

How COVID-19 Expanded the Family Dinner Table: Greater Frequency Linked With Improved Quality and New Ways of Eating Together

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While the predominance of previous family dinner research has focused on family dinner frequency, the quality of the mealtime atmosphere also accounts for impactful mental health and nutritional benefits to children and adults. COVID-19 lockdowns dramatically increased the frequency of meals eaten at home, providing a unique opportunity to examine whether the quality of family dinners also improved. Additionally, the pandemic boosted the number of meals shared remotely with family and friends, thus changing *how* families ate dinner. Using a newly validated measure encompassing previously established as well as pandemic-related family dinner qualities (positive emotional interactions, negative mealtime behaviors, family support during meal preparation, and incorporation of the outside world), this study assessed frequency and quality changes in family dinners in a diverse, representative sample of 517 U.S. parents. Multivariate regressions in a structural equation modeling framework found that greater increases in family dinner frequency were linked with improvements in family dinner qualities, including positive emotional interactions, family support, and incorporation of the outside world. Most parents who increased their use of technology anticipated continuing those changes after COVID-19 abates. Greater frequency of family dinners was also associated with a rise in negative mealtime behaviors, but there were more changes in positive qualities. Given that the quality of dinners has been changed by frequency and by technology, these findings have important implications for researchers and clinicians interested in maximizing the protective qualities of family dinner.

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Mindful that our identities can influence our approach to research, the authors wish to provide the reader with information about our backgrounds. Both authors self-identify as White women.

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Public Significance Statement

This study took advantage of the increase in shared family meals during COVID-19 lockdowns to investigate associations between frequency changes and changes in the quality of family dinners. Having more meals was linked with a rise in positive emotional interactions at the table and more family support with preparing meals. Although more dinners were also associated with more negative behaviors, there were more positive associations. Most strikingly, families used remote technology during dinner more often to connect with others during dinner, a qualitative shift in family dinners that is likely to continue to transform family meals postpandemic.

Keywords: family dinner quality, family dinner frequency, COVID-19, remote technology, postpandemic

The COVID-19 pandemic forced families to eat more meals at home due to school, work, and restaurant closures. In a systematic review of studies conducted about the impact of COVID-19 lockdowns on family dinner, Titis (2022) found that a majority of parents reported eating more home-cooked meals, sharing more meals with children, and involving children in food preparation. Increased pandemic meals were also associated with more consumption of fruits and vegetables, less stress, and greater emotional well-being (Berge et al., 2021). In another study researchers found that more than half of the families were spending more time cooking, eating together, and involving their children in meal preparation than they had in prepandemic times (Carroll et al., 2020). The uptick in meals cooked and eaten at home during COVID-19 created a naturalistic opportunity with an unusually large amount of variance which could allow for a precise investigation of how the quality of mealtime may also have been affected. Examining both frequency and quality is critical, as both dimensions have been found to maximize the social–emotional benefits of shared mealtimes (Berge et al., 2023).

It could be logical to assume that when family members are forced to eat together at home, they might feel more resentment, stress, and tension during family meals. However, past research suggests that increasing healthy behaviors, even when one does not necessarily want to, can result in experiencing positive feelings (Baumeister et al., 2007). For example, past research has found that increasing exercise can prevent depression (Choi et al., 2019), and engaging in planned sex dates can boost mood and eudaimonia (Kashdan et al., 2018). Therefore, we hypothesized that

when families were required to eat family dinners together more frequently due to the COVID-19 pandemic, they would also realize qualitative benefits from increased family dinners.

The predominance of past family dinner research studies has focused on the *frequency* of mealtime as the prime predictor of academic (Fiese, 2001; Snow & Beals, 2006), mental health (Agathão et al., 2021; Fulkerson et al., 2009; Harbec & Pagani, 2018; Sen, 2010; Utter et al., 2013) and physical health benefits for children and adolescents. While less research has addressed the *quality* of family interactions at the table, this aspect can be as important as frequency (Dallacker et al., 2019; Harbec & Pagani, 2018). A recent longitudinal study of a large, diverse group of parents with children ages 5–9 found that frequency of family dinner accounted for different benefits than quality (Berge et al., 2023). On the one hand, higher frequency predicted food-related benefits, such as a lower risk of obesity, consumption of a healthier diet, and less food pickiness. On the other hand, quality predicted social benefits, such as fewer emotional and peer problems in children as well as reduced psychological distress for parents. These researchers concluded that greater frequency along with a positive quality of mealtimes together maximized the nutritional and emotional benefits of shared mealtime.

Past research of the qualities of family dinner that are most important for child and adult well-being, has focused on the presence of positive emotional interactions, the absence of negative mealtime behaviors, and family support around meal preparation (Carlson, 2022; Dallacker et al., 2019; Harbec & Pagani, 2018). A positive atmosphere at the table, characterized by parental warmth,

opportunities for children to talk, and enjoyment of the meal has been shown to reduce obesity rates (Berge et al., 2014) and asthma symptoms (Fiese et al., 2011), protect youth from disordered eating behaviors (Neumark-Sztainer et al., 2008), lower levels of soft drink consumption, and lead to higher levels of physical fitness (Harbec & Pagani, 2018). When the atmosphere is warm and positive, children are less likely to engage in emotional eating (Dallacker et al., 2019). In a study of 1,492 children ages 6–10, a positive meal environment predicted lower levels of oppositional behaviors and physical aggression (Harbec & Pagani, 2018).

On the other hand, when family meals are punctuated by stony silence, arguing, or everyone staring at their own phone or television (TV) screens, the benefits of family dinner are likely to go unrealized. For example, one study found that when parents' interactions at the table were marked by hostility and inconsistent discipline, the children exhibited increased prevalence of weight issues (Berge et al., 2014). Similarly, when the TV was frequently on during mealtime, children ate fewer fruits and vegetables and more pizza, soda, and snack foods than in families where eating meals and watching TV were separate activities (Coon et al., 2001). Alternatively, when the TV was turned off, children were more attuned to satiety cues and had better overall dietary quality (Trofholz et al., 2017).

In addition to a warm atmosphere around the table, having help with the preparation of family meals can make the nightly routine of making dinner more enjoyable and less burdensome (Carlson, 2022). When hundreds of families were asked what gets in the way of regular family dinner, the time and effort were at the top of the list (Middleton et al., 2020). During the pandemic, with everyone eating all meals at home, the burden of cooking and preparing meals and cleaning up may have increased even further. Fortuitously, more fathers and mothers were also working from home during the pandemic, providing ample opportunity to share the "invisible labor" of cooking. Although meal preparation is still not gender equitable, men are far more likely to help today than in previous decades (Smith et al., 2013). Similarly, with children spending more time at home, there may have been more time for them to participate in cooking. The Guelph Family Health Study, for example, reported a 50% increase in children

helping with food preparation at the start of the pandemic (Carroll et al., 2020).

The pandemic also brought a whole new quality to family dinner, in that, many families turned to video conferencing to visit virtually with friends and family members during the lockdowns (Luchetti et al., 2020). Extended family members who were staying socially distant from each other increasingly relied on technology to stay in touch. This greater prevalence of remote dinners with extended family could add to the quality of dinner in myriad ways. Since a consistent finding about the benefits of family dinner has been that children are more resilient and have higher self-esteem when they have a sense of belonging to a larger family system and when they know their family's stories (Duke et al., 2003, 2008; Fishel, 2015), the opportunity to connect with extended family while dining "together" remotely with family could help facilitate these connections with the larger family system.

In addition to telling stories about the family and what happened at school, the dinner hour is also a key time to discuss the news and other current events in the outside world. In light of the prevalent updates about COVID-related health, education, and workplace issues, the dinner table could provide a prime opportunity to discuss information and news during this time. Therefore, we anticipated that another new, important quality during the COVID-19 pandemic was how families brought in the outside world through discussing the news at dinner. No previous research to our knowledge has examined associations between frequency changes in family dinner and technology-based changes in the qualities of bringing in the outside world to dinner.

Design of the Family Dinner Quality Scale

Given that COVID-19 dramatically changed the way that families use remote technology, we designed the Family Dinner Quality Scale (FDQS) to reflect changes that will likely continue post-pandemic. Therefore, in addition to asking about positive and negative interactions during family dinner, our scale asked about eating remotely with friends and family, and sharing news and information about the outside world. We first reviewed existing questionnaires (Fiese & Kline, 1993; Neumark-Sztainer et al., 2003) that measure the traditional aspects of family mealtime. For example, the Project Eat Survey has 221 items

assessing social, personal, and behavioral factors predicted to be associated with dietary intake (Neumark-Sztainer et al., 2003). The Family Ritual Questionnaire assesses family rituals across settings ranging from dinnertime to religious celebrations and across multiple dimensions from roles to symbolic significance (Fiese & Kline, 1993). Although these assessed dimensions are significant, addressing the importance of the outside world, negative interactions, and family support were not measured. We constructed the FDQS to include the dimensions not included in these previous measures, particularly incorporating the outside world using technology, as well as to be brief enough for research purposes. Items were developed by a long-standing expert in the area of family dinner (first author), and reviewed by the second author, as well as the Organization who administered the survey (see below).

The Present Study

Therefore, the goals of this study were:

1. To examine whether family dinner frequency increased during the COVID-19 pandemic compared to prepandemic levels;
2. To preliminarily develop and test the initial validity and reliability of our new measure of family dinner qualities, including interfacing with the outside world using technology;
3. To examine whether there were changes to these family dinner qualities;
4. To test associations between changes in the frequency of shared dinners and changes in family dinner qualities (positive emotional interactions, negative mealtime behaviors, family support, and incorporation of the outside world); and
5. To investigate how many of the families who increased the frequency of remote family dinners wanted to continue those changes after the pandemic abates.

Method

Sample and Procedure

This study included the 517 parents who had children living at home at least half the time, out of 696 survey participants. Recruitment took place on Amazon Mechanical Turk (MTurk). MTurk is a

fee-for-service survey panel that allows researchers to recruit diverse samples from all over the United States. MTurk has increasingly been used in psychological research to obtain high-quality data inexpensively and quickly. One of MTurk's features is its system and premium qualifications; this study requested workers who were in the United States and had a 95% approval rating (meaning, their work got approved by those requesting their tasks 95% of the time). Previous research indicates that MTurk samples have strong generalizability to national samples (Huff & Tingley, 2015).

Participants completed informed consent, and a University School of Education Institutional Review Board approved the study. Families in this study had children spanning a wide age range, from infants to young adults. The sample also had substantial racial variability, as 14.1% were Black, 70.6% were White, 5.8% were Asian, and 5.5% were Latinx (the rest identified as other, multiple, or none). More than half of the respondents clustered in the low-to-middle household income range, with 57.8% earning below \$75,000. See Table 1 for additional details.

Survey

The survey included 50 questions (with some open-ended response options) developed by the Organization (a project of The University Graduate School of Education) and the Project (an initiative based at the hospital). The survey was offered at two different times to different groups of respondents, within 2 weeks of each other. After data collection was complete, several rounds of systematic cleaning were conducted, including careful analysis of open-ended data to eliminate "fraudsters" (e.g., those who completed the survey multiple times, provided inconsistent responses, or took much too long or short to complete the survey; Teitcher et al., 2015). Once the final data set was established, raking was used to generate sample weights that matched the sample to the population of U.S. adults on gender, race, age, income, educational attainment, and political affiliation (Yap et al., 2022). Raking is a simple and widely used technique in survey research for adjusting the weights of sample data based on known population characteristics. When researchers have used systematic cleaning and raking of the data to minimize threats to internal and external validity, the results from MTurk samples have been consistent with results obtained from other

Table 1
Demographic Characteristics of Participants

Demographic characteristic	<i>M</i> or <i>n</i> (<i>SD</i> or %)
Age (years)	37.7 (10.1)
Sex (male/female)	245 (51.9%)/227 (48.1%)
Relationship status	
Married/living with partner	402 (84.8%)
Single/divorced/widowed/ living apart	72 (15.2%)
Education	
High school graduate	27 (5.7%)
Some college	52 (11.0%)
2-year degree	38 (8.1%)
4-year degree	264 (55.9%)
More than 4-year degree	91 (19.3%)
Employment	
Not employed or unemployed	33 (7.1%)
Part- or full-time employed	429 (92.9%)
Age of child ^a	
Child ≤1 year old	49 (9.5%)
Child 2–5 years old	227 (43.9%)
Child 6–12 years old	229 (44.3%)
Child 13–18 years old	119 (23.0%)
Child ≥19 years old	74 (14.3%)
Household income	
<\$25,000	42 (8.9%)
\$25,000–\$49,999	103 (21.9%)
\$50,000–\$74,999	127 (27%)
\$75,000–\$99,999	119 (25.3%)
\$100,000–\$149,999	52 (11.1%)
\$150,000–\$249,999	21 (4.5%)
\$250,000 or more	6 (1.3%)
Race	
Latinx	26 (5.5%)
Black	66 (14.1%)
White	331 (70.6%)
Asian	27 (5.8%)
Other/multiple/none	19 (4.1%)

Note. All values are unweighted. Totals are not 517 for every characteristic because of missing data. Valid percents not including missing data are used.

^aTotals for age of child exceed 517 and 100% because participants could have more than one child.

commonly used internet surveys and in-person recruiting (Casler et al., 2013).

Measures

Family Dinner Frequency

Participants were asked, “During the pandemic, did all or most of the people living in your home eat dinner together less, about the same, or more than compared to before the pandemic?” The item was rated on a 5-point Likert scale from 1 = *much less* to 5 = *much more*.

Family Dinner Quality

Quality of family mealtime was assessed using the FDQS (Fishel, 2015), which consists of 12 questions in four subscales. The Positive Emotional Interactions subscale includes five items: “Talked about who we are as a family or who we want to be as a family,” “Laughed together,” “Talked about our days,” “Expressed or talked about feeling gratitude,” and “Felt connected to one another.” The Negative Mealtime Behaviors items includes two items: “Used screens/technology for personal use at the table” and “Argued or had tension at the table.” The two Family Support items are “During the pandemic, have family members helped with preparing family meals,” and “During the pandemic, have your children cooked.” The Incorporation of the Outside World subscale includes three items: “Shared information from screens/technology with others at the table,” “Talked about news and politics,” and “Eat with friends or family members remotely (e.g., via Zoom, Face Time, Google Meets or other video technology).” Each question asks whether a given family dinner quality happened less, about the same, or more during the pandemic as compared to before the pandemic on a 5-point Likert scale from 1 = *much less* to 5 = *much more*. Mean scores were used for each subscale.

Unfortunately, the two Family Support items were inadvertently affected by a skip problem due to the administration of the survey in the first set of questionnaires, resulting in having a 20.7% response rate and 23.4% response rate, respectively. Therefore, that subscale was not included in the psychometric analyses or regressions but was explored in a preliminary manner.

Postpandemic Expectations

Participants were also asked whether they expected to continue increases in their remote family dinners *after* the pandemic abates. The question was,

Thinking about life after the pandemic, do you think you will eat with friends or family members remotely (e.g., via Zoom, Facetime, Google Meets or other video technology) less, about the same, or more than you did during the pandemic?

Postpandemic expectations of continued changes were analyzed for those who said they increased the frequency of remote dinners during the pandemic and was rated on a 5-point Likert scale from 1 = *much less* to 5 = *much more*.

Analytic Strategy

We summarized the changes in family dinner frequency and quality using SPSS v. 28 (International Business Machines Corporation, 2021). Correlations between the variables were also examined in bivariate analyses to ensure lack of multicollinearity between the variables.

Before testing whether changes in the frequency of family dinner were associated with changes in the quality of family dinner, we sought to assess reliability and validity of the FDQS (Fishel, 2015). Internal constancy reliability of the 10-item measure was assessed using Cronbach's α . Factorial validity (also called structural validity) of the FDQS was examined using confirmatory factor analysis in Mplus v. 8.7 (Mokkink et al., 2010; Muthén & Muthén, 1998). The 10 items included made up three types of family dinner qualities: (a) positive emotional interactions during family dinner, (b) negative mealtime behaviors, and (c) incorporation of the outside world into family dinner. We examined the chi-square statistic (ideally nonsignificant to suggest good fit), as well as other goodness-of-fit measures including the comparative fit index (CFI) and the Tucker–Lewis index (TLI), the standardized root-mean-square residual (SRMR), and the root-mean-square error of approximation (RMSEA) with confidence intervals (Byrne, 2012; Hox et al., 2017). A CFI and TLI of 1 indicates perfect fit, .95 or above indicates a good fit, and below .90 indicates a poor fit (Byrne, 2012; Hox et al., 2017). The SRMR should be .05 or less in a good-fitting model, an RMSEA of .05 indicates a good fit, and an RMSEA between .08 and .10 indicates a moderate fit (Byrne, 2012; Hox et al., 2017). Although when creating a new measure standardized factor loadings should ideally be $>.70$, a cutoff of .32 has been suggested by some statisticians (Tabachnick & Fidell, 2000), and others have said that over .45 is acceptable (Comrey & Lee, 1992).

To test whether frequency changes in family dinner were associated with quality changes, multivariate regressions were run in a structural equation model framework in Mplus. Mplus uses MLR, maximum likelihood estimation with robust standard errors, which accounts for missing data (Baraldi & Enders, 2010). MLR estimation also allows for weighting to increase the representativeness of the sample and is robust to nonnormality in the variable distribution (Muthén & Muthén, 1998). Standardized estimates and adjusted R^2

(adjusted for the number of terms in the model) were reported while controlling for gender, race, age of the participant, age of the child, income, and education (<https://www.educba.com/adjusted-r-squared-formula/>).

We also examined whether the raw changes in the descriptives of positive family dinner qualities across the pandemic showed greater increases than the raw changes in negative family dinner qualities using difference tests via model constraints in Mplus. These were reported as unstandardized z -score estimates with two-tailed p values and 95% confidence intervals.

Finally, using data from the 255 respondents who increased the frequency of remote dinners during the COVID-19 pandemic, we investigated how many of those wanted to continue those increases, or do even more, after the pandemic.

Results

Family Dinner Frequency Changes During the COVID-19 Pandemic

As shown in Table 2, of the 456 respondents, 60.1% said they had family dinner more often or much more often 14 months into the pandemic as compared to prepandemic levels.

Psychometric Properties of the FDQS

The three-factor confirmatory factor analysis had an excellent fit to the data: Model chi-square was not statistically significant ($\chi^2 = 30.395$, $p = .547$), CFI and TLI were 1.000, SRMR was .042, and RMSEA was .000, 90% CI [.00, .032]. As shown in Figure 1, the standardized factor loadings ranged from .391 to .950 (mean of .644), all $p < .001$. Cronbach's internal consistency reliability α for the 10-item measure was also high at .83.

Family Dinner Quality Changes During the COVID-19 Pandemic

Changes in family dinner quality are summarized in Table 2. All of the quality items increased during the COVID-19 pandemic as compared to before the pandemic. When averaging the items in each subscale, 59.72% reported an increase of more or much more in Positive Emotional Interactions, 62.70% reported an increase in Incorporation of the Outside World, and 65.35% reported an increase

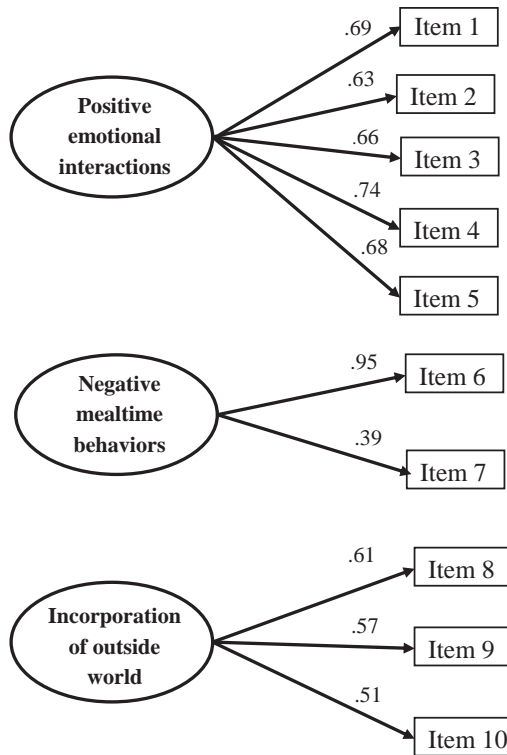
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Table 2
Changes in Frequency and Quality of Family Dinner (by Subscale) During COVID-19 Pandemic

Change	Frequency		Positive interaction				Negative behavior				Outside world			Family support (preliminary)	
	Family dinner	Talk about day	Discuss identity	Gratitude	Laugh	Feel connected	Screen personal use	Argued/tension	Screen to share	News/politic	Remote	Children cook	Family help		
Much less %	8	7	8	6	2	5	16	29	11	5	14	2	0		
Less %	1.8	1.6	1.8	1.4	.4	1.1	3.8	6.8	2.6	1.2	3.8	1.9	0		
Same %	14	27	17	24	21	16	43	81	28	23	18	7	2		
More %	3.1	6.2	3.9	5.5	4.7	3.7	10.2	19.1	6.7	5.3	4.8	6.5	1.7		
Much more %	160	157	149	147	139	158	142	158	133	141	86	28	40		
Missing %	35.1	36.1	34.0	33.6	31.2	36.2	33.7	37.3	31.7	32.7	23.1	26.2	33.1		
	112	123	146	142	128	117	121	83	134	142	116	49	33		
	24.6	28.3	33.3	32.4	28.8	26.8	28.7	19.6	31.9	32.9	31.1	45.8	27.3		
	162	121	118	119	155	141	99	73	114	120	139	21	46		
	35.5	27.8	26.9	27.2	34.8	32.3	23.5	17.2	27.1	27.8	37.3	19.6	38.0		
	61	82	79	79	72	80	96	93	97	86	144	410	396		
	11.8	15.9	15.3	15.3	13.9	15.5	18.6	18.0	18.8	16.6	27.9	79.3	76.6		

Note. Valid percents not including missing data were used for all variables except in "Missing" row.

Figure 1
Confirmatory Factor Analysis Standardized Factor Loadings for 10 Family Dinner Quality Items



Note. Item 1 = Talk about days; 2 = Talk about family identity; 3 = Express gratitude; 4 = Laugh together; 5 = Feel connected; 6 = Use screens for personal use; 7 = Argue or have tension; 8 = Share information from screens with others at the table; 9 = Talk about news and politics; 10 = Eat with friends or family members remotely.

in Family Support. Notably, as seen in Table 2, the largest percentage (68.4%) of respondents reported an increase in remote dinners as compared to all other survey items. Although less than the reported changes on the other three subscales, 44.5% also reported increases in Negative Mealtime Behaviors.

Regressions Between Frequency and Quality of Family Dinner

The multivariate regressions from changes in frequency of family dinner to changes in each of the three quality subscales were significant, even while controlling for participant employment, income, education, age (parent and child), gender, and race. More Positive Emotional Interactions

during family dinner was significantly associated with more frequent family dinners, $\alpha = .546$ (.059), $p < .001$, and frequency accounted for 30.1% of the variance (adjusted $R^2 = .301$). More Incorporation of the Outside World into family dinner was linked with more frequent family dinners, $\alpha = .321$ (.086), $p < .001$, and frequency accounted for 14.4% of the variance (adjusted $R^2 = .144$). And more Negative Mealtime Behaviors were associated with more frequent family dinners, $\alpha = .186$ (.078), $p = .017$, and frequency accounted for 14.5% of the variance (adjusted $R^2 = .145$). As seen in Table 3, there were only small to medium correlations between the variables, except for the correlations between mutually exclusive categories, indicating lack of multicollinearity.

Given the finding that more family dinners were also linked with more negative mealtime behaviors, we tested if negative behaviors surpassed, equaled, or were less prevalent than the positive ones by comparing the raw descriptives of the changes in positive qualities versus negative qualities from Table 2. The Positive Emotional Interactions subscale had significantly more increases than the Negative Mealtime Behaviors subscale, difference = .494 (.083), 95% CI [.331, .657], $p < .001$, as did Incorporation of the Outside World versus Negative Mealtime Behaviors, difference = .530 (.070), 95% CI [.394, .666], $p < .001$. However, there were no significant differences between the positive quality subscales, Positive Emotional Interactions versus Incorporation of the Outside World, difference = $-.036$ (.060), 95% CI $[-.154, .081]$, $p = .543$. These analyses indicated significantly more increases in the positive family dinner qualities than in negative family dinner behaviors.

Expectations of Postpandemic Mealtime Practices

Finally, when examining participants who had increased the frequency of remote family dinners more or much more during the pandemic, 205 out of 246 or 83% (nine of the original 255 did not respond) stated that they planned to continue or exceed those increases after the pandemic ends.

Discussion

The increase in the frequency of family dinners experienced by many families may have been a silver lining of the COVID-19 pandemic,

Table 3
Intercorrelations and Descriptive Statistics of Family Dinner Frequency Changes, Family Dinner Quality Changes, and Control Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Family dinner frequency ^a	—																		
2. Positive emotional interactions ^a	.48**	—																	
3. Negative mealtime behaviors ^a	.22**	.32**	—																
4. Incorporation of the outside world ^a	.32**	.54**	.55**	—															
5. Family support ^a	.45**	.53**	.35**	.45**	—														
6. Gender of participant ^b	-.17**	-.03	-.10*	-.06	-.15	—													
7. Asian race	.01	-.06	-.03	-.08	-.14	.01	—												
8. Black race	.06	.11*	.07	.11*	.20*	-.05	-.11*	—											
9. Latinx race	-.00	-.05	.02	.02	-.02	-.01	-.03	-.10*	—										
10. White race	-.05	-.05	-.06	-.02	-.16	.07	-.40**	-.63**	-.29**	—									
11. Age of participant ^c	-.01	-.07	-.06	-.05	-.04	.01	.06	.19**	.00	.13**	—								
12. Child age < 1	-.02	-.04	-.03	.01	-.10	.03	.03	.01	-.02	-.03	-.20**	—							
13. Child age 2-5	.01	.00	.00	.03	.09	-.09	-.04	.09	.03	-.06	-.41**	-.05	—						
14. Child age 6-12	.06	.11*	.02	.09	.21*	-.08	-.01	.02	.00	-.03	.03	-.22**	-.24**	—					
15. Child age 13-18	-.02	-.01	-.04	-.09	.04	.07	.05	-.05	-.04	.05	.33**	-.16**	-.36**	.01	—				
16. Child age >19	-.10*	-.07	-.05	-.06	-.22*	.08	.02	-.12**	-.02	.09*	.46**	-.11**	-.33**	-.25**	.09*	—			
17. Household income ^d	-.03	-.03	-.10*	-.02	.04	-.05	.09	-.05	-.02	.03	.08	.04	-.06	.10*	.05	.03	—		
18. Education ^e	.05	.02	.15**	.13**	.15	-.13**	.10*	-.01	-.04	-.04	.03	-.04	.04	.02	-.05	-.10*	.33**	—	
<i>n</i>	456	435	393	432	105	472	471	471	471	471	472	517	517	517	517	517	470	472	
<i>M</i>	3.89	3.82	3.39	3.81	3.90	1.48	0.06	0.15	0.06	0.72	37.72	0.09	0.44	0.44	0.23	0.14	3.26	4.72	
<i>SD</i>	0.99	0.72	0.88	0.75	0.72	0.50	0.24	0.26	0.23	0.45	10.10	0.29	0.50	0.50	0.42	0.35	1.35	1.07	
Range	1-5	1.8-5	1-5	1-5	2-5	1-2	0-1	0-1	0-1	0-1	19-91	0-1	0-1	0-1	0-1	0-1	1-7	2-6	
Skew	-.41	-.15	-.12	-.31	-.25	.08	3.56	2.01	3.91	-1.00	.95	2.78	.25	.23	1.29	2.04	.33	-1.08	
Kurtosis	-.49	-.84	-.29	-.32	-.95	-2.00	10.90	2.03	13.33	-.99	1.39	5.72	-1.95	-1.95	-.35	2.19	-.25	.52	

Note. All values are unweighted.
^a Family dinner frequency and three qualitative subscales: 1 = *much less*, 2 = *less*, 3 = *same*, 4 = *more*, 5 = *much more* (qualitative subscales are mean scores). ^b Gender of participant: (1 = *male*, 2 = *female*, 3 = *other*, and 4 = *won't say*); there were no 3 or 4s in this sample so not dummy coded. ^c Age of participant was a continuous whole integer. ^d Income: 1 = \$24,999 or less, 2 = \$25,000-\$49,999, 3 = \$50,000-\$74,999, 4 = \$75,000-\$99,999, 5 = \$100,000-\$149,999, 6 = \$150,000-\$249,999, 7 = \$250,000 or more. ^e Education: 1 = *less than high school*, 2 = *high school graduate*, 3 = *Some college*, 4 = *2-year degree*, 5 = *4-year degree*, 6 = *more than a 4-year degree*. All other variables: 0 = *no*, 1 = *yes*.
 * *p* < .05. ** *p* < .01.

particularly given the concomitant improvement in the quality of those dinners. This study took advantage of an otherwise impossible natural phenomenon to vastly increase the frequency of family dinners for a large portion of U.S. families, allowing for examination of precise associations between the frequency and qualities of family dinners.

Even though parents did not purposely sign up to have more shared mealtimes, increases in family dinners were largely linked with improvements in the quality of pandemic-era family dinners. There were increases in positive behaviors like expressing gratitude, laughing, and feeling connected, as well as with new qualities like sharing meals remotely and sharing news and politics at the table. Given that the dinner table is a canvas for all the dynamics of a family, the rise of negative along with positive qualities is not surprising. As families spend more time together, they may also experience more arguing and tension, as well as more time laughing at the table. Still, when comparing the raw changes in the qualitative categories, all the positive qualities increased more than negative mealtime behaviors. Furthermore, there were significant differences between each of the positive subscales and the negative subscale, but not between the positive subscales themselves. These findings suggested that even though increased frequency of family dinner can bring out both beneficial and less favorable qualities during family dinner, the positives seemed to outweigh the negatives.

Importantly, the finding that increases in frequency were linked with increases in quality of family dinner remained even when controlling for different family characteristics. In other words, it was not the fact of how much income participants made, nor how much education they had, nor the age of the parent or child, nor their gender or race that accounted for the changes in quality—the association between increasing frequency and quality was above and beyond those demographic characteristics. This finding suggested that more frequency could be linked with better quality of family dinner for a wide range of families who have diverse demographic characteristics.

On top of the positive and negative dinnertime behaviors, the pandemic ushered in new qualitative changes to dinnertime: Remote dining became much more prevalent, and the urgency to keep up with news about the pandemic brought more news of the outside world to the family table. The largest number of respondents said that they

increased remote dinners more than any of the other family dinner qualities. Furthermore, most parents who had increased the number of remote dinners with family and friends during the pandemic stated that they would continue or further increase this practice after the pandemic abates. There is evidence of the usefulness of remote socialization for people of all ages in terms of decreasing loneliness (Luchetti et al., 2020). The continued use of remote technology to connect with those not physically present may bring ongoing opportunities for family bonding and children's feeling a sense of belonging to a larger unit (Duke et al., 2003; Fishel, 2015). More incorporation of the outside world during dinner conversation would seem to be beneficial to children, offering a prime opportunity for children to process their anxieties and questions about the outside world with their parents.

Finally, the development of the FDQS (Fishel, 2015), with solid initial validity and reliability, could be of use to future researchers interested in measuring the quality of family dinners, including pandemic-related changes. Future testing of the measure would help to replicate these preliminary psychometric properties with other samples. Given the centrality of the family atmosphere as key to producing nutritional and mental health benefits, this measure could be helpful in looking at what happens around future dinner tables.

Limitations and Future Directions

The current research had some limitations. Although efforts were made to survey a representative U.S. sample, and weighting was used to make our inferential statistics more representative, our sample was disproportionately working age (i.e., 18–65), and educated. More than half of our sample, however, reported an income of less than \$75,000, almost 30% were non-White, and families had a wide range of children's ages.

Due to the skip issue in the first set questionnaires, there was not enough data to examine family support around preparing meals as the fourth factor of the FDQS. Given that shopping, planning, cooking, and cleaning can be quite a parental burden, future research could validate the Family Support factor, and study associations between it and increased family dinner frequency. The preliminary descriptives showed that most respondents did experience increases in family members helping with preparing meals, as well as children

cooking, during the pandemic. This is also in line with previous studies of parents' division of domestic responsibilities during COVID-19 which found that mothers and fathers reported a shift toward more equal divisions of household labor (Carlson et al., 2022).

As with all cross-sectional studies, the findings could also be interpreted the other way around—that increased quality of family dinner could lead to increased frequency. However, given that COVID-19 forced people to eat at home more often, it is likely that increased frequency came first. On the other hand, when families started having more dinners together, it would also make sense that experience put into motion a virtuous cycle, where an increase in frequency led to better quality of mealtime, and this improved experience led to having more shared dinners. In comments offered on the survey, parents reflected on their experiences of having more frequent family meals. One parent wrote, “I love eating dinner at the table more now. Life slowed down a lot during the pandemic and was kind of nice for all of us to be together each night.” Others discovered that being forced to cook more led to better eating habits. Another parent stated,

I plan to eat out less, and more at home. My family will likely follow suit for our health, as we found over the pandemic that it was easier to be healthy if we ate at home and avoided junk food as we used to do before the pandemic.

Future studies could further investigate these positive reciprocity cycles between the frequency and quality of family dinners.

Another limitation was that our study did not measure the exact number of meals that families were having before the COVID-19 pandemic: Some families might have started at few or none and moved to two or three during the pandemic, while others might have had several a week pre-pandemic and moved to every night during the pandemic. Both types of respondents would have accurately reported eating dinner together more or much more during the pandemic. These findings, however, suggest that it was not a specific number of meals per week that mattered, but rather, that any increase in meals eaten together are linked with qualitative experiences. This is promising since it suggests that even families who are able to manage only a small number of family meals per week could also benefit from increasing in small increments. Indeed, previous research has

supported the notion that the positive quality of family dinners is associated with relational and social benefits, independent of how many nightly meals a family may have (Berge et al., 2023).

Implications and Applications

Clinicians who work with families may want to encourage increases in frequency of their family mealtimes, as our findings suggest that increasing their meals, as many did during the pandemic, can lead to increased quality of those dining experiences, with all the concomitant benefits. Families need not be pressured, however, to achieve a set number of shared meals each week, as any increase may be accompanied by improvement in quality. Clinicians may warn families that eating together more frequently could also bring some increases in arguing and tension, normalizing this as part of the complex fabric of families' lives. Still, families could be motivated to persist through navigating these conflicts given that the positive benefits could ultimately outweigh the negatives.

If therapists want to offer guidance within a therapy session about how to get families excited about shared mealtime, they might ask parents to begin by exploring their own reasons for committing to family dinners so that they can explain their enthusiasm to their children. Then, parents can be asked to set their goals and ask their children for their goals: Perhaps some family members want to have more fun at dinner so there will need to be more jokes told, games played, and fewer negative comments made. Others may wish that the workload was more evenly shared so requests for more help with cooking, clean-up, and serving will be the focus. For some, making the food more adventurous or healthy will be a goal. Alternatively, parents may choose instead to plan one enjoyable dinner that features a favorite family meal, has a conversation jar on the table, and a game at the ready. At this dinner, a parent could suggest that they want to do more of these, perhaps once or twice a week, and then ask for the children's engagement and ideas to make dinner enjoyable. For more support, therapists can share a 4-week guide (<https://thefamilydinnerproject.org/4week-program/introduction/>) that offers suggestions for families to make mealtime more frequent and satisfying with a week-by-week focus: making a commitment to dinner, making it simple, making it fun, and making it matter.

Clinicians may also want to capitalize on some of the ways that the dinner table expanded during the pandemic. Given that many families grew accustomed to using remote technology to dine with distant loved-ones, therapists may discuss the use of technology to create a sense of belonging and to bond with an extended family. In light of the increase of the dinner table as a time to talk about news in the outside world, clinicians may inquire about how children are digesting challenging conversations about wars, elections, and other events of the day and suggest helpful ways for parents to help their children process upsetting events.

These findings also have important implications for overall well-being, as past research has found that positive emotional processes queried about here such as expressing gratitude and laughing, have significant benefits to mental health (Emmons & McCullough, 2003; Savage et al., 2017). In addition, feeling connected to other family members is protective against feeling isolated, overwhelmed, and depressed (Luchetti et al., 2020; Office of the Surgeon General, 2023; Southwick et al., 2016). Clinicians could ask specifically about the presence of these positive qualities of shared dinner time, noting that these are important ingredients of both an enjoyable mealtime and of psychological well-being.

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