

## Effects of Home Confinement due to COVID-19 on Physical, Social and Psychological status of Children and Adolescents'

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### Abstract

**Background:** The rapid expansion of corona virus (COVID-19) pandemic and inability in most countries to control it in finding out an effective treatment or vaccine to prevent it, resulted in worldwide recourse to committing people to remain at home for a long time, which had many negative effects on individuals in all aspects of health. Aim of the study was to evaluate effects of home confinement during COVID-19 outbreak on the physical, social and psychosocial status of children and adolescents. A descriptive cross sectional design was used in carrying out the present study; the data were collected from a convenient sample of 183 children and adolescents' survey, which distributed electronically. The survey targeted the preparatory, secondary schools and university students send online via Egypt and Saudi Arabia portals. A structured questionnaire that consists of personal characteristics of the studied sample; plus effects of home confinement on physical activity; social and psychological status children and adolescent. The results revealed that studied subjects suffered from negative effects on physical, social and psychological status as result of home confinement. This study concluded that home confinement due to COVID-19 which has negative effect on physical status, social relations and worsening in the psychological behaviors of children and adolescents. Therefore, this study recommended to design educational interventions for children and adolescent to enable them to cope and adjust with emergency health hazards.

**Keywords:** Effects; Covid-19; Outbreak; Home Confinement; Children; Adolescents; Physical; Social; Psychological; Health

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### Introduction:

COVID-19 was first identified and documented in China 31/12/ 2019, On 30/1/ 2020, became a sixth public health emergency requiring worldwide attention and led to increasing the illness number and death recorded around the world and spread to affect above 8.000000 people (third week of June/ 2020), and 400,000 deaths. (WHO, 2020).

WHO and public health authorities were acting for controlling COVID-19 outbreak. Although recognized with hygiene care as one of the most effective measures for controlling of disease spread, social contact weakness in disastrous loss of leisure and working hours, disturbance of normal lifestyle, and stress propagation in different centuries. Restrictions more help to decreasing infection rates, as limiting participation in

physical activity, traveling and exercise forms (WHO, 2020). As a result, anxieties, defeat, panic attacking, loss or sudden appetite increasing became quietly common throughout lockdowns (Hossain and Mahub 2020).

Stress such as prolonged duration, infection fears, frustration and boredom, inadequate information, deficiency of contact, lack space of home, and financial loss could be more enduring effects (Brooks et al., 2020). Sprang & Silman (2013) found that, mean posttraumatic stress scores were 4 times higher in children had quarantined than not quarantined. Inter actions among lifestyle change and psychosocial stress by home confinement have aggravated the detrimental effect on physical and mental health.

Many people were suffer from major changes in lifestyle routine, uncertainty, and more stress, insecurity about general health, and became more worries about COVID-19 situation and duration. All adjustments in turn may affects how many hours a day could spend in sleeping (Atlenaet al., 2020).

CHEN, Shu-Ching, (2020) reported that through outbreaks of new infectious diseases, uncertainty feeling, anxiety, and panic spread, while disease is not under control. Supporting those under isolation, and healthcare became very essential. Implementing policies and strategies for decreasing the conflicts stemming related discrimination.

Decreasing physical activity and prolonged sedentary behavior are link to negative physical and mental health outcome, as muscular loss and cardiorespiratory fitness. Nonetheless, >70% of 1.6 .000000 adolescents failed to achieve sufficient physical activity in 2016. COVID-19 pandemic might further worsen this

situation. More understanding of situation of physical activity and sedentary behavior during this pandemic help teachers, parents, and Education Ministries to urgently determine and implement effective policies (Mi Xiang et al, 2020).

The nurse has important roles in prevention, control, early detection and education regarding to the pandemic of COVID 19. The nurse identifies and educates at-risk populations (of children, adolescent and immune compromised for reducing COVID-19 exposure. In addition to her roles in combats miss information's, fear and mistrust by act as a bridge to the formal health system and national authorities. Inspires positively the behavior and collective actions were observed. The nurse provide support , self-isolation and monitor the community members while ensuring delivery of food, social and medical support to prevent and control negatively influence of COVID-19 pandemic on physical, psychological and social health of children as well as the community as a whole (Ballard et al.,2020).

#### **Significance of the study:**

The lockdown consequences after epidemics outbreak had devastating effects on pediatric age group in all aspects of health for example, difficulties in access to many childhood health care services such dental services and routine outpatient services for managing chronic childhood conditions (McDonald HI et al, 2020). In addition, there are social consequences of the lockdown that are more difficult to measure. As well as the loss of learning which is more likely to affect the most disadvantaged children, is likely to have significant long-term effects, both at the individual and societal level (Ichino, 2004). There are also wider social consequences resulting from isolation and loss of interaction with other children, both for the younger age-groups and for adolescents,

many of whom are likely to experience depression and anxiety both during and many years post enforced isolation; importantly, this risk increases with the duration of isolation (Loades et al, 2020). Therefore, this study was conducted in a sample of Egyptian and Saudi children and adolescents during COVID-19 epidemic in order to effects of home confinement on their physical activity, social and psychological status; as well as examine correlations between home confinement during COVID-19 outbreak and the physical, social and psychosocial status.

### **Aim of the study:**

The present study was conducted to identify the effect of home confinement during COVID-19 outbreak on physical, social and psychosocial status of children and adolescents

### **Subject and Methods:**

#### **Research question:**

1-What is home confinement effect throughout COVID-19 outbreak on the physical, social and psychosocial status of children and adolescents?

2- Are there any correlations between home confinement throughout COVID-19 outbreak and the physical, social and psychological status?

#### **Subjects and methods:**

##### **Design:**

A descriptive cross sectional design using in carry out our investigation.

##### **Study setting:**

Data were collected from the survey was distributed electronically through Google Drive link; meanwhile, social media was used to distribute the link with a small message which explained

the aim of the study and the qualifications of the researchers. The survey was targeted the preparatory, secondary schools and university students living in Egypt and Saudi Arabia.

### **Subjects and sampling:**

The study was conducted using a convenient sample of 183 children and adolescents who accepted to participating and whose had responds to complete survey during the period of sharing (from 12<sup>th</sup> May to 12<sup>th</sup> June, 2020).

### **Tools of data collection:**

Self-administered online questionnaire was developed by the researchers after reviewing relevant scientific literature and articles in periodicals to collect the required data. The survey was then reviewed and edited by three experts in Nursing. It consisted of four main parts:

#### **Part 1: Personal and socio-demographic characteristics of the studied children and adolescents:**

This part of the questionnaire included sex, age, residence, educational level of the study subjects and their parents as well as parents' work.

#### **Part 2: Effect of home confinement on the physical status of the studied children and adolescents:**

This part of tool was developed to assess the effect of home confinement on physical status. It covers 4items: physical activities, appetite, changes in body weight and implementing health practices to prevent infection with Covid-19.

### **Part 3: Effect of home confinement on the social status of the studied children and adolescents:**

This part of tool was developed to assess the effect of home confinement on social status. It include 4 items: (1) contact with peers, friends and teachers, (2) family relationships, (3) family financial losses, (3) school performance and on line education and (4) leisure time including watching television , social game and contact through social media on a 3-point Likert scale "increased, decreased and no effect" scored 3, 2 and 1 respectively.

### **Part 4: Effect of home confinement on the psychological status of the studied children and adolescents:**

The tool in this part is used to cover home confinement effects on psychological status and it consists of 12 items. Response options were use 5 point Likert scale (5=decreased significantly, 4=decreased, 3=no effect and 2=increased and 1=increased significantly). A sum score was calculated by adding all the items, ranging from 20 to 100. There are three categories: negative effects >60%, no effects 40-60%, and positive effects <40%.

#### **Content validity and reliability:**

Validity tools were assessed by asking panel of three experts from academic staff ( Faculty of Nursing, Zagazig University) (Psychiatric and Mental Health Nursing, Pediatric Nursing, and one Community Health Nursing, Assiut University), for revising our tools, applicability, relevance, comprehensiveness and understanding. Recommendations taken into consideration. Tool Reliabilities were tested by researcher for the internal consistency. They showed accepted reliability with Cronbach alpha coefficients 0.79.

### **Ethical consideration:**

Inclusion into the study was entirely on a voluntary basis and participants who agreed to include in the study were reassured that all information obtained are confidential and secure. The participants informed that, all data would use only for our study purpose and they answers are anonymous and confidential according to Google's privacy policy (<https://policies.google.com/privacy?hl=en>) and do not mention own names or contacts data. And they could stop participating and leaving questionnaire at time.

#### **Pilot study:**

A pilot study was conducted on 20 children and adolescents to test applicability, feasibility and practicality of the tools. The pilot sample was the first 20 respondents after sharing the survey platform. Some corrections were done to our tools and participants shared in the pilot study were excluded from studied samples, then necessary modifications were made and the questionnaire was reconstructed.

#### **Data Analysis:**

Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. As well as used number and percentage, mean and SD to summarize a dataset with a single number to represent a "typical" data point from the dataset. Correlation coefficient is a statistical measure of the strength of the relationship between the relative movements of two variables. Linear regression model is a linear approach to modeling the relationship between a scalar response and one or more explanatory variables.

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**Table (1): Distribution of studied subjects according to demographic data (N=183):**

**Table (1)** reveals that mean age of studied subjects was 15 year, 69.9% of them were female and 63.4% of them were Saudi, while more than one third (36.6%) was Egyptian. As for the residence, the vast majority (92.4%) from urban area, more than half (57.4%) had obtained secondary school education. With regard to job attainment (71% & 67.2% of fathers & mother respectively) get a job; meanwhile, the majority (82.5%) of studied subjects had enough income.

**Table (2)** shows that (16.4%) of studied subjects' their physical activity level not affected, nearly two thirds (61.8%) mentioned a restriction for participation in housework; moreover, most of them (73.2%) suffered from irregular sleeping. According to level of appetite only 15.8% of them not affected, but the remaining highest percentage affected. About two thirds (61.2%) of subjects reported change in body weight, while more than one fifth (21.4%) reported increase in body weight. Also it was not able that more than half (55.7%) of subjects' commitment to apply all instructions about protection from infection with corona as known.

**Table (3)** revealed that nearly one third ( 32.8% & 32.8% respectively) of studied subjects had high and moderate lack of direct contact with colleague, 39.4% had high lack direct contact with friends and 44.3% had high lack direct contact with their teachers. Meanwhile, more than half of them (51.9%) increased family bonding; however less than half (45.9%) suffered from financial loss. According to students' online education, the majority (72.7%) depended on online education. A little bit good percentage (29.5%) get the highest

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**Results:**

benefits level of virtual learning than traditional. The great majority (93.4%) of them mentioned using social media, while 63.4% mentioned significantly increase in television watching habits.

Table (4) demonstrates the psychological effects, the dominant mean score was (4.11, 4.10 & 4.03 respectively) lack of enjoy to things around them and feeling bored, blame themselves for neglect of protection. Meanwhile, the mean score of angry and irritable due to the current conditions consider high (3.93), as well it was noticed that, 3.89 mentioned a feeling punished due to the current condition of home confinement. In additions to (3.27&3.68 respectively mean score, were fear from infection & fear about they may became the source of infection to family members.

Figure (1) illustrates that the vast majority( 80.8%) of studied participant's suffered from negative effects on physical status because home confinement due to COVID-19, while the majority (73.8%) their social status affected negatively, Moreover, a high percentage (81.5% ) their psychological status affected negatively as for home confinement due to COVID-19 .

Table (5) indicates that educational level of studied subjects, educational level of father, and mother had high significant predictors effect on dependent variable at p value <0.01. Meanwhile the age, nationality, residence and income had slight significant predictors effect on physical as dependent variable at p value <0.05.

Table (6) Revealed that gender and family income had high significant predictors effect on dependent variable at p value <0.01. While, residence,

educational level of studied subjects, educational level of father and mother had slight significant predictors effect on social effect as dependent variable at p value <0.05.

Table (7) Represented that age, educational level and income had high significant predictors effect on dependent variable "psychological effect" at p value <0.01. While, Nationality, educational

level of father and mother had slight significant predictors effect on psychological effect as dependent variable at p value <0.05

Table (8) Reported that there was high significant positive correlation between physical domain, social domain and psychological domain at p value less than 0.01.

**Table (1): Distribution of studied subjects according to demographic data (N=183):**

Items	N	%
<b>Age /years</b>		
9- <12	14	7.6
12-<16	56	30.6
16-<19	105	57.4
19-21<	8	4.4
<b>Mean± SD</b>	<b>15.86±4.7</b>	
<b>Gender:</b>		
Male	55	30.1
Female	128	69.9
<b>Nationality:</b>		
Egyptian	67	36.6
Saudi	116	63.4
<b>Residence:</b>		
Rural	14	7.6
Urban	169	92.4
<b>Educational level:</b>		
Primary	14	7.6
Preparatory	56	30.6
Secondary	105	57.4
Baccalaureus	8	4.4
<b>Educational level of father:</b>		
Read & write	18	9.8
Preparatory	20	10.9
Diploma	36	19.7
Bachelor's	87	47.5
Postgraduate	22	12.1
<b>Educational level of mother:</b>		
Read & write	20	10.9
Preparatory	32	17.5
Diploma	52	28.4
Bachelor's	64	34.9
Postgraduate	15	8.3
<b>Fathers' job:</b>		
Work	130	71
Not work	53	29
<b>Mothers' job:</b>		
Work	123	67.2
Not work	60	32.8
<b>Income:</b>		
Enough	151	82.5
Not enough	32	17.5

**Table (2): Distribution of studied subjects according to physical effects of home confinement due to COVID-19 (N=183):**

Items	N	%
<b>Physical activity :</b>		
Significantly increased	18	9.8
Increased moderately	22	12
decreased significantly	65	35.5
It decreased moderately	48	26.2
Not affected	30	16.4
<b>Type of activity:</b>		
Exercise without sports equipment	50	27.3
Using sports equipment	20	10.9
Restricted to participating in housework	113	61.8
<b>Sleeping habits:</b>		
Regular	37	20.2
Irregular	134	73.2
Disturbing nightmares	12	6.6
<b>Regularity in meals</b>		
Regular	139	75.9
Irregular	44	24.1
<b>Appetite:</b>		
Significantly increased	27	14.8
Increased moderately	41	22.4
Decreased significantly	30	16.4
It decreased moderately	56	30.6
Not affected	29	15.8
<b>Changes at body weight:</b>		
Yes	112	61.2
No	71	38.8
<b>If yes; type of change* (N=112)</b>		
Significantly increased	24	21.4
Increased moderately	68	60.7
Decreased significantly	5	4.5
It decreased moderately	15	13.4
<b>Hand washing:</b>		
Mean of times before COVID-19		4.8±2.6
Mean of times after COVID-19		9.2±1.8
<b>Committed to apply all instructions regarding protection from infection with corona as known:</b>		
Significantly increased	102	55.7
Increased moderately	58	31.7
Decreased significantly	2	1.1
It decreased moderately	13	7.1
Not affected	8	4.4

Percentage calculated from those who answered yes

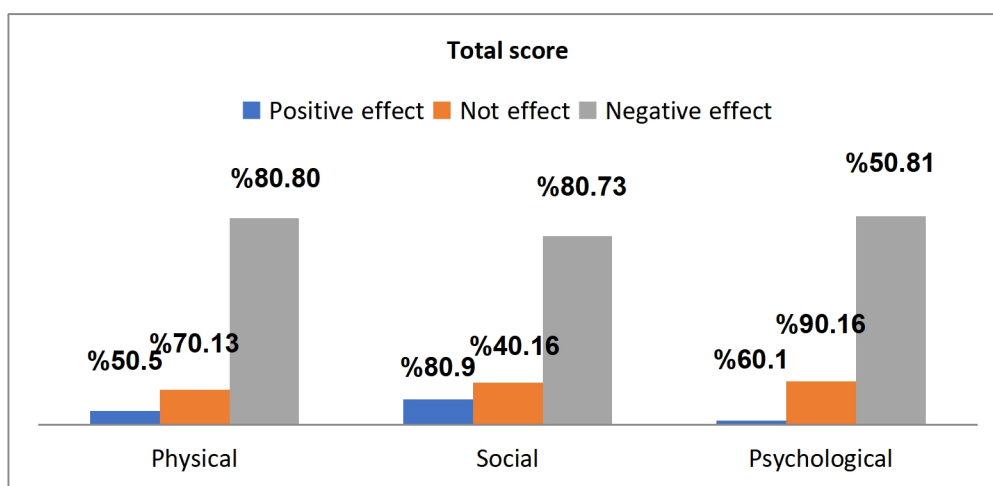
**Table (3): Distribution of studied subjects according to social effects of home confinement due to COVID-19(N=183):**

Items	N	%
<b>Lack direct contact with colleague:</b>		
High	60	32.8
Moderate	60	32.8
Not affected	63	34.4
<b>Lack direct contact with friends:</b>		
High	72	39.4
Moderate	64	34.9
Not affected	47	25.7
<b>Lack direct contact with teachers:</b>		
High	81	44.3
Moderate	90	49.2
Not affected	12	6.5
<b>Relationship between family members:</b>		
Increased family bonding	95	51.9
Decrease family bonding	18	9.8
Not affected	48	26.3
I was exposed to verbal violence	16	8.7
I was exposed to physical violence	6	3.3
<b>Family financial loss:</b>		
High	24	13.1
Moderate	60	32.8
Not affected	99	54.1
<b>Online education:</b>		
Yes	133	72.7
No	50	27.3
<b>Preferring online education:</b>		
Yes	44	24.1
No	139	75.9
<b>Virtual learning high benefits than traditional learning:</b>		
Yes	54	29.5
No	129	70.5
<b>Watching Television habits:</b>		
Significantly increased	116	63.4
Decreased significantly	14	7.6
Not affected	53	29
<b>Type of games:</b>		
Individual game	60	32.8
Multiplayer game	123	67.2
<b>Using social media:</b>		
Yes	171	93.4
No	12	6.6



**Table (4): The mean score of studied subjects according to psychological effects of home confinement due to COVID-19(N=183):**

Items	Mean	S.D
Fear from infection	3.27	1.7
Fear about he may became a source of infection to family members	3.68	1.63
Fear from longtime social isolation	3.30	1.82
Feeling bored	4.10	1.43
Feeling frustration	3.51	1.73
Lack of enjoy the things around you	4.11	1.36
Feeling punished due to the current conditions	3.89	2.02
Blame yourself for neglect of protection	4.03	1.77
Crying a lot due to current condition	3.86	1.54
Angry and irritable due to the current conditions	3.93	2.5
Thinking about suicide due to the current situation	1.97	0.96
Get closer to God because of the current situation	2.78	1.30



**Figure 1: Percentage distribution of the studied subjects according to total score of physical, social and psychological status affection of home confinement due to COVID-19.**

Table (5): Multiple Linear regression model:

Variables	Unstandardized Coefficients <i>B</i>	standardized Coefficients $\beta$	T	P. value
Age	.244	.169	4.038	.001*
Nationality	.152	.144	1.169	.023*
Residence	.160	.217	1.525	.011*
Educational level	.174	.165	10.520	.000**
Educational level of father	.179	.168	10.611	.000**
Educational level of mother	.187	.210	3.525	.001**
Income	.109	.124	1.536	.010*
<b>ANOVA</b>				
<b>Model</b>	<b>Df.</b>	<b>F</b>		<b>P. value</b>
<b>Regression</b>	7	5.942		.001**

a. Dependent Variable: physical status

b. Predictors: (constant) Age, Nationality, Residence, Educational level, Educational level of father, Educational level of mother and Income.

Table (6): Multiple Linear regression model:

Variables	Unstandardized Coefficients <i>B</i>	standardized Coefficients $\beta$	T	P. value
Age	.118	.169	1.038	.031*
Gender	.246	.278	5.801	.001**
Residence	.107	.140	1.525	.023*
Educational level	.101	.134	2.520	.011*
Educational level of father	.114	.172	1.611	.012*
Educational level of mother	.120	.196	1.448	.010*
Income	.218	.207	5.066	.000**
<b>ANOVA</b>				
<b>Model</b>	<b>Df.</b>	<b>F</b>		<b>P. value</b>
<b>Regression</b>	7	5.942		.001**

a. Dependent Variable: social b. Predictors: (constant) Age, Gender, Residence, Educational level, Educational level of father, Educational level of mother and Income

Table (7): Multiple Linear regression model :

Variables	Unstandardized Coefficients <i>B</i>	standardized Coefficients $\beta$	T	P. value
Age	.255	.301	6.038	.001**
Nationality	.163	.184	1.047	.034*
Educational level	.298	.247	7.520	.000**
Educational level of father	.174	.188	1.611	.021*
Educational level of mother	.167	.192	2.525	.011*
Income	.310	.289	6.077	.000**
Model	Df.		P. value	
Regression	6		.003**	

a. Dependent Variable: psychological

b. Predictors: (constant) Age, Nationality, Educational level, Educational level of father, Educational level of mother and Income.

Table (8): Correlation between studied variables:

Variables		Physical	Social	Psychological
Physical	r.		<b>0.458</b>	<b>0.547</b>
	p		<b>.007**</b>	<b>.005**</b>
Social	r.	<b>0.458</b>		<b>0.611</b>
	p	<b>.007**</b>		<b>.002**</b>
Psychological	r.	<b>0.547</b>	<b>0.611</b>	
	p	<b>.005**</b>	<b>.002**</b>	

### Discussion:

In /12/ 2019, spread of unusual cluster of pneumonia cases in China and later called COVID-19 with first case in Europe being in Jan 25, 2020. Most governments had ordered a nation-wide school closure as emergency status to preventing forms infection and public activity was discouraged (de Winter et al., 2020). Education Ministries were estimates the millions of children and adolescents confined to homes. Prolonged school closure and home confinement throughout disease outbreak might had negative effect on children's physical and mental health (Pecoraro et al.,2020).

According to characteristics of previous studies subjects, our study revealed that mean age for subjects was 15.86±4.7 years and more than two thirds of them were female. Most of subjects

were from urban area. Regarding educational level, more than half were secondary school. Also, the results demonstrated that less than three quarters of participants' fathers and more than two thirds of subjects' mothers are working. Regarding income, the majority of studied subjects had enough income. These results in cohort with the study conducted by Gotlib, et al., (2020) titled in Early Life Stress Predicts Depressive Symptoms in Adolescents During the COVID-19 Pandemic, who detected that around half of adolescent were female and mean age was 11.67±0.91. But, supported with the study performed by Fegert et al., 2020 titled in Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality, who reported mean age of subjects was 14.23 and more

than three quarters of their family had enough income.

Regarding home confinement effects throughout COVID-19 outbreak on physical health, current study revealed that more than three quarter of studied subjects suffered from negative effect, these results may due to more than half of them decreased physical activity, around three quarters suffered from irregular sleeping, majority of them suffered from increasing body weight and slight less than half of them had decreased appetite. These results agreed with the study by **Altena et al., 2020** titled in Dealing with sleep problems during home confinement due to the COVID-19 outbreak, found the home confinement had negative effect on sleeping **Wang et al., 2020** found sleep disturbance had highly prevalent between pediatric healthcare workers, and sleep disturbance had independently associated with only child. In addition, supported with the study conducted by **Moore et al., 2020** about Impact of the COVID-19 virus outbreak on movement and play behaviors of Canadian children and youth, who detected that three quarter of children, not meet physical activity recommendation. Also, the current study revealed that participants' Educational level, Educational level of fathers as well as mothers had high significant predictors effect on dependent variable at p value <0.01. While, age, nationality, residence and income had slight significant predictors effect on physical activity as dependent variable at p value <0.05, these result incongruent with the study performed by **Chen et al., 2020**, who demonstrated that level education of parents had high effect on committed of children with physical activity.

Regarding effect of home confinement during COVID-19 outbreak on social health, current study revealed that, around three quarters of studied

subjects suffered from negative effect on social health, these results may due to around two thirds of them suffered from lack of direct contact with colleague, more than two thirds suffered from lack of direct contact with friends, majority of them suffered from lack direct contact with teacher, more than half of participants watching TV had significantly increased and most of them using social media, these results in the same line with the study performed by **Buheji et al., 2020** who detected that COVID-19 had negative effect on social health of children. Also, it was supported with the study by **Van Lancker & Parolin, 2020**, demonstrated that majority of adolescent suffered from decreased communication level with colleagues and friends. And, regular with the study by **Nicola et al., 2020** about the socio-economic implications of the coronavirus and COVID-19 pandemic, who revealed that home confinement, caused increasing at using social media and decrease socialization.

Also, the present results, revealed that gender and family income had high significant predictors effect on social health at p value <0.01. While, Residence, participants' educational level, educational level of fathers and mothers had slight significant predictors effect on social effect as dependent variable at p value <0.05, these results inconsistent with the study performed by **Wang et al., 2020** titled in Mitigate the effects of home confinement on children during the COVID-19 outbreak, who showed that income and gender have no burden on social health of subjects. Regarding effect of home confinement during COVID-19 outbreak on psychological status, the current study revealed that, more than three quarters of studied subjects suffered from negative effect on psychological status, these results may be due to studied subjects had high mean related enjoy the

things around them, feeling bored and blame themselves for neglecting protection, feeling punished due to the current conditions, fear from infection and fear from infection of family member, these results as similar with the study conducted by **Zhang et al., 2020** about response to children's physical and mental needs during the COVID-19 outbreak, who revealed that children suffered from high mental needs due to COVID-19 outbreak. Also, in cohort with the study by **Dalton, Rapa & Stein, 2020** about protecting the psychological health of children through effective communication about COVID-19, who represented that majority of children suffered from anxiety, stress and mild depression. And, regular with the study performed by **Liu et al., 2020** titled in mental health considerations for children quarantined because of COVID-19, who detected that most of children suffered from fear from COVID-19 infection.

### **Conclusions:**

Based on the findings of the current study, it can be concluded that long-term lock down due to COVID-19 pandemics causes negative effects on the physical status, social relations and worsening in the psychological behaviors.

### **Recommendations:**

Implemented in cooperation with the Egyptian and Saudi Ministries of Health using mass media, such as television, radio, newspaper, magazines and online social media, for encouraging families with children and adolescent to overcome negative effects of home confinement by home physical activity and exercise, even range of motion. Restrict the television viewing time and media that disseminate negative and horror news regarding COVID 19 that

Also the current results represented that age, educational level and income had high significant predictors effect on dependent variable "psychological status" at p value <0.01. Mean while; other variables as nationality, educational level of fathers and mothers had slight significant predictors effect on psychological status of the participants; p value <0.05. These results in cohort with the study performed by **Saddik et al., 2020** titled in assessing the influence of parental anxiety on childhood anxiety during the COVID-19 pandemic in the United Arab Emirates, who revealed that parents' education have no significant relation with childhood anxiety. But supported with the study by **Liu et al., 2020** about Online mental health services in China during the COVID-19 outbreak, who demonstrated that there was significant relation between age and income with mental stress.

affect psychological status. Encouraging children and adolescent express negative feeling and listening to Quran for Muslims any regions practices or calm musical any regions practices. Enhancement to participate in active peer and families relationships while maintain social distance and infection control measures.

- Design educational interventions for children and adolescent individuals to enable them to cope and adjust with emergency health hazards.
- Provide measures to preserve and promote children health during the COVID-19 outbreak and recovery period.
- Provide strategies to lessen potential risks during future pandemics.

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No

#### References:

- Altena E, Baglioni C, Espie C A, Ellis J, Gavriloff D, Holzinger B and Riemann D (2020):** Dealing with sleep problems during home confinement due to the COVID-19 outbreak: Practical recommendations from a task force of the European CBT-I Academy. *Journal of Sleep Research*, e13052.
- Ballard M, Bancroft E, Nesbit J, et al.(2020):** Prioritising the role of community health workers in the COVID-19 response. *BMJ Global Health*2020;5:e002550.bmjgh-2020-002550
- Brooks SK, Webster RK, Smith LE, et al (2020):** The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet*. 2020; (published online Feb 19.). Available at: [https://doi.org/10.1016/S2215-0366\(20\)30077-8](https://doi.org/10.1016/S2215-0366(20)30077-8).
- Buheji M, Hassani A, Ebrahim A, da Costa Cunha K, Jahrami H, Baloshi M and Hubail S (2020):** Children and Coping During COVID-19: A Scoping Review of Bio-Psycho-Social Factors. *International Journal of Applied*, 10(1), 8-15.
- Chen P, Mao L, Nassis G P, Harmer P, Ainsworth B and Li F (2020):** Returning Chinese school-aged children and adolescents to physical activity in the wake of COVID-19: Actions and precautions. *Journal of Sport and Health Science.Lancet*2020 Jul; 9(4): 322–324.Published online 2020 Apr 12. doi: 10.1016/j.jshs.2020.04.003.
- CHEN, Shu-Ching; LAI, Yeur-Hur, TSAY, Shiow-Luan (2020):** Impact of COVID-19 pandemic on children and adolescents' lifestyle behavior larger than expected. *Journal of Nursing Research*. 28(3). e85.
- Dalton L, Rapa E and Stein A (2020):** Protecting the psychological health of children through effective communication about COVID-19. *The Lancet Child & Adolescent Health*, 4(5), 346-347.
- De Winter J P, de Winter D, Bollati V and Milani G P (2020):** A safe flight for children through COVID-19 disaster: keeping our mind open!. *European Journal of Pediatrics*. 179 (8). <https://doi.org/10.1007/s00431-020-03668-7>
- Fegert J M, Vitiello B, Plener P L and Clemens V (2020):** Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child and adolescent psychiatry and mental health*, 14, 1-11.

- Gotlib I, Borchers L, Chahal R, Gifuni A and Ho T (2020):** Early Life Stress Predicts Depressive Symptoms in Adolescents During the COVID-19 Pandemic: The Mediating Role of Perceived Stress. *PsyArXiv*. June 19. doi:10.31234/osf.io/4dkaf.
- Hossain, M D Mahbub (2020):** "Epidemiology of Mental Health Problems in COVID-19: A Review." *PsyArXiv*, 27 May 2020. Web.
- Ichino AW-E, R. (2004):** The Long-Run Educational Cost of World War II. *Journal of Labor Economics* ;22:57-86.
- Liu J J, Bao Y, Huang X, Shi J and Lu L (2020):** Mental health considerations for children quarantined because of COVID-19. *The Lancet Child & Adolescent Health*, 4(5), 347-349.
- Liu S, Yang L, Zhang C, Xiang Y T, Liu Z, Hu S and Zhang B (2020):** Online mental health services in China during the COVID-19 outbreak. *The Lancet Psychiatry*, 7(4), e17-e18.
- Loades ME, Chatburn E, Higson-Sweeney N. (2020):** Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. *J Am Acad Child Adolesc Psychiatry* Available at: <https://www.sciencedirect.com/science/article/pii/S0890856720303373>. Accessed 25 June 2020.
- McDonald HI, Tessier E, White JM. (2020):** Early impact of the coronavirus disease (COVID-19) pandemic and physical distancing measures on routine childhood vaccinations in England, January to April 2020. *Euro Surveill* ;25. Available at: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.19.2000848>. Accessed 25 June 2020
- MiXiang,a, ZhiruoZhang,a, and Keisu ke Kuwaharab (2020):** Impact of COVID-19 pandemic on children and adolescents' lifestyle behavior larger than expected. *Prog Cardiovasc.Dis*.doi: 10.1016/j.pcad.2020.04.013 PMID: PMC7190470.P MID: 32360513
- Moore S A, Faulkner G, Rhodes R E, Brussoni M, Chulak-Bozzer, T, Ferguson L J and Tremblay M S (2020):** Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: A national survey. *International Journal of Behavioral Nutrition and Physical Activity* (17). Article number: 85
- Nicola M, Alsafi Z, Sohrabi C, Kerwan A, Al-Jabir A, Iosifidis C and Agha R (2020):** The socio-economic implications of the coronavirus and COVID-19 pandemic: a review. *International Journal of Surgery*. Published online 2020 Apr 17. doi: 10.1016/j.ijssu.2020.04.018
- Pecoraro L, DalleCarbonare L, De Franceschi L, Piacentini G and Pietrobelli A (2020):** The psycho-physical impact that COVID-19 has on children must not be underestimated. *Acta Paediatrica*. First published: 13 May 2020. <https://doi.org/10.1111/apa.15347>

- Saddik B, Hussein A, Albanna A, Elbarazi I, Al-Shujairi, A, Sharif-Askari F. S and Halwani R (2020):** Assessing the influence of parental anxiety on childhood anxiety during the COVID-19 pandemic in the United Arab Emirates. medRxiv.
- Sprang G and Silman M (2013):** Posttraumatic stress disorder in parents and youth after health-related disasters. *Disaster Med Public Health Prep.* 7: 105-110
- Van Lancker W and Parolin Z (2020):** COVID-19, school closures, and child poverty: a social crisis in the making. *The Lancet Public Health*, 5(5), e243-e244.
- Wang G, Zhang Y, Zhao J, Zhang J and Jiang F (2020):** Mitigate the effects of home confinement on children during the COVID-19 outbreak. *The Lancet*, 395(10228), 945-947.
- Wang S, Xie L, Xu Y, Yu S, Yao B and Xiang D (2020):** Sleep disturbances among medical workers during the outbreak of COVID-2019. *Occupational Medicine (Oxford, England)*. Published online 2020 May 6. doi: 10.1093/occmed/kqaa074
- World Health Organization B. (2020):** Coronavirus disease (COVID-19) pandemic. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>. Accessed at: 2020 May 27
- Zhang X B, Gui Y H, Xu X, Zhu D Q, Zhai Y H, Ge X L and Xu H (2020):** Response to children's physical and mental needs during the COVID-19 outbreak. *World Journal of Pediatrics, Lancet*: 2020 May 25: 1–2. doi: 10.1007/s12519-020-00365-1