

The assessment of lifestyle change due to COVID-19 pandemic in northern Iraq

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ABSTRACT

The aim of this study was to assess the effect of *Coronavirus* disease-19 (CoVID-19) on body and daily activity in Kurdistan Region, Iraq. This study was conducted among 320 participants using an online application. The questionnaire included items related to negative impact of CoVID-19 on daily life. The weight gaining included little (46 %) and severe (25 %). Sleep disturbance was less affected (24 % little and 8 % severe). The impact on daily living routines included 38 % little and 50 % severe ($p=0.04$). Notably, 47 % ($p=0.001$) of participants had severe decrease in daily output ($p=0.041$). The quarantine and disturbed lifestyle during COVID-19 caused significant changes in body and daily activity or output in Northern Iraq.

Keywords: Corona virus disease-19, mass media, public awareness, lifestyle

INTRODUCTION

Since December 2019, there has been an outbreak of pneumonia of primarily unknown origin [1]. Following the outbreak, a novel coronavirus was identified as the cause of the pandemic by World Health Organization (WHO) [2]. By

12th February 2020, there were 43103 confirmed cases of *Coronavirus* disease-19 (CoVID-19) or severely acute respiratory syndrome CoV-2 (SARS CoV-2), out of which 99.1 % were from China [3]. This was a major public health disaster for China [4]. CoVID-19 was reported to have the possibility of transmission from animals to

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human being [5]. Although with unknown source, the CoVID-19 infection has been associated with contact with a local seafood vendor in Wuhan that illegally sold wildlife animals including bats [6]. The SARS pandemic caused more than 11.5 million infections and 535,463 deaths worldwide [7,8]. The SARS epidemic was controlled within eight months [2]. Moderate-to-severe Post-Traumatic Stress Disorder was also reported among the population in areas severely affected by the SARS epidemic [9]. Risk factors such as being female were associated with a higher risk of developing SARS-related Post-Traumatic Stress Disorder [9]. Similarly, Middle East respiratory syndrome (MERS), H1N1 and Ebola epidemics had a tremendous impact on mental health, including depression and substance use disorders [8]. Additionally, the populations also experienced high death rates, resource and food insecurities, and discriminations against infected individuals, which also acted as additional causes for the high levels of mental health disorders [8]. The effects of CoVID-19 on mental health and population life quality haven't been entirely elucidated. Some recent studies published in the Lancet have reported the clinical symptoms of patients with CoVID-19 [8,10,11]. The aim of our study was to identify the effect of CoVID-

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19 on weight, sleeping pattern, daily life activity and output of the inhabitants of Kurdistan Region, Iraq.

MATERIALS AND METHODS

Research design

The study was a descriptive, cross-sectional design conducted in Kurdistan Region of Iraq. Kurdistan is an independent region in the North of Iraq, consisting four major cities: Erbil, Duhok, Sulaimani and Halabja. It is inhabited by 5 million individuals of different ethnic backgrounds (Kurds, Arabs, Turkmen, and other minorities). This region is run by Kurdistan Regional Government (KRG), which is an independent government accredited by the Iraqi Central Government.

Time spanning and participants

This study was carried out during 2020, with CoVID-19 spread throughout Kurdistan region, Iraq. Quarantine was strictly implemented, and the individuals respected the rules in the region. A total of 500 individuals were selected randomly, by selecting the first 20 names of each letter in the Arabic Alphabet. However, only 320 individuals agreed to participate in the study. A self-report questionnaire was sent to each subject via an online application. The aim and process of the study was thoroughly

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explained to each of them in their native language. The questionnaire consisted of items related to negative impact on daily life (none, little, always) depending on Likert scale. The negative impact of CoVID-19 on daily output (none, little, always) was also assessed.

Inclusion and exclusion criteria

The participants who were added expressed interest to join the study and they accessed to one of the online applications used. Additionally, they all had the age of >18 years. Individuals with history of psychological disorder were excluded from the study.

Ethical considerations

The study was approved by Ethics and Scientific Committee of Kurdistan Board of Medical Specialties. The researchers were committed to keep the information confidential and use these data for this study only. Participants were informed to

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have the right to withdraw at any time of the study.

Data analysis

The data were analyzed through the application of SPSS (Statistical Package for Social Science, version 26, 2019) program, and included descriptive statistical analysis, frequency and chi-square.

RESULTS

The weight gaining was noticed by the participants, which was classified as little effect (46 %) and severely affected (25 %) ($p=0.05$). However, sleep disturbance were less affected, 24 % with little affect and only 8 % severely affected. The impact on daily living routines was 38% as little and 50 % have severely impaired daily activity routines ($p = 0.04$) (Tables 1 and 2).

Table 1. Negative impacts of COVID-19 on daily life

	Ages group	None	Little (low)	Very (always)	P-value
Impact on weight gain	18-24	43	42	28	0.05
	25-30	10	9	6	
	31-36	16	33	25	
	37-42	12	24	8	
	42 or older	12	38	14	
	Total	93 (29 %)	146 (46 %)	81 (25 %)	
Impact on decreased sleeping	18-24	86	22	5	0.4
	25-30	15	6	4	
	31-36	50	20	4	
	37-42	26	13	5	
	42 or older	42	16	6	
	Total	215 (67 %)	77 (24 %)	24 (8 %)	
Impact on daily living routines	18-24	15	41	57	0.04
	25-30	2	11	12	
	31-36	3	27	44	
	37-42	0	14	30	
	42 or older	6	27	31	
	Total	26 (8 %)	120 (38 %)	174 (50 %)	

Decreased daily output in a severe form and minor degree was 47 % and 37 %, respectively ($p = 0.001$) (Table 2).

DISCUSSION

Local and National Health authorities have legislated special guidelines and recommendations during this pandemic which has resulted in numerous restrictions on daily living including distancing, isolation and home confinement. On the other hand, absence of treatment and vaccine against CoVID-

19 with frequent change in these guidelines during the pandemic caused psychological distress among individuals. Self-quarantine, lockdown and stay home orders were ordered from the beginning by health authorities, government and both national and international health organizations. Individuals were deprived from going to fitness centers, moving around because of their confinement in their home.

Table 2. Negative impacts of CoVID-19 on daily output

Impact on daily output	Education level	None	Little (low)	Very (always)	P-value
	Highschool	3	3	4	0.001
	Undergraduate	19	32	50	
	Postgraduate	26	76	84	
	Others	4	6	13	
	Total	52 (16 %)	117 (37 %)	151 (47 %)	

Gaining the weight was noticed among the participants, 71 % (both little and severe) (p-value 05 %). The impact on daily living routine was more severe, 88 % have impaired daily activity (little and severe) (p = 0.04). These findings are agreed with Wuhan and WHO reports about CoVID-19; It is well-established that news coverage can have a significant impact on individuals behavior and life pattern (weight, sleep, daily living, and daily routine output) [12]. These findings are compatible with Australian campaign and others against CoVID-19 [13,14]. In our study, gaining weight and disturbed daily living were more in young age group, while decreased sleep was more prevalent among older participants. This is because of inability to have daily sports and physical activity as they did before the quarantine period. We suppose that eating disorders, loss of daily physical activities and psychological upsets

were the main causes behind gaining weight and change in the body images of the individuals which added another burden on the psychosocial behavior derangement. However individuals were home confined and psychologically deprived, they worked fulltime e.g. taking care of children and sick family members. Loss of the work of individuals and loss of governmental support to the individuals with stoppage of giving salary by the government added more stress and deprived individuals from good quality of food. Decreased daily output was noticed in 84 % of the participants (p = 0.001). This is in agreement with others [15] which explained by isolation and home confinement that alters physical activity and eating behaviors. Because more sitting, disturbed eating style and eating out of control, more snacks in between meals and number of meals is increased because of

family gatherings [16]. However, like other infectious diseases, staying in hospital addition to crowded population facilitate the transmission of the viruses [17-20]. Urgent actions and new strategic measures should be initiated to modify the negative impact on lifestyle behaviors that have manifested during the CoVID-19 confinement.

CONCLUSION

Quarantine and disturbed lifestyle during CoVID-19 resulted in significant daily life activity and daily life out among healthy subjects in North of Iraq. However, home stay was an advantageous strategy to prevent the spread of the infection.

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