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Quality OF life;Health;Behavior Changes during COVID-19 Pandemic and Subsequent "Self quarantine Effects".

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The world has been in a state of a pandemic for more than a year, humanity is suffering great losses. Millions of people have died, and countries have been in proper lockdowns to stay safe which has led to the greater economic and social loss. The virus that turned the world over is referred to as the SARS COV 2 virus commonly known as the corona virus. The COVID-19 related lockdown and quarantine and home confinement might have an important impact on the quality of life worldwide including children and women confined to home or health care workers continuously working in tertiary care facility. We investigated the quality of life during the epidemic in general population in Saudi Arabia, who just returned to work, and assessed its potential influencing factors to have a better understanding of the impact of COVID-19 pandemic lockdown and home confinement. The aim of this study is to determine the quality of life during the pandemic and its effect on social life. All aspects of health including physical, mental, psychological health and general quality of life need to be assessed. Quality of life in general population before and during pandemic is topic need to be address by researcher in terms of mobility, self-care, usual activities, pain/discomfort and anxiety/depression. The study was carried out among Saudi population. Data were collected from general population using questionnaire during the period from 22 August 2021 to 10th January 2022.The study included the participation of 214 participants from both genders and different age groups in the Kingdom of Saudi Arabia. There were 174 female participants (81.3%) and 40 males (18.7%) took place in this study. The most prevalent age group was under the age of 40 years (n= 63, 29.4%) followed by the age group 25-35 (n= 61, 28.5%) while the least frequent age group was above 60 years (n= 1, 0.5%). On asking the participants whether they were satisfied with their health and how they would rate their quality of life, their answers were as follows: yes or satisfied (n= 86, 40.2%), very Satisfied (n= 102, 47.7%) Dissatisfied (n= 11, 5.1%) and neither satisfied nor dissatisfied (n= 15, 7%). Due to pandemic, they were rate quality of life very good (n= 94, 43.9%), good (n= 63, 29.4 %) poor (n= 5, 2.3 %) and neither good and nor poor (n= 52, 24.3 %). During pandemic 96 participants feel no change in their weight but 110 participants respond that there is increase in coffee intake during the pandemic. Similarly increased in smoking habits and decrease rate in social activities (n=119, 41.4%).The psychosomatic well-being of people has been interrupted by disturbing their social activities, economic and mental peace. Proper strategy and intervention are required by health authorities and there is need propose tailored interventions in order to promote appropriate health behaviors among general population for improving quality of life during the pandemic. The outcome of this research will help to direct and improve prevention and management of COVID-2019. The research will help to enhance concept hypothesis of prevention, and even behavior change during the COVID-2019 which can reduce burden of intensive and complicated COVID-2019 disease management.

Keywords: Quarantine, Weight gain, quality of life, COVID-19 pandemic, lockdown period, social, environmental, risk factors

INTRODUCTION

The recently emerging infectious disease known as Coronavirus is spreading across the world at an increasing rate. The COVID-19 (Coronavirus disease) has become a global pandemic Coronavirus 2 (SARS-CoV-2), a new member of the human coronavirus's family, was identified in 2019 as the causative agent of a new disease outbreak in China associated with severe medical

complications and even death in some cases as discussed by Huang C, Wang Y, Li X, et al. 2019.

Novel coronavirus or 2019-nCoV) disease (COVID-19) outbreak occur is one of the most chief health problems world- wide. WHO stated that COVID- 19 is the sixth Public heath disaster of global concern involved more than 300 countries .COVID-19 was found to cause a severe type acute respiratory syndrome (ARDS), which is similar to that caused by bat-SL-CoVZC45 and bat-CoVZXC21 corona viruses. It has been reported by World health organization that around 3,848,683 confirmed reported cases with 30,980,21 deaths were declared from at least 260 countries well confirmed cases have been diagnosed in number of countries and regions all over the world, most of them was in China studied by Chan-Yeung M et al. 2020.

Corona viruses (CoVs) are a group of viruses that have historically been linked to mild flu-like symptoms in humans. However, the transmission of these viruses from wild animals to humans resulted in two pandemics in the last two decades: extreme acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), also known as corona virus disease 19 (COVID19), is a recurrence of infection by SARS-related viruses that has been declared a global pandemic by the World Health Organization (WHO). SARS-CoV-2 is more contagious than prior coronaviruses and causes a more severe disease than influenza. The challenge posed by CoVs caused scientists to begin searching for therapeutics, vaccines, and diagnostics right away, resulting in laboratory contamination of animals with human or field isolates of the virus. On several occasions, the novelty of CoVs and variations in receptor binding domains of viral spike protein across different organisms proved elusive. As a prelude to viral entry into the cell, the SARS-CoV-2 receptor-binding domain (RBD) of the spike protein binds to the human angiotensin-converting enzyme 2 (ACE2) receptor. The ACE2 receptor is used by SARS-CoV to enter cells. Since the sequence homology of both ACE2 receptors differs between species, animals cannot always show human-like symptoms when infected (Hussain et al. 2020). Pathogens and hosts are in a relentless struggle to conquer each other, and evolution is a complex and ongoing interplay. Natural selection has sculpted pathogens to achieve greater virulence and pathways to escape the host immune response by random mutations. And utility instruments in Chinese adult populations. However, the impact of COVID-19 lockdown on the quality of life has not been well studied for working people, especially for those who stop working during the lockdown from epidemic. A recent study prompted more attention to the health of people who were not infected by virus but stopped working during the outbreak. Another study stated that there is increased in personal hygiene during the pandemic and has been healthy affects for being fully aware about their activities towards healthy life style discussed by Zakout YM, Khatoon F et al.2019 in their study in 2019. Because of the impact on people's mindsets, there is a clear actual need to cooperate and to improve QOL, maintaining a positive attitude, promoting a healthy lifestyle and identifying the most vulnerable categories in order to intervene as early as possible Studies shown increased in weight and coffee intake during the home confinement stated by Khatoon F, Balouch Z, et al. 2020.

Literature Review;

Pandemic COVID- 19 happen regarding as one of most aggressive outbreak occur in three close decades with uncommon viral pneumonia started in Whuhan , China and then globally. WHO declared a national emergency along with ministry of Saudi Arabia declaring it as a state emergency and directed to close the university and all educational institute till any further declaration. Preventive measure include wearing mask, not to shake hand, Use of hand sensitizer, gloves and keep social distancing of approximately 1 meter. Since 2019 till now school are closed and online education by blackboard or Microsoft team has announced to be used. The influence of self-quarantine on human have some negative effects including the more weight gain than during school year clarified by Rundle A.G et al in 2020.

Patients suffering from Covid-19 presented with many symptoms include fever, dry cough and shortness breathing. In most advance pneumonia and severe respiratory syndrome and even death can occur. Labrotarotory diagnosis of COVID- 19 basically build on molecular method PCR (real time PCR) the sample is from respiratory (throat swab, nasopharyngeal swab, sputum, endotracheal aspiration and bronchoalvoelar lavage), in severe cases stool and blood will be positive for viruses discussed by by Huang in 2020. Once the individual is diagnosed to be COVID-19 positive, it is recommended to be self- quarantine himself for at least 14 days till the symptoms resolve and recovery has noticed. Management of patient with COVID- 19 is different in case of mild clinical presentation may not need hospitalization and at home management is enough Use of herbal medicine are also has some beneficial effects for symptomatic relive along with use of anti-oxidant and vitamin use as stated by Shimaa MH et at in 202. Although the decision of monitor patient in the hospital or outpatient should made on every case separately. A recently published study reported that during the self-quarantine 45 students has noticed alteration in sleep pattern and eating behaviors' in a manner that it would lead to raised BMI during this period as mention by Pietrobelli A et al.2020.In another study stated thatthe COVID-19 pandemic represents a massive impact on human health, causing sudden lifestyle changes, through social distancing and isolation at home, with social and economic consequences. Thus, the duration of living at home in isolation or sedentary life of people within a home

may also impact on increased BMI during self-quarantine. Aim of this study is to evaluate the quality of life and also to know the various factors resulted in weight gain during the pandemic Study will help in detection of adverse effects on human during pandemic in Saudi Arabia Study has significant implication in preventing from developing long term effects coffee intake and dietary habits during the pandemic and help them in life style modification leading to healthy life. Our study has contributed to healthier nutritional recommendations and guidance for healthy life style interventions during the pandemic.

MATERIALS AND METHODS

Study design

This was an analytical cross-sectional study to spot light on the relationship between visual impairment and addiction to electronic devices use. Since the aim of the study was to determine the relationship between visual impairment and addiction to electronic devices use among Saudi, this is the suitable design for this research.

Study setting

The study was carried out among Saudi population. Data were collected from general population using questionnaire during the period from 22 August 2021 to 22 January 2021.

Data management

The data was recorded on different proforma for history, examination, investigations and microscopic assessment in raw form. Then it was entered to SPSS-16 worksheet. After clearing of data, summary was made before application of different statistical tests. Then tests were applied and results calculated.

Sampling and sample

Participants were chosen via probability simple random sampling technique. Participants were selected from the general population. The expected number of sample size was 244 participants. However, the study included 214 participants.

Inclusion criteria: General population

Exclusion criteria: age group below 15 and above 65years.

Instruments

Data collection tool was self-designed and base on latest literature. It contained the following information: (1) basic information about participants and (2) disease related information and questions about quality of life during pandemic.

Statistical analysis

Data obtained from questionnaire were entered and analyzed using SPSS program version 23 computer software. Socio-demographic data are presented using descriptive statistics as means, median, percentages and standard deviation. Independent T test and one-way Anova are used to show statistical significance among patients' characteristics and tool scores.

RESULTS

The current study aimed to examine some of the predictors of the QoL during the first wave of the COVID-19 pandemic in Saudi Arabia.. The study included the participation of 214 participants from both genders and different age groups in the Kingdom of Saudi Arabia. There were 174 female participants (81.3%) and 40 males (18.7%) took place in this study. The most prevalent age group was under the age of 40 years (n= 63, 29.4%) followed by the age group 25-35 (n= 61, 28.5%) while the least frequent age group was above 60 years (n= 1, 0.5%) as shown in Table 1.

On asking the participants whether they were satisfied with their health and how they would rate their quality of life, their answers were as follows: yes or satisfied (n= 86, 40.2%), very Satisfied (n= 102, 47.7%) Dissatisfied (n= 11, 5.1%) and neither satisfied nor dissatisfied (n= 15, 7%). Due to pandemic, they were rate quality of life very good (n= 94, 43.9%), good (n= 63, 29.4 %) poor (n= 5, 2.3 %) and neither good and nor poor (n= 52, 24.3 %) given in Table 2

Table 1: Demographic Characteristics of the Participants in the Main Safety Population.

Characteristics	Frequency	percentage
Total number of responses	214	100%
Gender		
Female	174	81.3
Male	40	18.7
Age Group in years		
10-20	30	14.0
21-30	49	22.9
31-40	61	28.5
41-50	63	29.4
51-60	10	4.7
61-70	1	.5
Education level		
Matric	14	20
Intermediate	113	18.4
University /Graduate	326	53.5
Postgraduate /Master	9	17
Nationality		
Saudi	160	75.8
Non -Saudi	54	25.2
Employment		
working at home	28	13.1
Student	48	22.4
Unemployed	49	22.9
Retiree	7	3.3
I go to the work as usual	79	45.0
I have currently suspended my job	3	1.4

Table2: Disease sign and symptoms among study group

Question About	Responses N=214	Frequency	Percentages
How satisfied are you with your Health?	satisfied	86	40.2
	very satisfied	102	47.7
	Very Dissatisfied	11	5.1
	Neither satisfied nor	15	7.0
How would you rate your quality of life?	very good	94	43.9
	good	63	29.4
	poor	5	2.3
	neither poor nor good	52	24.3
Did your lifestyle and eating habits changed during the COVID-19 pandemic period?	No, they didn't	145	67.8
	yes, it get worse	39	18.2
	yes, it improved	30	14.0

. During pandemic 96 participants feel no change in their weight but 110 participant respond that there is increase in coffee intake during the pandemic. Similarly increased in smoking habits and decrease rate in social activities (n=119,41.4%).The distribution of age groups among study participants is presented in figure 1 and table 1 shows the distribution of age groups by the gender of participants. Majority of participants were Saudi (n=160, 75%) and the rest of participants were non-Saudi (n= 60, 25.2%). There were 72 participants had diabetes (20.9%).

Regarding education status of the studied population, 17% was postgraduate, 53.3% were graduate, 18.4% had done intermediate and 20% did matriculation only.

The frequency distribution of occupation status of our studied group revealed that 13.1% of the study group were working at home or online faculty.22.4 % were student and22.9% were unemployed and 3.3% belong to business community and were retired, 45% were answered that they were going to their work as usual as before the pandemic, only 1.4% study participant has suspended their job during lockdown in Pandemic.

The marital status of participants varied, but most of them were married (n=102, 48%), divorced (n=14, 7%) and single (n= 96, 44.8%). Distribution of marital status among study participants is presented in figure 1.

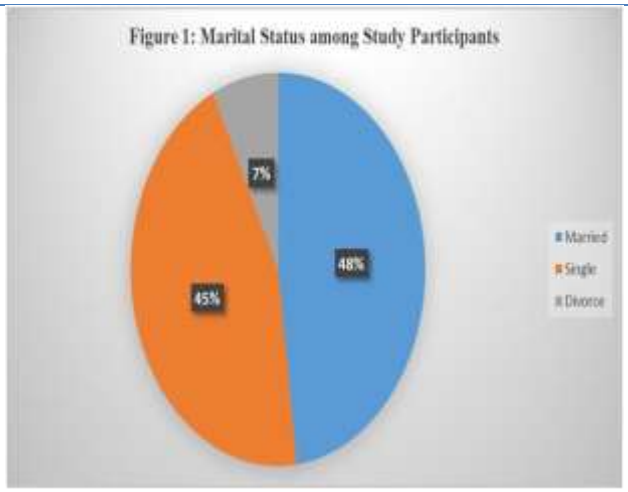

Figure I: Marital status of Study group

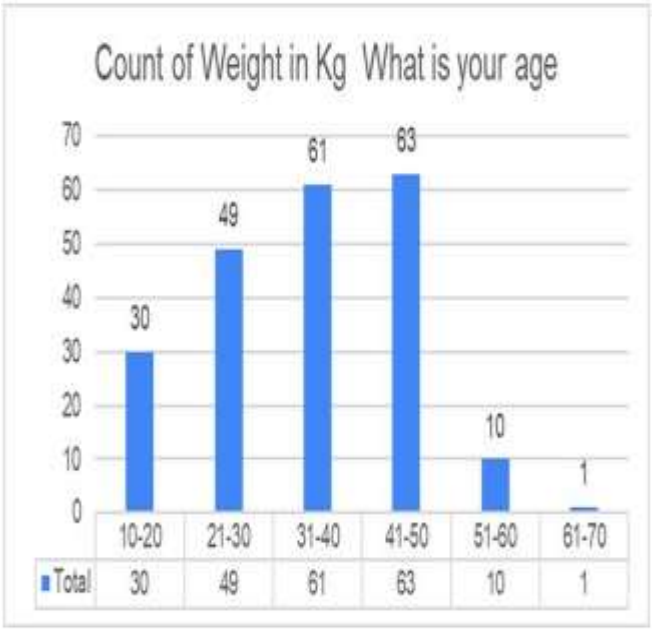

Figure 2: showing weight and age distribution among study group.

In table3 it has noticed that 54.9% of respondent has not experienced any loss or gain weight or it remain same where as 14.5% fee gain of weight during home confinement and 30.4% noticed weight gain but not as much or less than 2 kg.

Table3: Response for daily meals and drinking habits of study population.

Question About	Responses N=214	Frequency	Percentages
How much water do you drink per day?	1> لتر	126	58.9
	2 < لتر	29	13.6
	1 لتر–2 لتر	59	27.6
Did you change the number of daily meals, during this period	Yes, I eat out of the meals	8	3.7
	No, it did't /	127	59.3
	Yes, I added 1 or more of the snacks between meals	13	6.1
	Yes, I skip 1 or more of snacks between meals	23	10.7
	Yes, I skip 1 or more of the main meals breakfast , lunch, dinner	38	17.8
	yes, I added 1 or more of the main meals	5	2.3
How much coffee do you drink per day before covid-19	1-2 \ day	68	31.8
	3-4 times / day	46	21.5
	5-6 times / day	12	5.6
	more than 6 times/ day	15	7.0
	None-less than 1	73	34.1
How much coffee do you drink per day During Covid-19?	1-2 \ day	66	30.8
	3-4 times / day	44	20.6
	5-6 times / day	18	8.4
	more than 6 times/ day	15	7.0
	None-less than 1	71	33.2
Did you gain weigh during the COVID-19	No, I think I lose weight	31	14.5
	No ,it is same	96	44.9
	Yes, I think I gain a lot of weigh	22	10.3
	Yes, I think I gain not so much weight	65	30.4

Table 4: Responses for preferences of food or dish during pandemic

Question About	Food /Favorite Dish	More consumed		Less Consumed	
		Frequency	Percentages	Frequency	Percentages
During this period, which of these foods are you consuming MORE or Less During Pandemic?	Sweets	23	10.7	16	7.5
	Fishes	4	1.9	16	7.5
	Tea	9	4.2	7	3.3
	Meats	4	1.9	13	6.1
	Snacks	19	8.9	14	6.5
	Homemade pizza	5	2.3	5	2.3
	Bread	17	7.9	9	4.2
	Industrial bakery products	3	1.4	6	2.8
	Fruits/fresh vegetables /frozen vegetables/	35	16.4	36	16.8
	Coffee	12	5.6	6	2.8
	None	25	11.7	45	21.0
	Homemade pastries	10	4.7	12	5.6
	Pasta and cereals	20	9.3	8	3.7
	Nuts	15	7.0	14	6.5
	Dairy products cheese/ cow's milk and yogurt	13	6.1	7	3.3

On drinking of water 58.9 individual respond to drink less than 1 liter of water and 27.6% drink 1-2 liters of water per day and 13.6% drink greater than 2 liter of water per day. Similarly 59.3%respondent answer that they feel no change in daily meals during the pandemic.

In table IV question about diet and preferences of food has asked and individuals show different preferences during pandemic or lock down period.

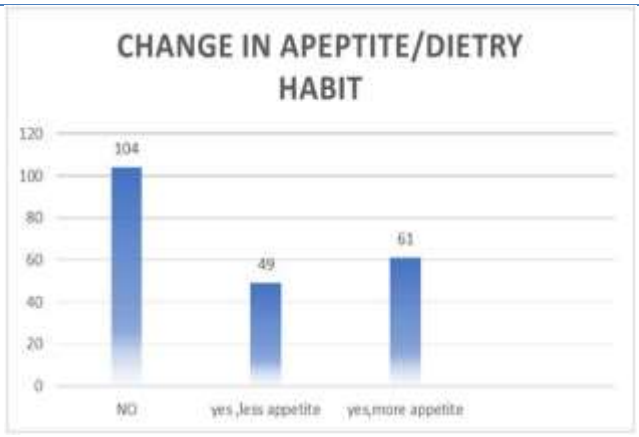

Figure3: Showing Change in Appetite among Study group.

In this figure it has shown that n=104 ,48.6% participants answer no change in Appetite while 28.5% answer more or 22.8% were experienced less appetite during the lockdown period or staying at home.

Figure 4: Showing Comparison of Extra circular activities among Study group before and during Home confinement or pandemic.

Almost 5% percent increase is shown in extra circular activities during the pandemic although they were not practice any sport before pandemic. Although not much more differences in playing games during the pandemic or no significant change is noticed among them as shown in figure IV.

But the students in the same survey pointed out that their caffeine consumption has led to sleep disorder and almost 2.28 % of the students opinioned that they cannot sleep properly after coffee consumption. Therefore, the above figure indicates that 2.7 % of the students' reported that their caffeine consumption must be controlled and limited .

DISCUSSION

Coronavirus disease 2019 (COVID-19) has had a significant impact on worldwide health and economic activity. In addition to its health and economic effects, COVID-19 has a significant impact on people's lifestyles, encompassing activities such as eating habits, and physical exercise. These changes have direct effects on body weigh .

This study not only examines the impact of the COVID-19 pandemic on eating habits , but also examines the change in the level of PA and other psychological variables such as self-esteem during the COVID-19 pandemic .

Specifically, this study had two objectives. First, it aims to compare the change in eating habits, from before to during the COVID-19 pandemic. .Second, it aims to compare the PA levels, self-esteem of the participants from before to during the COVID-19 pandemic.

The activity findings of the current study are consistent with those of previous studies.

The result significant proportion of cases are related to occupational exposure. As this virus is believed to have originated from wildlife and then crossed the species barrier to infect humans, in Wuhan, they found first documented occupational groups at risk were persons working in seafood and wet animal wholesale markets . Workers and visitors to the market comprised 55% of the 47 cases with onset before 1 January 2020, when the wholesale market was closed. In comparison, only 8.5% of the 378 cases with onset of symptoms after 1 January 2020 had a link with exposure at the market .

The results of our research indicate that who is going to work as usual 36.0% The study found gender differences 81.3% with women more at risk than persons who were currently suspended from their jobs 1.4% .

In addition, some studies indicate that increased and required health care, health care workers (HCWs) was next recognized as another high-risk group to acquire this infection. In a case series of 138 patients treated in a Wuhan hospital, 40 patients (29% of cases) were HCWs. Among the affected HCWs, 31 (77.5%) worked on general wards, 7 (17.5%) in the emergency department, and 2 (5%) in the intensive care unit (ICU). There was apparently a super-spreader patient encountered in the hospital, who presented with abdominal symptoms and was admitted to the surgical department. This patient infected >10 HCWs in the department have a positive impact on life satisfaction is sleep [18]. Recognized as an important element of human life, it strongly affects our sleep states. In addition, short sleep duration and poor sleep quality have a significant impact on lower life satisfaction levels [4]. In our research results indicating better quality of sleep before Covid-19 are 53.3% sleep <7h and 13.1% <9h in both gender 33.6% sleep between 7-9 h. After infection 51.9% sleep <7 and 16.8% <9 h and from 9-7h are 31.3%

There were 1047 replies (54% women) from Western Asia (36%), North Africa (40%), Europe (21%) and other countries (3%), which revealed that the COVID-19 home confinement has had a negative effect on all levels of PA (vigorous, moderate, walking and overall) and an increase

in daily sitting time by more than 28%. Additionally, an unhealthy pattern of food consumption (the type of food, eating out of control, snacks between meals and number of main meals) was exhibited. Only alcohol binge drinking decreased significantly [19].

In our research, 67.8% thought there were no change In lifestyle and eating habits during the Covid-19 pandemic period. On the other hand, there were 18.2% assumed that there's change in lifestyle and eating habits during the Covid-19 pandemic period, but there 14.0% supposed there is improving in lifestyle and eating habits

Eating habits are impacted during quarantine by reducing available goods, lack of the accessibility of food, grocery store limited opening hours, and consuming unhealthy food [20].

According to our results in the dietary habits section showed a significant increase in healthy food rating 6.1% added 1 or more of snacks between meals , 2.3% added 1 or more of the main meals ., while 59.3% hadn't change in their daily meals during pandemic COVID-19

The main limitation of the present study is represented by a self-reported questionnaire, which may lead to the actual misreporting of data. However, our web survey was similar to others that have been frequently employed. A strength of our study was represented by the fact that the survey was conducted among a specific group of people.

In this study, we have provided data on the Saudis population's lifestyle, eating habits during the COVID-19 lockdown. The perception of weight gain was observed in 40.7% of the population, whereas a slight increased physical activity has been reported in 23.4% of respondents, especially for bodyweight training. Moreover, 16.8% of respondents turned to fruit and vegetable farmers or organic purchasing groups. Another positive result is the percentage reduction in smokers by 1%. However, as the COVID-19 pandemic is still ongoing, our data need to be confirmed and investigated in future larger population studies.

CONCLUSION

The COVID-19 pandemic has significantly influenced various aspects of individuals' QoL, as well as their physical and psychological health. Community-based interventions are needed to mitigate the pandemic's negative effects and enhance the health and QoL of the general population.

CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

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AUTHOR CONTRIBUTIONS

FK and MR wrote first draft of the manuscript. SH, SA and AA collected data and literature. ZB, RM, AK, AD, AHE, MA, SH and AB reviewed the manuscript. FK contributed in literature search and finalized the manuscript. All authors read and approved the final version of the manuscript.

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