The reliability of the tool was achieved by Cronbach's alpha. The following table shows coefficients for the internal consistency of the sub-dimensions of the scale.

Table 2
Internal consistency of the sub-dimensions of the scale

Dimensions	Internal consistency coefficients
Inside home measures	0.86
Outside home measures	0.83
Personal daily health measures	0.92

The Methodology of the Study:
The present study used the descriptive method to answer the following questions:

What outside home preventive measures against COVID-19 are practiced by persons with disabilities in Jordan?

What inside home preventive measures against COVID-19 are practiced by persons with disabilities in Jordan?

What personal daily preventive health measures against COVID-19 are practiced by persons with disabilities in Jordan?

DATA COLLECTION

After completing the constructing of scale which specialized for examining the extent of practicing preventive measures from COVID-19 for persons with disabilities, a special link has been established on the Internet and published on social media (Facebook, Telegram, WhatsApp ...). Cooperation was requested to re-publish it to interested persons with disabilities. The researcher explained to the participants the aim of the study and how to respond to the scale. In addition to used e-mail, WhatsApp and phone calls to answer the questions of the sample participating in the study. To estimate the degree of practicing preventive measures, the participating sample were asked to choose one of the following rates: high, moderate, low, and not at all. A two-week period was given to gather the data, and the percentages of responses of the participants were calculated to identify the status of the practice of preventive measures from COVID-19 by person with disabilities.

RESULTS

The answers in the results are organized according to the study questions as follows:

What outside home preventive measures against COVID-19 are practiced by persons with disabilities in Jordan?

Table 3
The percentages of outside home prevention measures against COVID-19 practiced by persons with disabilities

Items	The percentages of practice for outside home prevention measures			
	high	moderate	low	Not at all
Maintain a distance of 3 to 6 feet while communicating with others	25.7%	53.5%	18.8%	2.00%
Stay away from crowds and places of crowding	29.7%	50.5%	16.8%	3.00%
Avoid touching surfaces in public places	27.7%	56.4%	14.9%	1.00%
Use masks and gloves when touching surfaces when necessary	21.8%	59.4%	15.8%	3.00%
In the case of shopping, keep social spacing and with gloves and masks	31.7%	54.5%	11.9%	1.9%
Avoid visiting patients and healthcare centers	41.6%	39.6%	16.8%	2.00%
Ensure that others follow the prevention and respiratory health system	22.8%	55.4%	20.8%	1.00%
Maintain social separation when using public transport	31.7%	49.5%	16.8%	2.00%
Maintain healthy ventilation when using public transportation, such as opening windows	31.7%	48.5%	17.8%	2.00%

The ratios in the table above indicate that the vast majority of preventive practices were within the moderate and about a quarter of responses were high.

What inside home preventive measures against COVID-19 are practiced by persons with disabilities in Jordan?

Table 4
The percentages of inside home prevention measures against COVID-19 practiced by persons with disabilities

Items	The percentages of practice for inside home prevention measures			
	high	moderate	low	Not at all
Stay away from patients within the family for a distance of 6 feet.	21.8%	37.6%	24.8%	15.8%
Use of physical distance in interactions with family members.	13.9%	42.6%	23.8%	19.8%
Maintain the cleanliness of the house and surfaces, such as furniture, equipment's, and floors by using sterilizers.	32.7%	50.5%	14.9%	1.9%
Wash hands with soap and sterilizers when returning home.	39.6%	50.5%	9.9%	00.00%
Sterilization of tools used by family members.	35.6%	51.5%	10.9%	2.00%
Maintain healthy home ventilation by opening windows to ensure clean and healthy airflow.	43.6%	44.6%	10.9%	0.9%
Uses of cloth face coverings or masks and gloves in the case of family social interactions.	15.8%	41.6%	20.8%	21.8%
Avoid approaching home visitors and staying 6 feet away.	9.9%	53.5%	20.8%	15.8%

The ratios in the table above report that the vast majority of preventive practices were within the average, while the rates of lack of practice were few**.**

What personal daily preventive health measures against COVID-19 are practiced by persons with disabilities in Jordan?

Table 5
The percentages of personal daily preventive health measures against COVID-19 practiced by persons with disabilities.

Items	**The percentages of practice for personal daily preventive health measures**			
	high	**moderate**	**low**	**Not at all**
Wash hands before eating or preparing food.	43.6%	47.5%	8.9%	00.00%
Wash hands before touching the face, eyes or nose.	25.7%	61.4%	10.9%	2.00%
Wash hands after leaving public places.	38.6%	52.5%	7.9%	1.00%
Wash hands after cleaning the nose, coughing or sneezing.	33.7%	56.4%	8.9%	1:00%
Wash hands before and after changing masks and gloves.	28.7%	56.4%	10.9%	4.00%
Stay at home in case of illness.	20.8%	54.5%	19.8%	5.00%
Avoid touching the eyes, nose, and mouth without washing hands.	22.8%	57.4%	17.8%	2.00%
Eat foods that boost the immune system.	20.8%	47.5%	24.8%	6.9%
Clean the exposed surfaces with sterilizers daily.	29.7%	53.5%	14.9%	10.2%
Follow the general safety and prevention instructions issued by the relevant authorities.	29.7%	46.5%	22.8%	1.00%
Daily temperature measurement.	%3.00	18.8%	20.8%	57.4%
See doctors if symptoms of fever, cough, shortness of breath, and others appear.	32.7%	48.5%	16.8%	2.00%
Covering mouth and nose with tissues during sneezing or coughing.	37.6%	51.5%	10.9%	00.00%
Throw away cloth face coverings or masks and gloves after using them and washing hands thoroughly with sterilizers or soap.	36.6%	51.5%	11.9%	00.00%
Stay away from smoking and smokers.	32.7%	39.6%	21.8%	5.9%
Practicing sports activities.	8.9%	29.7%	36.6%	24.8%
Staying home and isolating oneself from direct contact with others.	22.8%	50.5%	23.8%	2.9%
Follow up the information issued by the official authorities about the virus and how it spreads.	20.7%	23.8%	26.9%	28.6%
Use the safety application and other smart applications to detect the virus, infection or contact with an infected person.	18.8%	25.7%	24.8%	30.7%

It is noted from the data in the table that the lowest practice was daily measuring the body temperature, while most of the responses were between moderate to high.

DISCUSSION AND RECOMMENDATION:

The results indicated that most of the responses of persons with disabilities in Jordan were within a high to moderate estimate, while a few prevention measures were practiced in a low manner. It was also noted that daily body temperature measurement was practiced to a very small degree. The practice of COVID-19 prevention measures must be taken in an integrated and holistic approach. As these measures prevent the spread of the virus and avoid infection. In general, there is an awareness of the importance of practicing preventive measures, and this was reflected by the fact that most of the responses were classified as average and a few had little practice. These results confirm the importance of the awareness role to fully practice preventive measures in a way that ensures the preservation of the safety of people and preventing the spread of COVID-19.

Based on the results, the researcher recommends the following:

Increasing the importance of awareness of practicing the preventive measures against COVID-19 in a holistic and integrated approach.

Focusing the importance of using smart applications in detecting the virus and measuring body temperatures.

Emphasizing the importance of maintaining physical distance in social interactions and public situations.

Developing awareness of the importance of using cloth face coverings or masks in social situations.

Encouraging of maintaining physical health, keeping away from patients and strengthening the immune system.

Following COVID-19 prevention instructions issued by the Ministry of Health and other responsible authorities.

REFERENCES

American Psychological Association (APA). (2020). *How COVID-19 impacts people with disabilities: Research shows people with disabilities are at risk for mental health problems.* Retrieved from https://www.apa.org/topics/covid-19/research-disabilities.

Centers for Disease Control and Prevention (CDC). (2020). coronavirus disease 2019 (COVID-19): How to protect yourself & others. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html.

Cheng, X. (2020). Challenges of "School's Out, but Class's On" to School Education: Practical Exploration of Chinese Schools during the COVID-19 Pandemic. Online Submission. *Science Insights Education Frontiers, 5*(2), 501-516.

El-Zraigat, I., & Alshammari, M. (2020). The Psychological and Social Effects of COVID-19 Outbreak on Persons with Disabilities. *Canadian Social Science, 16*(6).

Güzel, P., Yildiz, K., Esentas, M., and Zerengök, D. (2020). "Know-How" to Spend Time in Home Isolation during COVID-19; Restrictions and Recreational Activities. *International Journal of Psychology and Educational Studies*, 7(2), 122-131.

Harvard Health Publishing. (2020). *Preventing the spread of the coronavirus: Social distancing, hand washing, and other preventive measures.* Retrieved from https://www.health.harvard.edu/diseases-and-conditions/preventing-the-spread-of-the-coronavirus

Heller, T. and Sorensen, A. (2013). Promoting healthy aging in adults with developmental disabilities. *Developmental Disabilities Research Reviews*, *18*(1), 22-30.

Jensen, K. M., Taylor, L. C., and Davis, M. M. (2013). Primary care for adults with down syndrome: Adherence to preventive healthcare recommendations. *Journal of Intellectual Disability Research*, 57(5), 409-421.

Kung, P., Tsai, W. and Li, Y. (2012). Determining factors for utilization of preventive health services among adults with disabilities in Taiwan. *Research in Developmental Disabilities: A Multidisciplinary Journal*, *33*(1), 205-213.

Lin, L., McCloud, R., Jung, M., and Viswanath, K. (2018). Facing a health threat in a complex information environment: A national representative survey examining American Adults' behavioral responses to the 2009/2010 A (H1N1) Pandemic. *Health Education & Behavior*, *45*(1), 77-89.

Office for Civil Rights, US Department of Education. (2020). *Fact sheet: Addressing the risk of COVID-19 in schools while protecting the civil rights of students*. Office for Civil Rights, US Department of Education.

Ouellette-Kuntz, H., Cobigo, V., Balogh, R.; Wilton, A. and Lunsky, Y. (2015). The uptake of secondary prevention by adults with intellectual and developmental disabilities. *Journal of Applied Research in Intellectual Disabilities*, *28*(1), 43-54.

Tsai, W., Kung, P. and Wang, J. (2012). Disparities in the use of preventive health care among children with disabilities in Taiwan. *Research in Developmental Disabilities: A Multidisciplinary Journal*, *33*(2), 324-333.

Ubani, K. (2020). COVID-19, Culture and public health conditions in developing countries: Prevention is better than cure. *Canadian Social Science, 16*(4), 14-19.

US Department of Education. (2020). Questions and answers on providing services to children with disabilities during the coronavirus disease 2019 outbreak. *US Department of Education*.

World Health Organization (WHO). (2020). Coronavirus disease (COVID-19) advice for the public. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public.