

Life Style Changes Related to Covid-19 - Quarantine among Academic Teachers of Salahadin University

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ABSTRACT

Introduction: Exposures to epidemics and Quarantine have been consistently associated with bad consequences. The impact of measures taken to contain COVID-19 on lifestyle-related behavior is undefined in Erbil academic teacher. The current study was undertaken to assess the impact of COVID-19 on lifestyle-related behaviors: eating, physical activity and sleep pattern among academic teachers of Salahadin University.

Material and Methods: An online survey was conducted among (120) the academic teacher living in Erbil, Iraq during the COVID-19 quarantine. In addition to demographic and clinical data, participant's self-reported changes in some lifestyle domains. Data were analyzed using SPSS software.

Results: A total of 120 responses (51.7% male, and 48.3% mean age 42.10 ± 8.32 years) were collected. A reduction in physical activity coupled with an increase in daily screen time was found more among men. Changes in the participants' physical activity decreased and they had a significant weight gain. With regard to sleeping habits, results indicated significant statistical differences before, during and after the pandemic, there was a marked increase in the number of sleeping hours per day.

Conclusion: In this study, sizable proportions of participants reported meaningful changes in lifestyle behaviors during the COVID-19 pandemic in Erbil. A detailed understanding of these factors can help to develop interventions to mitigate the negative lifestyle behaviors that have manifested during COVID-19.

KEYWORDS

Eating Behavior, Physical Activity, Sleep Pattern, Coronavirus, Pandemic.

Introduction

Corona Virus outbreak and epidemic CoVid-19 is the same event as a turning point in human history were remembered; because this type of viruses causing infectious diseases and they became a constant threat to human health (1). One of the best ways for the purpose of preventing transmission of these diseases is Quarantine. The separation and restriction of movement or activities of persons it will affect people's lifestyle. Widespread and prolonged closures of schools, university and businesses lead to dramatic changes in daily routines and lifestyle behaviors (2).

Harmful health behaviors, such as smoking, and overeating, excessive alcohol consumption, may be more likely to be initiated by individuals affected by economic shutdowns, quarantines and curfews (3). Immobility is one of the main causes of increasing non-communicable diseases (4).

Although the prevalence of obesity, overweight, and relate diseases has increased over the past few decades (4, 5), quarantine appears to have further affected living conditions. Because there was no previous study carried out in Erbil related to association between quarantine periods against COVID19 therefore we try to do this research to find the association between quarantine period and lifestyle changes of university teachers.

Material and Methods

Study Design

In this descriptive study through a by self-report technique through online (Google Forum), during the period of 20

March to 20 June 2020. The present analysis included data from the first week of data collection. The online questionnaire was programmed in google form and this questionnaire consist data related to socio-demographic characteristics, lifestyles of participant including weight, dietary regime, physical activities, and sleeping pattern pre, during, and post quarantine, body weight and height.

The study population included 150 staff who is working in Salahaddin University who agree to participate in the study after reading the informed consent form.

Variables and Measurements

Demographic information included age, sex, marital status, educational level, and Socio economic state.

Change in lifestyle behaviors during of the quarantine the COVID-19 pandemic as compared to habitual, previous ones and its effects on lifestyle after quarantine was self-reported with using questions; and response options were measured using a number for each option. Questions that read as 'Did you have dietary regime (balance food eating)?'; 'Did you have regular physical activities regime?' and 'what was your Sleeping pattern?'

Health assessments were performed by comparing changes in weight and living conditions.

Statistical Analysis

Data were examined using statistical package for social sciences (SPSS) version 22 (SPSS Inc. Chicago, IL) for windows. Frequency, Percentage, Mean and Standard deviation of data were calculated. Then Repeated measures statistical test was used for weight variable and also Fisher test was used to compare variables. P value < 0.05 was considered statistically significant.

Ethical Aspects

The study was approved by the Ethics Committee at the Hawler Medical University, Erbil, Iraq. The survey was anonymous (no identification -name, city or IP address was collected) and participants read the consent form and confirmed their interest on participating in the first screen of the online questionnaire.

Results

The online survey was conducted between 20March to 20June 2020. Overall, 150 questionnaires were initiated, and all those individuals provided informed consent. However, 30 were not eligible for the study or preferred not to answer if they were self-isolated or not and were excluded. Thus, our final sample included 120 individuals. This 120 person have been included in the study, aged between 22 and 57 years that mean age was 42.10 ± 8.32 years. 62 men (51.7%) and 58 women (48.3%) participated in this study. In terms of degree, only one person had a bachelor's degree, 53 (44.2%) had a master's degree and 66 (55%) had a PhD. 15 (12.5%) were single and 105 (87.5%) were married. In terms of socio-economic status, 108 people (90%) had average status and 12 people (10%) had excellent status (**Table 1**).

The Repeated measure test showed a statistically significant difference in weight changes among the three times measured, which showed during the COVID-19 Quarantine academic teachers had higher weight($p < 0.001$). The weight changed in each period are shown separately in **Table2**.

According to Greenhouse-Geisser test results, there is a significant relationship between gender and consecutive weight measurements ($p = 0.005$) but no significant relationship seen between Educational degree, marital status, socioeconomic status, age, height and consecutive weight measurements ($p = 0.076$, $p = 0.345$, $p = 0.540$, $p = 0.827$, $p = 0.607$; respectively).

With regards to eating habits, more than half of the participants didn't have a balanced Diet during this COVID-19 pandemic which evaluated during the early period of COVID-19 Quarantine. Results showed that there is a significant relationship between eating habits among before, during and after COVID-19 Quarantine ($p < 0.001$).

We then analyzed physical activity by time. When we looked at the differences in times of minutes of doing regular physical activities per week, most of the participants spent less than 4 hours per week doing physical activity, but this is not different significantly ($p=0.755$).

Changes in the participants' physical activity during and after quarantine, which decreased and a significant difference was seen between the frequency of having regular physical activities and Types of regular physical activities ($p=0.003$, $p<0.001$; respectively).

Before COVID-19, 65.8% of participants spent their time walking compared to 64.2% during quarantine, however, this percentage significantly dropped to 61.7% after quarantine ($p<0.001$).

With regard to sleeping habits, results indicated significant statistical differences before, during and after the pandemic, there was a marked increase in the number of sleeping hours per day ($p<0.001$). A comparison of people's lifestyle in detail in all three periods (pre, during and past of quarantine) is shown in **Table 3**.

Table 1. Socio-demographic characteristics of the study

		Frequency (n)	Percent (%)
gender	Male	62	51.7
	Female	58	48.3
Educational Degree	Bachelor	1	0.8
	Master	53	44.2
	PhD	66	55
Marital Status	Single	15	12.5
	Married	105	87.5
Socioeconomic Status	Medium	108	90
	High	12	10

Table 2. Repeated measure analysis of Weight before, during and after COVID-19 Quarantine

Weight	Before	During	After	P-value
Mean (SD)	73.47 (11.75)	78.25 (23.67)	74.20 (11.55)	< 0.001

Table 3. Eating and lifestyle habits pre, during and after COVID-19 Quarantine

Frequency (%)		Before	During	After	P-value
Having Balance food eating	Yes	44 (36.7)	38 (31.7)	46 (38.3)	< 0.001
	No	76 (63.3)	82 (68.3)	74 (61.7)	
Having regular physical activities	Yes	46 (38.3)	38 (31.7)	33 (27.5)	0.003
	No	74 (61.7)	72 (68.3)	87 (72.5)	
Place of doing regular physical activities	House	56 (46.7)	103 (85.88)	78 (65)	0.005
	Club	38 (31.7)	0	5 (4.2)	
	Others	26 (21.7)	17 (14.2)	37 (30.8)	
Types of regular physical activities	Walking	79 (65.8)	77 (64.2)	74 (61.7)	< 0.001
	Jogging	0	0	6 (5)	
	Swimming	14 (11.7)	8 (6.7)	8 (6.7)	
	Others (Not Fixed)	27 (22.5)	35 (29.2)	32 (26.7)	
Time of doing regular physical activities per week	< 4 hours	56 (46.7)	70 (58.3)	81 (67.5)	0.755
	> 4 hours	64 (53.3)	50 (41.7)	39 (32.5)	
Sleeping pattern: Number of hours per day	< 4 hours	18 (15)	18 (15)	12 (10)	< 0.001
	4 to 8 hours	74 (61.7)	72 (60)	75 (62.5)	
	> 8 hours	28 (23.3)	30 (25)	33 (27.5)	
Time you go to the bed	During 11 PM	33 (27.5)	27 (22.5)	22 (18.3)	< 0.001
	After 12 AM	73 (60.8)	79 (65.8)	85 (70.8)	
	Other	14 (11.7)	14 (11.7)	13 (10.8)	
Time spending in sleep	≤5 hours	8 (6.7)	13 (10.8)	18 (15)	< 0.001
	5 to 8 hours	79 (65.8)	76 (63.3)	46 (38.3)	

	> 8 hours	20 (16.7)	17 (14.2)	33 (27.5)	
	Not Fixed	13 (10.8)	14 (11.7)	23 (19.2)	

Discussion

The Prevalence of COVID-19 and measures of its containment such as quarantine has evident impact on the lifestyle related behaviors in the society (6, 7). The key findings of this study divulge certain trends in the lifestyle like eating habits and physical activity behavior. The findings indicate that Food trends have changed during quarantine. As reported in recent studies, the most important consequence of quarantine has been the reduction of outdoor activities, which in turn affects most types of physical activity (8). Also reduction in moderate intensity workout as well as leisure related activities coupled with an increase usage in daily screen. Overall, physical inactivity was comparatively higher in men. And unlike similar studies, it had nothing to do with their economic status (7). This difference can be due to geographical reasons or the sample size.

Previous studies had examined other aspects of lifestyle, such as social support, sleep pattern, and diet/nutrition (8-11). In these study aspects of lifestyle such as sleeping, eating and activity that it was shown that Changes in the participants' physical activity during and after quarantine, which decreased, as a result, they have gained weight and changed their sleeping habits.

In this regard, other studies conducted during or after situations of crisis, not specifically under quarantine, showed increased frequencies of sleeping problems, eating and activity. Studies conducted during or after situations of crisis, not specifically under quarantine, showed increased frequencies of sleeping problems (about 20% reported), eating and activity (12). Due to uncertainty about food supply during Early in quarantine, most people in the community tend to purchase processed, unhealthy food instead of fresh food (13). This uncertainty is not only directly associated with states of health and disease, but also indirectly by creating stress associated with other lifestyle behavior, such as sleep and physical activity (14).

Our results showed changes in sleep patterns during the pandemic, which is consistent with findings from Chinese and Italian studies (10, 11). Individuals with higher levels of Anxiety and especially depression showed with worse lifestyles and pronounced changes in sleep quality during the current pandemic in clinical samples (8, 15). Another hand, it seems, there is Strong associations between impaired sleep quality and lower levels of physical activity (16).

These findings suggest that variations in diet, sleep and daily activity rate have negatively impact on lifestyle. Perhaps a prospective study in this regard is not bad to investigate memory bias and social desirability. The results of this and future studies can be used to tune health recommendations issued to maintain healthy lifestyles. Based on these results, the adoption of high quality diets and Sleep regulation should be emphasized. New technologies may come to help control lifestyle in the future if they continue or create similar conditions.

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Conflict of Interest

Any of authors declare no conflict of interest.

References

- [1] Khani, M.A., SalehiRad, M., Darbeheshti, S., & Motaghinejad, M. (2020). Survival of COVID-19 patients requires precise immune regulation: The hypothetical immunoprotective role of nicotinic agonists. *Medical hypotheses*, 143, 109871.

- [2] Leigh-Hunt, N., Baggeley, D., Bash, K., Turner, V., Turnbull, S., Valtorta, N., & Caan, W. (2017). An overview of systematic reviews on the public health consequences of social isolation and loneliness. *Public health*, 152, 157-171.
- [3] Lange, K.W., & Nakamura, Y. (2020). Lifestyle factors in the prevention of COVID-19. *Global Health Journal*.
- [4] Shahverdi, E., Taheri, F., Pourmohammad, A., Shahverdi, A., Konjedi, M., Vakiloroya, Y., & Jahanbakhsh, B. (2016). Overweight in students and its relationship with the lifestyle: A cross sectional study in Birjand, 2014. *Focus on Sciences*, 2(3).
- [5] Story, M.T., Neumark-Stzainer, D.R., Sherwood, N.E., Holt, K., Sofka, D., Trowbridge, F.L., & Barlow, S.E. (2002). Management of child and adolescent obesity: attitudes, barriers, skills, and training needs among health care professionals. *Pediatrics*, 110(Supplement 1), 210-214.
- [6] Narayanan, L., Pandit, M., Basu, S., Karmakar, A., Bidhan, V., Kumar, H., & Brar, K. (2020). *Impact of lockdown due to COVID-19 outbreak: lifestyle changes and public health concerns in India*.
- [7] Chopra, S., Ranjan, P., Singh, V., Kumar, S., Arora, M., Hasan, M.S., & Baitha, U. (2020). Impact of COVID-19 on lifestyle-related behaviours-a cross-sectional audit of responses from nine hundred and ninety-five participants from India. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 14(6), 2021-2030.
- [8] Balanzá-Martínez, V., Kapczinski, F., de Azevedo Cardoso, T., Atienza-Carbonell, B., Rosa, A.R., Mota, J.C., & De Boni, R.B. (2021). The assessment of lifestyle changes during the COVID-19 pandemic using a multidimensional scale. *Revista de psiquiatria y salud mental*, 14(1), 16-26.
- [9] Xiao, H., Zhang, Y., Kong, D., Li, S., & Yang, N. (2020). Social capital and sleep quality in individuals who self-isolated for 14 days during the coronavirus disease 2019 (COVID-19) outbreak in January 2020 in China. *Medical science monitor: international medical journal of experimental and clinical research*, 26, e923921-1.
- [10] Cellini, N., Canale, N., Mioni, G., & Costa, S. (2020). Changes in sleep pattern, sense of time and digital media use during COVID-19 lockdown in Italy. *Journal of Sleep Research*, 29(4), e13074.
- [11] Yuan, S., Liao, Z., Huang, H., Jiang, B., Zhang, X., Wang, Y., & Zhao, M. (2020). Comparison of the indicators of psychological stress in the population of Hubei province and non-endemic provinces in China during two weeks during the coronavirus disease 2019 (COVID-19) outbreak in February 2020. *Medical science monitor: international medical journal of experimental and clinical research*, 26, e923767-1.
- [12] Lau, J.T., Yang, X., Pang, E., Tsui, H.Y., Wong, E., & Wing, Y.K. (2005). SARS-related perceptions in Hong Kong. *Emerging infectious diseases*, 11(3), 417.
- [13] Mattioli, A.V., & Ballerini Puviani, M. (2020). Lifestyle at time of COVID-19: How could quarantine affect cardiovascular risk. *American Journal of lifestyle medicine*, 14(3), 240-242.
- [14] Braun, C., Foreyt, J.P., & Johnston, C.A. (2016). Stress: a core lifestyle issue. *American journal of lifestyle medicine*, 10(4), 235-238.
- [15] Firth, J., Siddiqi, N., Koyanagi, A., Siskind, D., Rosenbaum, S., Galletly, C., & Stubbs, B. (2019). The Lancet Psychiatry Commission: a blueprint for protecting physical health in people with mental illness. *The Lancet Psychiatry*, 6(8), 675-712.
- [16] Stults-Kolehmainen, M.A., & Sinha, R. (2014). The effects of stress on physical activity and exercise. *Sports medicine*, 44(1), 81-121.