

**Original Article****Implication of Covid-19 "Lock Down" on Family Functioning among Families with Young Children and Adolescents in Southwest States of Nigeria****Oyeninhun Abimbola Oluwatosin, RN, PhD**

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clubim4real@yahoo.com**Abstract**

**Background:** Family is the smallest and basic unit of any society. The health of the family will have a great impact on any nation. There are several physical, social and psychological factors that can affect the health of a family. COVID-19 lock down has brought about several changes in the global village which can have either positive or negative impacts on the health of family which in turn will have effects on the health of a nation.

**Methodology:** Research study utilized a descriptive cross sectional design. Snowball sampling was used to select 200 respondents for the study. Willingness and ability to comprehend English were major Inclusion criteria. A web-based questionnaire was used to collect data from the respondents using email WhatsApp or telegram. Data were analyzed using descriptive and Statistical inferences. Level of significance was set at 0.05.

**Results:** The level of interaction between couples increased during COVID-19 lock down. There was a significant difference between mean scores of couples interaction with both children and adolescents before and during the lockdown ( $p=0.022$  and  $p<0.001$  respectively). Although family functioning improved significantly during lockdown, however roles and enmeshed dimensions were significantly reduced during the lockdown ( $p=0.026$  and  $p=0.046$  respectively)

**Conclusion:** The result has shown that COVID-19 lock down had positive on family; it strengthens and improved family relationship. This information can serve as evidence for nurses, physician and educationist working with family in developing more strategies that can help promote family bonding and functioning especially during crisis.

**Keywords:** Implication, COVID-19, Lock down, Family functioning

**Introduction**

Family functioning refers to interactions and relationships within the family. This includes levels of cohesion, adaptability, organization, and communication (Kayode, Oluseye, and Oluwatosin, 2018). A family is seen to be healthy

and function effectively when there is clear communication, moderate to high level of cohesion, well-defined roles, and good affect regulation. Unhealthy family functioning occurs within families with high levels of conflict, disorganization, and poor communication.

Several models described how family function and interact, among such models are McMaster model of family functioning (MMFF), Circumplex model among many others (Lewandowski et al. 2010).

Olson and colleagues described two of the family dimensional constructs, cohesion and adaptability and named it Circumplex Model. A self-report scale was developed to measure this construct - the Family Adaptability and Cohesion Evaluation Scale (FACES) (Place et al. 2017). This tool has undergone several developments and the latest version which is FACES IV measures the dimensions of family cohesion and family flexibility using six scales. The scales consist of two balanced scales that assess balanced family cohesion and balanced family flexibility and contains four unbalanced scales that assess the high and low extremes of cohesion and flexibility. The two unbalanced scales for cohesion are disengaged and enmeshment while the two unbalanced scales for flexibility which are rigid and chaotic (Olson, 2010).

The MMFF is a model based on a systems approach, which views the family as an open system made up of complex interactive subsystems (individual, marital, dyad). Family as a system relate both with itself (members) and the external systems such as the extended family, schools, religion, and work. This model evaluates family structure, its organisation and transactional patterns. All these determine the behavior of the members of the family. Family levels of functioning or dysfunction depends on the interaction that is ongoing between both the family members and the entire family and its environment. The MMFF explains that one part of the family cannot be understood in isolation from the rest of the system and that family functioning is more than just the sum of the parts. MMFF assumes that family functioning and health is related to the accomplishment of tasks and roles within a family. Thus, the MMFF identifies six core areas that impact on a family's ability to meet these functions and tasks: Problem solving, Communication, Roles, Affective responsiveness, Affective involvement and Behavioural control (COPMI, 2016).

Several factors can affect families in performing these functions and tasks. Families going through either physical or emotional illness will be subjected to some level of dysfunction which will

either directly or indirectly affect the health of other members of the family which may progress into the future (Ogundokun, et al. 2016).

It is worth noting that families will react to problems differently depending on their life cycle stage. The recent COVID-19 lock down can have both positive and negative impact on family functioning. Globally, this has affected the economy of the World. In Nigeria, the Central Bank of Nigeria (CBN) arranged a stimulus package of “50 billion naira (\$138.89 million) credit facility to households and small and medium enterprises especially in areas most affected by the pandemic, and a 100 billion naira (\$277.78 million) loan to the health sector, and a 1 trillion naira (\$2.78 billion) to the manufacturing sector”. The stimulus package and movement restrictions will have negative implication on the country economy (Onyekwena & Ekeruche, 2020).

Family life cycle stage ranges from single young adults, the new couple, families with young children, families with adolescents, launching children and moving on, to families in later life stage. Families with young children experience some exciting and bonding moments as they interact together. Their new role and relationship come with financial and household burdens. As the children grow into teen's rules and roles change, with need for more flexibility that permits adolescents independence and focusing on career development (ablongman.com, 2020). The effect of COVID-19 lock down will be different across the various family life cycle stages. It is expected that they will response to the situation differently.

Schools in most countries of the World have been shut down and this will result into schooling taking place at home either by the parents or arranged program by the educational system. The global home schooling will surely bring about more intimacy, inspirational moments, interesting moments, and fun-filled moments. Nevertheless, it will be quite tasking, frustrating, and annoying for parents.

The global home schooling can never replace the school system because most parents are not trained or skilled for such task. Although a lot of untested online educational programme has been arranged, however this cannot replace the school system where both the teachers and the environment have a great impact on child education (Burgess & Sievertsen, 2020).

Although in most nations of the World, food markets and stores are met to be opened on daily basis but the present economy meltdown especially in developing countries had caused increase in prices of goods and services, foods inclusive (Human Rights Watch., 2020). Children under twelves' years as well adolescents are prone to eat always own to their stage of child development. Parents often breathe sigh of relief when children go to school because of the relief of cooking and constant feeding they experience. The rate at which they will eat at home will increase than when going to school (Coleman, 2018). This on itself poses a great financial burden for parents and family at large. Some families may not be able to meet up with this basic physiological need of the children.

Anecdotal observations indicates that in the research setting (Nigeria) during normal school long vacation holidays, parents often register their children for activities by the religious institutions (church), school or Non- Governmental Organisations to help engage their children. The reason for this may be that parents do not have the skills to engage their children for such long periods of about four to six weeks. The COVID-19 lockdown did not provide for such opportunities that parents normally use because of the need for social distancing many of these services had closed. It is therefore imperative to assess the family functioning and pattern of family interactions among parents of young children and adolescents during the lockdown.

### Research Questions

1. What is the level of interaction between couples during COVID-19 lock down?
2. Is there difference between the couples interaction with their children and adolescents before and during COVID-19 lock down?
3. Is there difference between family functioning dimensions before and during the lockdown?

### Methodology

Research study utilizes a descriptive cross-sectional design. Study was carried out in the six states of Southwestern Nigeria, Lagos, Ogun, Oyo, Osun, Ondo and Ekiti states. All the states experienced lock downs at different levels but generally based on Federal Government directives all schools were closed. Snowball sampling was used to select 200 respondents for the study. Potential eligible respondents were contacted

through e- mail, WhatsApp or Telegram. Ethical approval for the study was obtained from UI/UCH Ethics Committee. Written informed consent on word document was sent together with the online questionnaire.

A web-based questionnaire designed for the study was hosted using google forms and used to collect data from the respondents via emails WhatsApp and Telegram. Parts of the questionnaire were adapted from two family measuring tools which are the Family Adaptability and Cohesion Evaluation Scale (FACES IV) (Olson, 2010) and Family Assessment Device (FAD) (COPMI, 2016). These tools assessed the family level of functioning pre and during COVID 19 Lock down FAD assesses six core areas Problem solving, Communication, Roles, Affective responsiveness, Affective involvement and Behavioural control while FACES IV assessed level of cohesiveness and flexibility among families. Other items on the questionnaire assessed parents' pattern of interaction with their children/adolescents. The questionnaire was pre-tested on 10 participants who were excluded later from the study sample.

Data was collected with the aid of google forms, exported to Microsoft excel and imported to IBM SPSS 25 for analysis. Variables on family functioning and interaction were scored on Likert scales (Agreed, Undecided and Disagreed). Negative questions in this section were reversed coded for easy analysis. Composite scores were computed for items related to dimensions of family functioning and parents interaction with their children and adolescents. Categorical data was summarised in frequency tables with proportions and means and standard deviations were used to describe continuous variables.- Paired t-test was performed to investigate differences in family functioning and interaction both before lockdown and during lockdown. Level of significance was set at 0.05.

### Results

One hundred and fifty-two (76%) females and forty-eight (24%) males participated in the study. The mean age of the study participants was  $39.93 \pm 8.24$ . A hundred and ninety-three participants (96.5%) were married and 176 (88.0%) were of the Yoruba ethnic group. One hundred and ninety two participants (96.0%) had a nuclear family type while the mean number of children of participants

was  $2.58 \pm 1.056$  Other information on demographic characteristic are in Table 1.

Table 2 shows the level of interaction between couples during COVID-19 lock down. Most couples, 178 (92.2%) stated that they spent more time together during the lockdown than before it though interestingly this did not translate to an increase in sexual intimacy as less than half, 94 (48.7%) of respondents reported increased sexual intercourse. Twenty-two respondents reported an initial increased irritability during the lockdown while 87 (59.2%) out of the 147 married women in the study indicated that their husbands lent a helping hand with house chores more than before the lockdown.

Table 3 shows Paired t-test comparing mean scores of couples interaction with their children and adolescents before and during COVID-19 lock down. There was a significant difference between mean scores of couples interaction with

both children and adolescents before and during the lockdown ( $p= 0.022$  and  $p<0.001$  respectively). The couples interaction with both children and adolescents were significantly improved during the lockdown.

As regards the dimensions of family functioning as seen in Table 4, problem solving and communication were the only dimensions seen to have increased, though slightly during the lockdown. All other dimensions of family functioning measured had higher functional scores before the lockdown than during the lockdown. Three family functioning dimensions showed a significant difference in scores before and during the lockdown. Communication was seen to be significantly improved during the lockdown ( $p=0.037$ ) while roles and enmeshed dimensions were significantly reduced during the lockdown ( $p=0.026$  and  $p=0.046$  respectively)

**Table 1: Demographic characteristics**

Variable	Frequency (n= 23) (%)
<b>Sex</b>	
Male	48 (24.0)
Female	152 (76.0)
<b>Age (Years)</b>	
<= 25 Years	4 (2.0)
25-34 Years	51 (25.5)
35-49 Years	114 (57.0)
50-59 Years	28 (14.0)
>= 60 years	3 (1.5)
<b>Marital Status</b>	
Single	6 (3.0)
Married	193 (96.5)
Widowed	1 (0.5)
<b>Religion</b>	
Christian	184 (92.0)
Islam	16 (8.0)
<b>Ethnicity</b>	

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Yoruba	176 (88.0)
Igbo	12 (6.0)
Hausa	2 (1.0)
Others	10 (5.0)
<b>Education Background</b>	
SSCE	1 (0.5)
Tertiary	199 (99.5)
<b>Average Income (Percentile)</b>	<b>Average Income 189112</b>
25%	40 500
50%	100000
75%	250000
<b>Type of Family</b>	
Nuclear	192 (96.0)
Extended	6 (3.0)
Polygamous	2 (1.0)
<b>Respondents Employment Status</b>	
Employed (full time)	148 (74.0)
Employed (part time)	9 (4.5)
Home Maker	3 (1.3)
Self employed	30 (15.0)
Student	2 (1.0)
Unemployed	8 (4.0)
<b>Spouse Employment Status</b>	
Employed (full time)	121 (62.1)
Employed (part time)	13 (6.7)
Home Maker	1 (0.5)
Self employed	49 (25.1)
Unemployed	11 (5.6)
<b>Number of Children</b>	
	<b>2.58 ± 1.056.</b>
1	31 (15.5)
2	66 (33.0)
3	64 (32.0)
4	32 (16.0)
5	6 (3.0)
6	1 (0.5)
<b>Total</b>	<b>519</b>

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**Table 2:** Couples interaction during COVID-19 lock down

N=193 (married participants)	Yes (%)	No (%)
Couple spent more time together than before the pandemic	178 (92.2)	15 (7.8)
Couple had more sexual intercourse than they usually did before the pandemic	94 (48.7)	99 (51.3)
Couple was initially irritable as they were not used to being together for such long periods of time daily	22 (11.4)	171 (88.6)
Husband lent a helping hand with house chores more than before the pandemic	87(59.2)	60 (40.8)

*n = 147 (number of married women)*

**Table 3: Paired t-test comparing mean scores of couples interaction with their children and adolescents before and during lockdown**

Variable	<i>T</i>	<i>p-value</i>	Mean score	Mean difference	95% confidence interval of the mean difference	
					Lower	Upper
<b>Couples pattern of interaction with children</b>	-2.317	0.022		-3.6256	-6.7205	-0.5306
Before lockdown			53.7467			
During lockdown			57.3723			
<b>Couples pattern of interaction with adolescents</b>	-6.760	<0.001		-12.203	-15.7825	-8.6235
Before lockdown			39.5283			
During lockdown			51.7313			

**Table 4: Paired t-test comparing mean scores of dimensions of family functioning**

Variable	<i>T</i>	<i>p-value</i>	Mean scores	Mean difference	95% confidence interval of the mean difference	
					Lower	Upper
<b>Problem solving</b>	-0.063	0.950		-0.05556	-1.7955	1.6844
Before lockdown			95.0000			
During lockdown			95.0556			
<b>Communication</b>						-
Before lockdown	-2.097	0.037		-1.7500	-3.3957	0.1043
During lockdown			83.7917			
			85.5417			
<b>Roles</b>	2.248	0.026	82.2083	2.1667	0.2659	4.0674

Before lockdown			80.0417			
During lockdown						
<b>Affective responses</b>	0.396	0.692		-0.3889	-1.5472	2.3250
Before lockdown			85.9444			
During lockdown			85.5556			
<b>Affective involvement</b>	-0.757	0.450		-0.9444	-1.5152	3.4041
Before lockdown			81.0556			
During lockdown			80.1111			
<b>Behaviour control</b>	2.541	0.012		0.0833	-2.1875	2.3541
Before lockdown			83.2917			
During lockdown			83.2083			
<b>Balance cohesion</b>	1.244	0.215		0.9333	-0.5462	2.4128
Before lockdown			96.7000			
During lockdown			95.7667			
<b>Balance flexibility</b>	0.264	0.792		0.2917	-0.9970	1.5803
Before lockdown			90.5833			
During lockdown			90.2917			
<b>Disengaged</b>	-0.107	0.915		0.1250	-2.1857	2.4357
Before lockdown			75.4167			
During lockdown			75.2917			
<b>Enmeshed</b>	-2.005	0.046		2.3333	0.0383	4.6284
Before lockdown			62.7917			
During lockdown			60.4583			
<b>Rigid</b>	-1.892	0.060		-1.8333	-0.0778	3.7445
Before lockdown			62.7083			
During lockdown			60.8750			
<b>Chaotic</b>	-1.728	0.086		1.8750	-0.2649	4.0149
Before lockdown			86.5000			
During lockdown			84.6250			

## Discussion

COVID-19 has come with a lot of implications which has affected the health status of individual, families and society directly and/or indirectly. The recent COVID-19 lock down had impact on both national and international economic. This research study assessed it impact on family level of functioning. The impact can be either positive

or negative. The result discussed below reveals more of a positive impact.

One hundred and fifty-two females and forty-eight males participated in the study. The mean age of the study participants was 39.93. The majority 193 (96.5%) were married and of Yoruba ethnic group 176 (88.0%). Most of the couples had two children.

Study finding showed that most couples had good interaction during COVID-19 lock down. The lockdown gave couples enough opportunity to spend time and share burdens together which brings about more intimacy. Relationship is strengthened when parties involved spend a lot of time together (Baumbgardner, 2017). In addition, there was significant difference between couples pattern of interaction with children and adolescents before and during lockdown. The pattern of interaction was good before lock down and there was improvement during COVID-19 lock down. This implies that despite the economic meltdown during this period, the period provides opportunity for couples to relate better with one another and also enables them to spend more time with their children. The lockdown probably provides the parents the opportunity to be involved in their children education which will eventually have a positive effect the children physical, social, emotional, and physical health. The study revealed that couples undertook some activities such as hide and seek game, building of blocks games, board games and sharing of stories with the children to strengthen the bond which is between them. It has been reported that family spending time in leisure activities increases emotional bonding among family members. Playing of games, going to amusement park and vacation for tourist among many others requires ampoule of time and money which will be of benefits to overall health status and functions of the family (Pittsburgh parent, 2017; Fischier, 2018).

Study reveals that there exists no significant difference in family functioning before lockdown and during COVID-19 lockdown. Family level of functioning in terms of problem solving, communication, roles, affective responsiveness, affective involvement and behavioural control before COVID-19 lock down was quite encouraging however the lockdown did not really have statistical significant impact on this. This may be due to the economic meltdown during this period. Inability to meet basic needs as the average money earned could not be sufficient to meet such demands, had great tendency to create emotional strain between couples and children. Parents often feel bad when not able to provide for their children and this can also affect children psychological. If the emotional stress is not well managed, it is either there is no improvement in family level of functioning, or it reduces it.

When family spend time together it helps in moulding certain behaviour in children especially in area of delinquency (Fischier, 2018; Singer, 2020). It improves communication, reinforces rules and roles, meet emotional needs and promote balanced emotional connection.<sup>15</sup>The lockdown period offers opportunity for family to connect together, if this did not happen then this calls for in-depth evaluation by all stakeholders for future purpose but not necessarily in times of pandemic. Nurses working with families are to educate families on importance of how to manage family stressors that can limit or strain family connectedness. Individual, families and communities are to be enlightened on measures needed in promoting family functioning adequately even with daily busy activities and various stressors.

This study had added to the basis for providing information for parents' and families at large on the need to be emotionally strong and healthy even amidst stressful conditions. There is need for family health nurses working with families to make use of every encounter with families to give health information in order to educate them on how to live healthy and function effectively amidst life stress. For better coverage and output, health educational program can be organized at community level. The health education package should address all possible underlying factors affecting family level of functioning. Developing this, will require collaboration of all stakeholders involved in family, child and adolescence care. The involvement of a family health nurse, family health physician and Child's/adolescent educator in designing of the health educational package will not only ensure a wide coverage of all family health and functioning issues but also broaden the knowledge of all stakeholders. This suggests the need for training program for all end users of the health educational package.

**Conclusion:** This study though may be prone to sampling and volunteer biases due to the non-random sampling method which was the most suitable at the time of data collection, this paper shows that beyond the negative impacts COVID-19 lock down had on our community, it provided opportunities in building and strengthening relationship between parents and their children as well as communication within families. This would have been more encouraging if there were adequate social and financial support for families during the lockdown. However the bonding



opportunities provided by the lockdown may have long term implications that would be beneficial for family functioning and subsequently have great impact on the society during other stressful situations of life,

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