

Parenting practices and family relationships during the COVID-19 lockdown in Ghana

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Abstract

The effects of the COVID-19 pandemic have been far reaching across almost every sphere of life. Families, which are the basic units of society, have not been spared the ravages of the pandemic. Changes in family daily routines as a result of COVID-19 can affect spousal relationships, parenting and childcare practices. However, the extent to which the pandemic has affected parenting practices and family relationships in Ghana is not known.

The goal of this study was to assess how parenting practices and family relationships have been influenced during the COVID-19

pandemic in Ghana. Data for this paper was drawn from an online questionnaire response from 463 participants in Ghana as a subset analysis from a multi-country study on personal and family coping system with COVID-19 pandemic in the global south.

The mean score for pre-COVID-19 relationship with partner (36.86) was higher ($p < 0.0001$) than the mean score for during COVID-19 relationship with partner (35.32) indicating that COVID-19 has had negative influence on relationships. The mean score for pre-COVID-19 parenting (32.78) was higher ($p < 0.0001$) compared to the mean score for during COVID-19 parenting (31.40) indicating negative influence on parenting. We have predicted that participants whose coping levels were “Well” on the average, are likely to be doing well in relationship with partners and parenting practices during the COVID-19 period

The challenging public health containment measures of the COVID-19 pandemic have negatively influenced the relationship between partners and parenting practices in Ghana.

Introduction

The emergence of the global coronavirus disease in 2019 (COVID-19) has had staggering life altering effects in almost all facets of life.¹ First, this disease is novel, and very little is known about its virulence as well as its mode(s) of transmission. This, coupled with the ever-increasing daily infection and mortality rates, and current discovery of various variants of the virus, led to international borders being closed and schools being shut for a considerable long period. The restrictions on people’s movement and travel meant that some businesses were forced to furlough workers or even close down.² The uncertainties were numerous while anxiety levels continue to remain high despite the news of advances in the development of vaccines.³ Families, which are the basic units of society, have not been spared the ravages of the pandemic.

In the African context, and as pertains in other jurisdictions, parents, irrespective of their parenting styles, employ the services of others caregivers to develop the culture, values and identity of growing children.⁴ Factors like age at which people first becomes parents may influence their parenting practices. In addition, other background characteristics such as a person’s level of education, socioeconomic and marital status could significantly impact their parenting styles. For instance, low-income socioeconomic status has been linked to high economic pressures on parents which

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Informed consent: The manuscript does not contain any individual person’s data in any form.

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may lead to increased parental hostility and the development of negative behaviors in children.⁵ Moreover, working parents have additional stressors and most often leave little or no time for meaningful parent-child interaction which shapes the outlook of children on life.⁶

The demands of parenting are such that the partnership that marriage provides is essential for raising children. That is not to say that this does not come with its own challenges such as conflict as a result of, for example, differing opinions about how children should be cared for or raised. In relationships where co-parenting is positive, both parents share the responsibility of raising children and ensure consistency in childcare and monitoring.⁷

The first two cases of COVID-19 disease in Ghana were reported on March the 12th, 2020.⁸⁻¹⁰ Subsequently, public health safety protocols were announced by the Government of Ghana to limit its spread.⁹ These included a national lockdown, closure of schools, imposition of travel restrictions and persuasion of people to stay at home. Since then, public life in Ghana, as it pertains in almost all countries, has been characterized by social distancing and adherence to some hygiene protocols like wearing of nose masks, regular hand washing with soap under running water, avoidance of handshakes, social distancing and working from home. For some parents, this was their first experience of having to perform parenting duties while attending to work-related activities at home and being confronted with dealing with the effects and uncertainties surrounding the pandemic.¹

The COVID-19 pandemic has occasioned widespread uncertainties which has been described by Brown *et al.*¹ as a significant source of stress for both parents and children. The uncertainty associated with this unknown health crisis, the challenges of many parents working from home while home schooling their children have caused undeniable strain on most parents. Families who were struggling financially are now at higher risks of plunging into poverty. Staying at home for most parents meant limited income inflows and, where co-parenting exists, the financial constraints have been shown to affect an otherwise healthy relationship.⁷ These stressors and anxieties could lead to some hurtful parenting practices, strained spousal relationships, increased spousal and child abuse. The goal of this study was to assess the parenting practices, family relationships and the factors influencing these during the emergence of the COVID-19 pandemic in Ghana.

Materials and methods

Data description and sample size

Data for this paper was drawn from the Ghana component of a multi-country study on personal and family coping system with COVID-19 pandemic in the global south. The participants were adults aged 18 years, resident in Ghana and reached through varied online platforms including WhatsApp, e-mails and Facebook.

An *a priori* power analysis was performed using G*Power 3.1,¹¹ to test the difference between the retrospectively measured “before COVID-19” and the “past two weeks” paired mean scores using a two-tailed test, and a standard alpha of 0.05. A total sample of 199 participants was required to achieve a generally accepted minimum level of power of 0.80 while detecting the smallest effect size (Cohen’s $d=0.2$). As we were not aware of any pilot study nor known previous study conducted on this subject in Ghana, the determination of expected effect size was based on informal observations, our knowledge of the field and what we viewed as meaningful. For multivariate analysis, a sample size of 463 was sufficient for any robust analysis of the data. The Ghana survey gathered data from 811 respondents, however, our analysis is based on a sub-population of 463 respondents whose current relationship status was either married, cohabitating with significant other, having multiple partners, or having at least one child.

Data collection

A questionnaire composed of questions on partner relationships, parenting practices and COVID-19 disease was used to elicit primary data for this study. On relationships with partner(s), we asked participants questions on relationship stability two weeks before and two weeks after the emergence of COVID-19, positive benefits derived from their relationships like feeling of happiness and some downsides of the relationships including feeling irritated against a partner. Similarly, questions on parenting covered issues like communication between parents and their children. Other socio-demographic background data such as gender, age and employment status of our participants were also gathered. We also assessed participants’ experiences with COVID – 19 through responses to the question “Do you think you are coping well with the COVID-19 situation?”. Relationships was measured by participants marital status while parenting and coping measures were analysed by respondents’ parity levels.

Information about the study was announced to potential participants via different communication means through social media, phone calls, email messages or word of mouth. Regular reminders and new invitations were sent out to prospective participants every other week to ensure that the invitation reached as many participants as possible. Data collection lasted from July 2020 to September 2020.

Relationship with partner scores were generated from seven questions which covered issues on respondent relationship with partner two weeks before and during the COVID-19 pandemic or lockdown in Ghana. Responses to the questions were rated on a 7-point Likert scale (1 = very strongly disagree, 7 = very strongly agree). A higher score indicates a better level of relationship with a partner and vice-versa. Regarding parenting, nine questions covering issues on the parent-child relationship were used to derive two variables on parenting, pre-COVID-19 and during COVID-19 parenting scores.

Outcome variables

The outcome variable for the relationship regression model was the change in relationship with partner scores. It was generated by subtracting pre-COVID-19 relationship with partner scores from during COVID-19 relationship with partner scores. Change in parenting scores was the outcome variable for the parenting model which was obtained from subtracting during COVID-19 parenting scores from pre-COVID-19 parenting scores. The choice of change in scores as outcome variables instead of the scores during COVID-19 was informed by Dalecki and Willits.¹² The outcome variables were *neglog*-transformed because they were not normally distributed.¹³ *Neglog* transformation was selected because the outcome variables had negatives and zeros.

Key predictor

The key predictor for the two regression models was COVID-19 coping levels. COVID-19 coping levels was measured based on the question “In your own judgement, do you think you are coping well during the COVID-19 situation?”. Response to the coping question was rated on a 5-point Likert scale (1 = Not very well, 5 = very well).

Control variables

Gender, age, education, economic status and residence were all included in the models as control variables. The number of children was also controlled for in the relationship with partner model. COVID-19 infec-

tion was measured using three questions which assessed whether the respondent, someone in the household or someone close to the respondent has been infected by the COVID-19 virus. The responses for the three COVID-19 questions were coded as “0 = no”, “1 = yes” and “2 = not sure.”

Statistical analysis

Cronbach's alpha was computed to determine the internal consistency of the questions used to generate both relationship with partner scores (pre $\alpha=0.89$, during $\alpha=0.90$) and parenting scores (pre $\alpha=0.76$, during $\alpha=0.77$). The alpha coefficient values for the two were all above the accepted value of 0.70.¹⁴ A paired sample T-test was used to compare the log-transformed mean scores for pre-COVID-19 and during COVID-19 for relationship with partner and parenting to determine if there were significant differences. Ordinary least squares (OLS) regression was employed to model the relationship between COVID-19 coping levels and change in relationship with partner and parenting scores. Two OLS regression models were built, one for relationship with partner and the other for parenting. Margins,¹⁵ a postestimation analysis, was carried out for the two regression models to predict the change in relationship with partner and parenting scores for the five COVID-19 coping levels. The predictions should be interpreted taking into cognizance the neglog transformation of the outcome variables. Robust estimates of variance were employed to correct any statistical outliers in the estimation of standard errors. The level of statistical significance was set at 0.05. The statistical analyses were carried out in STATA 13 MP (StataCorp, College Station, TX, USA).

Results

Descriptive

Table 1 presents background characteristics of the respondents. The number of respondents was 436 with 416 of them having at least a child. The number of male respondents was slightly higher (53%) than females. The respondents who were married were 93% while 80% were located in urban residential areas. Only 3% of the respondents were infected by COVID-19 and 9% were not sure of their status.

Influence of COVID-19 on relationships and parenting

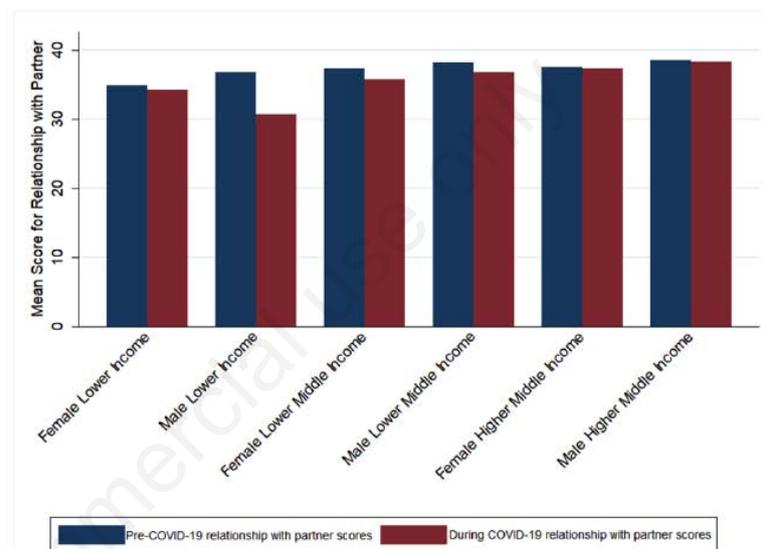
The mean score for pre-COVID-19 relationship with partner (36.86) was higher ($p<0.0001$) than the mean score for during

COVID-19 relationship with partner (35.32) indicating that COVID-19 has had negative influence on relationships. The mean score for pre-COVID-19 parenting (32.78) was higher ($p<0.0001$) compared to the mean score for during COVID-19 parenting (31.40) indicating negative influence of COVID-19 on parenting. Figure 1 presents the before and during mean scores for relationship with partner and parenting disaggregated by gender and economic status. The figure shows a reduction in the mean scores for both relationship with partner and parenting during COVID-19. The mean scores for males were higher than females for relationship with partner in all the economic categories for both during and Pre-

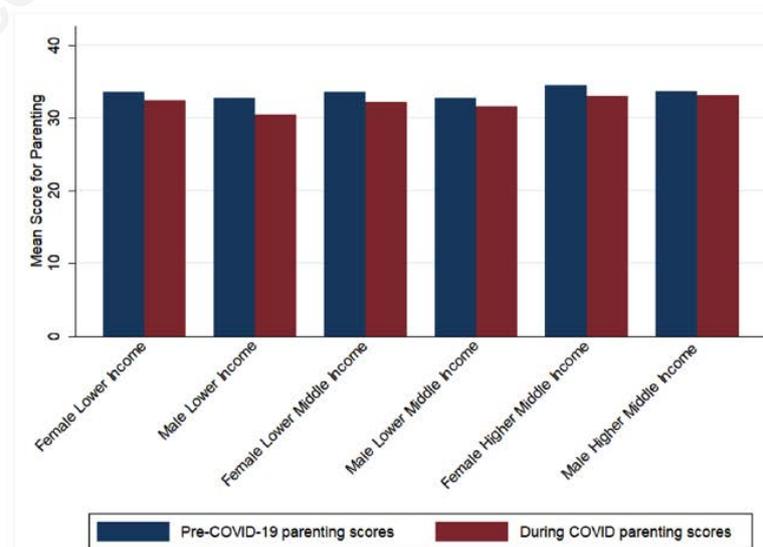
COVID-19 except the lower income category. However, the mean scores for males were lower than females for parenting in all the economic categories.

Influence of COVID-19 coping levels on relationship with partner and parenting

The results for the multivariate linear regression model of the association between relationship with partner and COVID-19 coping levels are provided in Table 2. The model explains 16% ($r^2=0.16$) of the variation in change in relationship with partner



Mean score for relationship with partner disaggregated by gender and economic status



Mean score for parenting disaggregated by gender and economic status

Figure 1. Mean score for relationship with partner and parenting disaggregated by gender and economic status.

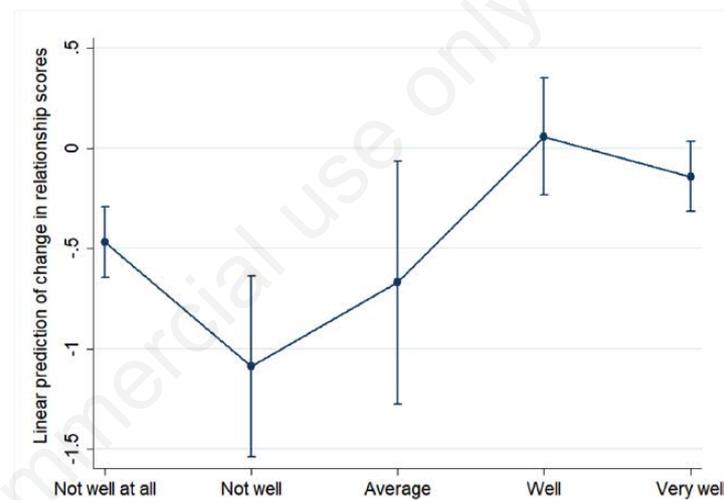
scores. The reported participants coping levels influenced the change in relationship scores. Respondents whose coping levels were “not well” had worse outcomes (-0.618, CI= -1.106 – -0.131) for relationship with partner compared to those whose coping level was “Not very well”. Respondents whose coping levels were “Well” had better outcomes (0.528, CI=0.183-0.872) for relationship with partner compared to those whose coping level was “Not very well”. Respondents whose coping levels were “Very well” had better outcomes (0.328, CI=0.072-0.584) for relationship with partner compared to those whose coping level was “Not very well”. Pre-COVID-19 parenting scores was inversely (-0.044, CI= -0.061 – -0.027) related to change in relationship with partner scores. Respondents’ background characteristics of gender, age, number of children, education, economic status and residence) did not influence change in relationship with partner scores.

Respondents who have had COVID-19 had better outcomes (0.665, CI=0.144-1.186) for relationship with partner compared to those who had not contracted COVID-19. Respondents who had someone in their household infected with COVID-19 had better outcomes (0.980, CI=0.374-1.586) for relationship with partner compared to those who had non infected household member. Respondents who have had a close relation or companion infected with COVID-19 had worse outcomes (-0.372, CI= -0.684 – -0.060) for relationship with partner compared to those in households without an infected member.

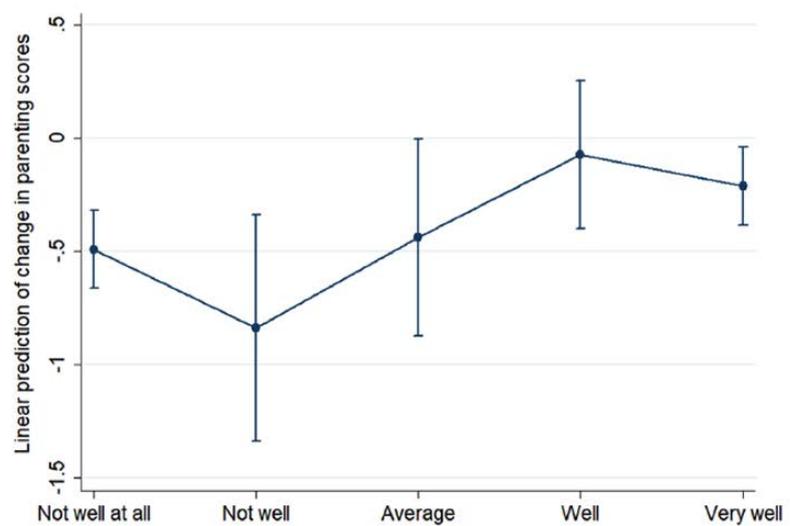
Table 3 provides the results for the multivariate linear regression model of the relationship between parenting and COVID-19 coping levels. The model explains 10% ($r^2=0.10$) of the variation in change in parenting scores. The reported coping levels of the respondents influenced change in parenting scores. Respondents whose coping levels were “Well” had better outcomes (0.418, CI=0.048-0.789) for parenting compared to those whose coping level was “Not very well”. Respondents with “Very well” coping levels had better outcomes (0.279, CI=0.029-0.529) for parenting compared to those whose coping level was “Not very well”. Pre-COVID-19 parenting scores was positively (-0.027, CI= -0.043 – -0.011) related to change in parenting scores. As observed in the relationship with partner model, respondents’ background characteristics did not influence change in parenting scores. Respondents who have had COVID-19 infection had no statistically significant linear relationship with change in parenting scores. COVID-19 infection in the respondent household or by someone close also did

not influence change in parenting scores. Figure 2 presents the predictive margins of COVID-19 coping levels for change in relationship scores with partner and parenting. The margins plot should be interpreted bearing in mind the neglog transformation of the change in relationship with partner scores variable. The estimates show that the respondents whose coping levels were “Well” on the average, were likely to be doing well in both their relationship with partners during the COVID-19 period. The

respondents belonging to the remaining coping levels were averagely struggling in their relationship with partners during the COVID-19 period. Regarding parenting, all respondents, irrespective of their coping levels, were predicted to have negative change in parenting scores on average, even though there were some disparities in the predictions. The respondents with average “Well” coping levels were likely to be doing better in parenting compared to the other coping levels during the COVID-19 period.



Linear predictive margins of COVID-19 coping levels for change in relationship scores with partner



Linear predictive margins of COVID-19 coping levels for change in parenting scores

Figure 2. Linear predictive margins of COVID-19 coping levels for change in relationship scores with partner and parenting.

Discussion

This study sought to assess the parenting practices, family relationships and the factors influencing these two outcomes during the early periods of the COVID-19 pandemic in Ghana. Significantly, partner relationships and parenting styles were found to be positive before the emergence of the pandemic, but these took a downturn due to the pandemic-related stress. Participants who were not coping well in their relationships before the pandemic scored lower relative to those who were coping fairly well and very well respectively. Significantly, respondents who were never married also had lower scores during the pandemic with their partners compared to their married counterparts. Pietromonaco and Overall, in their evaluation of the impact of COVID-19 on couples' relationship, have reported that "Couples who entered the pandemic with few external resources, greater vulnerabilities and less adaptive dyadic processes may be likely to experience declines in relationship quality and stability.¹⁶ Pier *et al.*, in their study on relationship quality and mental health during COVID-19 lockdown in Australia have also indicated that individuals with good relationship quality fared better than others with poor relationship quality or without relationship.¹⁷ Indeed, respondents' background characteristics of gender, age, parity, educational level, economic status and residence did not influence change in relationship with partner scores during the early days of the pandemic. Similarly, pre-COVID-19 parenting scores was found to be positively related during the same period.

Clearly, there have been monumental disruptions to routine human activities occasioned by the pandemic such as global economic downturn due to adoption of social distancing measures culminating in shutdowns of financial markets, corporate offices and businesses.¹⁸ On sexuality and reproductive health, Li has observed that in China, many young people reported decreased sexual desire and frequency of sexual intercourse due to the pandemic,¹⁹ which is affirming Goodwin *et al.* findings that stressors related to the COVID-19 quarantine and interpersonal relationships have created family dependencies, threatened livelihoods and a burgeoning in domestic abuse.²⁰

Our study indicates that there was an association between partner relationship and COVID-19 coping levels in Ghana. While this was not dependent on gender and age, it manifested in partners' coping, marital status, and parity levels. Compared with our married respondents, never married par-

ticipants showed a negative relationship with their partners during the outbreak of the pandemic. Similarly, partners with younger children showed inverse relationships as a result of the pandemic. While it is significant to note that partners were coping well two weeks before the COVID-19 lockdown in Ghana, most of these partners were equally coping well even in instances where a partner had contracted the virus. There has been emergence of previous pandemics like

HIV/AIDS that were associated with strained relationships. Contrasting the COVID-19 pandemic with these previous pandemics, we may be right to assert that the COVID-19 pandemic evoked sympathies for infected partners, perhaps due to requirements for mandatory quarantine and less stigmatization associated with the disease.

The parenting style adopted usually

Table 1. Background characteristics of respondents N=436.

Name of variable	Frequency (n)	%
Gender		
Female	205	47
Male	231	53
Age		
18-24	3	1
25-34	142	33
35-44	184	42
45-54	79	18
55-64	28	6
Marital status		
Married	406	93
Single	3	1
Cohabiting	27	6
No. of children		
0	61	14
1-3	357	78
4+	59	12
Education		
Secondary or Lower	8	2
Post-Secondary	91	21
Bachelor's	112	26
Masters	153	35
Doctorate	73	17
Employment		
Employed	415	95
Unemployed	21	5
Economic status		
Lower income	34	8
Lower middle income	270	62
Higher middle income	130	30
Residence		
Rural	87	20
Urban	348	80
COVID-19 coping level		
Not well at all	180	41
Not well	35	8
Average	21	5
Well	49	11
Very well	151	35
Infected by COVID-19		
No	385	88
Yes	13	3
Not sure	39	9
COVID-19 infection in the household		
No	392	90
Yes	15	3
Not sure	29	7
COVID-19 infection by someone close		
No	320	73
Yes	84	19
Not sure	32	7

provides the behavioral construct which provides the emotional context within which parents and children interact.²¹ This is expressed in any of the dominant styles of authoritative, authoritarian, or uninvolved with the authoritative style being widely acknowledged as most beneficial for children's growth and development.²¹⁻²³ It cannot be ruled out that the pandemic has introduced various stressors and uncertainties into relationships.²⁴ While parents are compelled to earn income to sustain their families, they are also limited with options of economic activities due to the restrictions imposed by the pandemic. Similarly, the shutting down of schools and other community play environments are also associated with other parental challenges of feeding, supervision, and weight control.

Coping strategies in relationships and

parenting may be influenced by myriad of factors and circumstances. As explained by Lukman *et al.*,²⁵ couples in marital relationships are required to adjust to each other. Derivation of satisfaction in a relationship, according to Fishman, Rogge and Beach,²⁶ is very foundational to the success of the relationship. Accordingly, the challenges involved in breakdown of relationships may include distress with attendant problems such as poor childrearing practices. Certainly, the unexpected emergence of the COVID-19 pandemic could be viewed as one defining tragedies that has significantly altered relationships and parenting practices,^{1,20,24} which may place children at risk of abuse and neglect or parenting-related exhaustion for which innovative mental health will become handy.^{1,24}

Limitations of the study

This study has some weaknesses including not capturing qualitative responses to in-depth explain some of the results presented. It also unexpectedly excluded other respondents due to the online methodology adopted for data gathering (none and non-active online users could not be contacted). Nonetheless, it is among the few that have been conducted in Ghana focusing on the pandemic, partner relationships and parenting practices. The study reported by Owusu and Frimpong-Manso focused on survival of poor Ghanaian families while Owusu-Fordjour, Koomson and Hanson also reported on the impact of the COVID-19 pandemic on teaching and learning in the country.^{27,28}

Table 2. Multivariate linear regression model of the association between change in relationship with partner scores and COVID-19 coping levels.

Predictors	Coef.	Robust SE	t	p>t	95% confidence interval	
Coping (Ref: Not very well)						
Not well	-0.618	0.248	-2.490	0.013	-1.106	-0.131
Average	-0.200	0.323	-0.620	0.535	-0.834	0.434
Well	0.528	0.175	3.010	0.003	0.183	0.872
Very well	0.328	0.130	2.520	0.012	0.072	0.584
Gender (Ref: Female)						
Male	0.071	0.113	0.630	0.528	-0.150	0.292
Age (Ref: 18-24)						
25-34	1.013	0.846	1.200	0.232	-0.650	2.677
35-44	1.121	0.850	1.320	0.188	-0.550	2.793
45-54	1.228	0.864	1.420	0.156	-0.472	2.927
55-64	1.018	0.879	1.160	0.247	-0.710	2.746
No. of Children (Ref: 0)						
1-3	-0.297	0.182	-1.630	0.104	-0.655	0.061
4+	-0.174	0.242	-0.720	0.472	-0.649	0.301
Education (Ref: Secondary or Lower)						
Post-secondary	0.084	0.366	0.230	0.818	-0.635	0.804
Bachelor's	0.130	0.369	0.350	0.726	-0.596	0.855
Masters	0.052	0.349	0.150	0.882	-0.635	0.738
Doctorate	0.052	0.389	0.130	0.893	-0.712	0.817
Employment (Ref: Employed)						
Unemployed	-0.092	0.318	-0.290	0.773	-0.717	0.534
Economic Status (Ref: Lower Income)						
Lower Middle Income	0.019	0.222	0.090	0.930	-0.416	0.455
Higher Middle Income	0.280	0.247	1.140	0.257	-0.205	0.766
Residence (Ref: Rural)						
Urban	0.152	0.147	1.040	0.301	-0.137	0.441
Pre-COVID relationship with partner Scores	-0.044	0.009	-5.110	0.000	-0.061	-0.027
Infected by COVID-19 (Ref: No)						
Yes	0.665	0.265	2.510	0.012	0.144	1.186
Not sure	0.205	0.231	0.880	0.377	-0.250	0.659
COVID-19 infection in the household (Ref: No)						
Yes	0.980	0.308	3.180	0.002	0.374	1.586
Not sure	-0.574	0.317	-1.810	0.071	-1.198	0.050
COVID-19 infection by someone close (Ref: No)						
Yes	-0.372	0.159	-2.340	0.020	-0.684	-0.060
Not sure	0.163	0.214	0.760	0.448	-0.258	0.584
Constant	0.033	0.906	0.040	0.971	-1.748	1.814

N= 436, r²= 0.16.

Table 3. Multivariate linear regression model of the relationship between change in parenting scores and COVID-19 coping levels.

Predictors	Coef.	Robust SE	t	p>t	95% confidence interval	
Coping (Ref: Not very well)						
Not well	-0.349	0.272	-1.280	0.201	-0.883	0.186
Average	0.051	0.240	0.210	0.831	-0.421	0.524
Well	0.418	0.188	2.220	0.027	0.048	0.789
Very well	0.279	0.127	2.200	0.029	0.029	0.529
Gender (Ref: Female)						
Male	0.083	0.115	0.720	0.474	-0.144	0.309
Age (Ref: 18-24)						
35-44	0.052	0.146	0.360	0.722	-0.235	0.339
45-54	0.243	0.172	1.410	0.159	-0.095	0.581
55-64	-0.252	0.243	-1.040	0.301	-0.730	0.226
Education (Ref: Secondary or Lower)						
Post-secondary	-0.041	0.364	-0.110	0.911	-0.757	0.676
Bachelor's	-0.115	0.362	-0.320	0.750	-0.827	0.596
Masters	0.106	0.356	0.300	0.765	-0.594	0.806
Doctorate	0.330	0.388	0.850	0.395	-0.432	1.092
Employment (Ref: Employed)						
Unemployed	-0.232	0.412	-0.560	0.574	-1.041	0.578
Economic (Ref: Lower Income)						
Lower Middle Income	-0.152	0.216	-0.700	0.482	-0.576	0.272
Higher Middle Income	-0.166	0.234	-0.710	0.479	-0.625	0.294
Residence (Ref: Rural)						
Urban	-0.098	0.153	-0.640	0.520	-0.398	0.202
Pre-COVID relationship with partner Scores						
	-0.032	0.009	-3.430	0.001	-0.050	-0.014
Infected by COVID_19 (Ref: No)						
Yes	-0.376	0.310	-1.210	0.227	-0.986	0.234
Not sure	-0.089	0.242	-0.370	0.713	-0.565	0.387
COVID-19 infection in the household (Ref: No)						
Yes	0.253	0.362	0.700	0.484	-0.458	0.964
Not sure	0.132	0.270	0.490	0.625	-0.399	0.664
COVID-19 infection by someone close (Ref: No)						
Yes	-0.018	0.155	-0.120	0.905	-0.323	0.286
Not sure	-0.272	0.204	-1.330	0.184	-0.673	0.130
Constant	0.671	0.546	1.230	0.220	-0.403	1.744

N= 406, $r^2= 0.10$.

Conclusions

The COVID-19 pandemic continues to wreak havoc to the global economy in addition to producing negative challenges to partners and parents. The findings suggests that the challenging public health containment measures of the COVID-19 pandemic negatively influenced the relationship between partners and parental involvement. We also predict that participants whose coping levels were "Well" on the average, were likely to be doing well in both their relationship with partners and in the discharge of their parenting duties during the COVID-19 period. It is therefore incumbent on partners to device appropriate coping mechanisms to ameliorate some challenges associated with relationship under the era of the new normal. For parents, it is imperative to embrace responsive parenting style(s) to be able to nurture their children and control adverse childhood practices like overeating, excessive gluing to television sets or addiction to social media.

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