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BRIEF REPORT

Emerging Ideas. Families Together: Supporting family resilience during the COVID-19 pandemic

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Abstract

Objective: This study evaluated a rapidly developed program designed to support family resilience during the COVID-19 pandemic.

Background: Grounded in Walsh's family resilience framework, *Families Tackling Tough Times Together* (FT) disseminated weekly evidence-informed content through a public Facebook group, partner organizations, and on a dedicated website.

Method: Facebook and website analytics and weekly brief usage surveys (n with at least one = 74) documented program use, and pre- and post-FT surveys (n with at least one = 49) assessed family connectedness, positive outlook, purpose in life, and stress.

Results: The program was widely used and received favorable feedback. Participants reported less stress in weeks when they engaged in more program activities, and more family connectedness in weeks when they spent more time engaged in program materials. No significant changes were observed, however, in overall family resilience, self-efficacy, family functioning, or stress.

Conclusion: The FT program was widely used and appraised positively. Program involvement was favorably correlated with less stress and family connectedness within weeks, although long-term changes post-program were not observed.

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Implications for Emerging Ideas: Social media can be used as an effective mechanism for reaching families during times of adversity and provides preliminary data that can guide refinement of FT and other disaster-responsive programs.

KEYWORDS

community, COVID-19, family connectedness, family resilience, online engagement, stress

The novel coronavirus 2019 (COVID-19), declared a global pandemic in March 2020, disrupted family functioning, with some families experiencing multiple stressors and conflicts due to job loss, social distancing and confinement, unstable housing, school closures, and family caregiving burden (Prime et al., 2020). Despite these challenges, family resilience theories (Walsh, 2016) suggest that families can offset the negative outcomes experienced as a result of COVID-19 (Masten, 2021) by maintaining and fostering social connectedness, purpose, and optimism. Our study aimed to assess the use and usefulness of a rapidly developed program: *Families Tackling Tough Times Together* (FT; Ruiz et al., 2020) designed to support families in building resilience during the pandemic.

FOSTERING FAMILY RESILIENCE

Family resilience is a process by which families operate as adaptive systems through shared beliefs and practices that allow them to respond to adversities, rising above and thriving against hardships (Masten, 2021; Walsh, 2016). Our operationalization of family resilience is based on Walsh's (2003) Family Resilience Framework, which comprises nine key family processes organized into three categories: shared belief systems (meaning-making, positive outlook, transcendence), organizational processes (flexibility to adapt, connectedness, social and economic resources), and communication/problem-solving processes (clear information, emotional sharing, collaborative problem solving). Key to Walsh's framework is that resilience reflects shared perspectives within families that are built and supported through relationships and interactions. For example, family resilience comprises a positive outlook shared by family members rather than simply optimism within individual family members (Walsh, 2016).

Many approaches to fostering family resilience (e.g., resilience-minded treatment, family-based interventions, community supports), although useful under most circumstances, are typically not amenable to quick tailoring and deployment to respond to specific crises—for example, in times of disaster or the COVID-19 pandemic. Disaster-responsive programs face challenges (Osofsky & Osofsky, 2018), including the need to focus on solving problems caused by the unique circumstances and stress, rather than ways to support strengths. Because disasters occur within a specific community and culture, incorporating community-based participatory components can help increase engagement when participants are overwhelmed (Osofsky & Osofsky, 2018). Most extant disaster-responsive programs focus on building resilience in individuals (most often children) and increasing community-level resilience and support for resilience in individuals (Agyapong et al., 2021). Few programs are designed to strengthen family resilience in response to acute adversity (e.g., Fulton et al., 2020), and none were found in response to the pandemic. Hence, we felt a need to develop a context-specific program to support family resilience during pandemic times.

EVALUATION OF PROGRAMS TO BUILD FAMILY RESILIENCE

Interventions that promote and enhance family resilience have generally demonstrated moderate success (Yi-Frazier et al., 2017). One strategy for examining program use and effectiveness is to assess individuals' use repeatedly and determine how use relates to key outcomes while the program is underway. Examining processes of use and change within individuals during interventions has become more common in intervention effectiveness studies (Kanning et al., 2013). Within-person analysis can provide needed clarity regarding the effects of program content, format, length, and duration (Yi-Frazier et al., 2017), as well as program processes (Kanning et al., 2013). We incorporated a within-person approach to examine the utility of the Families Tackling Tough Times Together (FT) program and its relation to family connectedness and feelings of positivity, purpose, and stress as the program progressed.

Present study

We aimed to assess the use and usefulness of the FT program by documenting use of the program via Facebook and Website analytics and self-reports (Aim 1); examining pre- and post-program changes in family resilience, self-efficacy, and stress at the sample average level (Aim 2); and examining between- and within-person associations of self-reported use of the program and feelings of family connectedness, purpose, positivity, and stress on a week-to-week basis over the course of the program (Aim 3). We hypothesized (Aim 2) that family resilience and self-efficacy would increase and stress would decrease over the course of the program. We hypothesized (Aim 3) at the between-person level that people who used the program more and tried more activities would experience higher family connectedness, purpose, and positivity and less stress on average. At the within-person level, we hypothesized (Aim 3) that on weeks when people used the program more and tried more activities, they would experience relatively higher levels of family connectedness, purpose, and positivity and lower levels of stress than on weeks when they used the program less and tried fewer activities.

METHODS

Program description

The present study is a quantitative assessment of the FT program. Guided by Walsh's (2003, 2016) framework, FT was a strength-based multiweek program that allowed participants to engage with online modules and content on developing family resilience (Ruiz et al., 2020). One program cycle was administered in spring 2020, when the public Facebook group was first created (described in Ruiz et al., 2020). This report focuses on the fall 2020 program cycle, which incorporated partner organizations to increase reach and engagement ("dissemination" and "engagement" partners). During October–November 2020, vaccines were not available, and the country was experiencing the first major increase of cases (i.e., from 43,000 daily cases at program launch to more than 175,000 daily cases during the last week of the program; "COVID in the U.S.," 2022), resulting in increased uncertainty and distress among families.

FT fall 2020 cycle procedures

A few weeks before program launch (see supplemental figure "Overview of Evaluation Schema" in the online supplemental materials), we enlisted approximately 50 organizations

as dissemination and engagement partners (herein termed *partners*) that served families primarily in Indiana, but with representation from multiple states in the United States (i.e., libraries, food banks, wellness centers, school corporations, Purdue Health and Human Services Extension, Military Child Education Coalition). These partners reported common goals for joining the FT effort to enhance family resiliency both in terms of seeking and generating more knowledge and resources to serve and help families in the communities.

For 9 weeks, evidence-informed and self-guided family activities, focused on resilience-related skill building (i.e., *kits*), were released weekly to a public Facebook group and project website for families. Each week's content included activities that focused on one of the nine themes incorporated in Walsh's family resilience framework. We decided to use these nine elements as an organizing framework, tying each to strengths that could be promoted by activities we would suggest each week. For example, shared belief systems incorporate a positive outlook. To support or encourage a shared positive outlook within the family, we focused on gratitude and encouragement, suggesting interactive activities such as holding "pits and peaks" discussions at meals for family members to share examples of positive events and offer one another encouragement for challenges. Separate sets of activities were tailored for different age groups, including families, young children, youth, young adults, and older adults. Our reasoning was that helping families learn about what resilience is, behaviors that can promote resilience, and providing them with opportunities to practice those behaviors would promote family resilience during the pandemic.

Additional weekly content included a short (<5-minute) video featuring excerpts from an interview between the program director and Froma Walsh about that particular week's theme, health-related activities released on "Wellness Wednesdays," messages of affirmation released on "Celebration Saturdays," and easily referenced infographics about the theme released on Mondays. All materials were edited by a diversity and inclusion team to maximize inclusion and utility among participants from diverse ethnicity, culture, religion, and ability and were made available in both Spanish and English. To minimize participant burden and encourage participation, families were provided flexibility to use the materials as they preferred. Partners were free to choose and tailor the program activities as per the specific needs of the families served by their organizations. Content was released weekly but was also available anytime on the website. Although this flexibility made evaluation more challenging, our goal was to offer families resources they could use whatever their circumstances while facing unprecedented challenges.

Assessment procedures

Assessment data were gathered using multiple methods and informants (see also supplemental figure "Overview of Evaluation Schema" in the online supplemental materials). Facebook and website analytics were recorded each week. We recruited participants to the quantitative survey portion of the overall evaluation strategy by advertising within the Facebook group and on the FT website. Specifically, participants were asked to complete two identical surveys taking about 15 to 20 minutes each—one "now" (open during the first 6 weeks) and a second after the program ended (open for 1 week). Participants were also asked to complete 1- to 2-minute mini-surveys after each weekly module (nine total, advertised weekly). Participants were compensated with "tickets" for a gift card raffle (50 gift cards worth $49.99 each) for each survey completed, with more tickets for later and longer surveys (participants could earn up to 100 tickets).

Samples

Facebook group

Facebook members active during fall 2020 (i.e., who viewed, posted, commented, or reacted to group content) were 92% female and roughly normally distributed in age brackets with about half of members between 35 and 55 years of age. Active members were primarily from the United States but also included 15 other countries (see "Full participant demographics" in the online supplemental materials). Comparable data for website users was not available.

Survey data

A total of 80 individuals completed at least one survey. Of the 49 individuals who completed a pre-FT ($n = 42$) or post-FT ($n = 24$) assessment, 17 completed both. With this sample size, using paired-samples t tests, we were powered ($\beta = .80$, $\alpha = .05$, one-tailed) to detect effect sizes of $d = .63$, which corresponds to a medium-to-large effect size. Pre-FT surveys were conducted primarily in the first ($n = 28$) and second week ($n = 8$), with fewer completed in the third week of the program ($n = 4$) or later ($n = 2$). A total of 74 unique individuals began and 50 completed at least one weekly usage survey. Of those, 36 also completed a pre- or post-FT survey. Between 27 and 38 individuals completed any given usage survey. On average, individuals completed 3.59 surveys ($SD = 2.19$).

Demographic information was provided by 48 individuals (for full details, see "Full participant demographics" in the online supplemental materials), who were mostly in their 30s to 50s and identified as female (94%). The sample was 96% non-Hispanic, and 90% White, and 83% parents or stepparents. Half of the respondents had a college or graduate degree, and 48% were employed full or part time. Respondents' families lived in rural areas (23%), towns (44%), and cities (33%). About two thirds (62%) of respondents were living with a spouse or romantic partner. Half of respondents were caregivers of adults (48%), and a quarter were caregivers of children (27%). On average, 2.30 ($SD = .61$, range = 2–5) adults and 1.52 ($SD = 1.67$, range 0–4) children were living in the home.

Measures

Facebook analytics were recorded weekly, from 7 weeks before launch of the fall 2020 cycle. Key metrics reported here include the total number of members and active members (i.e., members who viewed, posted, commented, or reacted to group content), as well as new and total posts (i.e., directly adding new content to the group), comments (i.e., responding to content posted), and reactions (i.e., selecting the emoji for "like," "love," "care," "haha," "wow," "sad," or "angry" on a post or comment). Website analytics were recorded from the FT fall 2020 cycle launch forward for 11 weeks. Key metrics reported here include the total users, total sessions, and number of sessions/user, pages/session, and average session time.

Pre- and post-FT surveys

The following measures were collected during the pre- and post-FT surveys (see Table 1 for sample descriptive statistics).

TABLE 1 Descriptive statistics for pre- and post-FT measures

	Pre-FT assessment (n = 41–42)					Post-FT assessment (n = 23–24)				
	M	*SD*	Observed/ possible range	Skew	Kurtosis	*M*	*SD*	Observed/ possible range	Skew	Kurtosis
Family dysfunction	1.92	0.50	1.00–3.00/1–4	.12	−.23	1.90	0.47	1.00–3.00/1–4	.58	−.16
Family resilience	3.77	0.68	2.17–4.77/1–5	−.79	.31	3.81	0.69	2.40–4.83/1–5	−.59	−.35
Perceived stress	1.93	0.63	0.60–3.60/1–5	.06	.03	2.00	0.77	0.60–3.50/1–5	.25	−.28
Self-efficacy	3.90	0.58	2.70–5.00/1–5	−.10	−.70	3.77	0.65	2.40–5.00/1–5	−.003	−.39
Stressful impacts	5.81	3.06	0.00–14.00/0–28	.29	.38	6.71	4.08	0.00–14.00/0–28	.11	−.89
Positive impacts	2.93	2.05	0.00–7.00/0–7	.31	−.82	2.54	1.56	0.00–7.00/0–7	−.05	−.85

Family resilience

Family resilience was measured using the Family Resilience Questionnaire (Walsh, 2016), designed to measure family resilience in each of the theoretical domains that the FT initiative focused on. The measure comprises 32 items (e.g., "In our family, we are clear and consistent in what we say and do.") rated on a 5-point scale: 1 = *rarely or never*, 2 = *not often*, 3 = *sometimes*, 4 = *often*, or 5 = *almost always*. Items were averaged into a scale score, with higher values indicating higher levels of family resilience (Cronbach's alpha = .96 for both assessments).

General family dysfunction

General family dysfunction was assessed via the Family Assessment Device using the general functioning subscale (Miller et al., 1985). Specifically, respondents answered 12 items (e.g., "Planning family activities is difficult because we misunderstand each other," "There are lots of bad feelings in the family") on a 4-point Likert scale with answer choices of *strongly agree*, *agree*, *disagree*, and *strongly disagree*. Positively worded items were reverse coded, and then items were averaged such that higher scores indicate greater general family dysfunction (Cronbach's alphas = .90 and .87 for the pre- and post-FT assessments, respectively).

Perceived stress

Perceived stress was measured using the Perceived Stress Scale (Cohen et al., 1983). This scale includes 10 items on which participants respond to the prompt "In the last month, how often have you … (e.g., "been upset because of something that happened unexpectedly?") on a 5-point scale: 1 = *never*, 2 = *almost never*, 3 = *sometimes*, 4 = *fairly often*, and 5 = *very often*. Items were averaged into a scale score, with higher values indicating higher levels of perceived stress (Cronbach's alpha = .88 and .89 at the pre- and post-assessments, respectively).

Self-efficacy

We used the Generalized Self-Efficacy Scale from the NIH Toolbox (Salsman et al., 2013), a 10-item measure (e.g., "I am confident that I could deal efficiently with unexpected events"). In the current study, participants responded to each item on a 5-point scale: 1 = *never*, 2 = *almost never*, 3 = *sometimes*, 4 = *fairly often*, and 5 = *very often*. Items were averaged into a scale score, with higher values indicating higher levels of self-efficacy (Cronbach's alpha = .90 and .91 at the pre- and post-assessments, respectively).

Epidemic–Pandemic Impacts Inventory

To assess pandemic-related stress, we selected items from the Epidemic–Pandemic Impacts Inventory (EPII; Grasso et al., 2020) to use as a covariate. The original EPII was designed to

assess the number of stressful and positive impacts of epidemics and pandemics across a number of domains in 92 items (e.g., work and employment, education and training, home life, social activities, economic, emotional health and well-being, physical health problems, physical distancing and quarantine, infection history, and positive change). We selected 28 of the most relevant items including work/employment (three items), home life (seven items), social activities (four items), economic (five items), emotional health and well-being (five items), infection history (three items), and positive changes (seven items) domains. For clarity and brevity, we also simplified the answer options to be a checkbox if true, rather than the original four answer options of yes (for me), and/or yes (for someone in my family), no, or not applicable. We used a total "stress" subscale (Cronbach's alpha = .85 and .91 at the pre- and post-assessments, respectively) that summed negative items across the domains and examined the positive changes domain (Cronbach's alpha = .85 and .79 at the pre- and post-assessments, respectively) separately.

Weekly usage surveys

On weekly surveys, we included an activity checklist where participants were instructed to "Select every activity you tried from this week's collection" with an "other" box to indicate a past-week activity they tried this week along with a write-in to describe that activity. We assessed the time spent engaging in the materials using this prompt: "About how much time did you engage with the Family Tackling Tough Times Together materials and activities this week?" with a forced choice option of 15 minutes or less (1), 16 to 30 minutes (2), 31 to 45 minutes (3), 46 to 60 minutes (4), or more than an hour (5).

Using a sliding scale option format on a scale of 1 to 9 anchored at not at all, sometimes, and almost all the time, we asked respondents to rate "How often this past week did you feel 'stressed,' 'positive,' and 'your life had purpose.'" Also on a sliding scale of 1 to 9, anchored in *not at all connected*, *occasionally connected*, and *frequently connected*, we asked respondents to rate "How connected did your family feel this week?" (termed *family connectedness* here).

Analytic strategy

To achieve Aim 1, we summarized key metrics over time. We compared metrics from the Facebook group from "pre-launch," which was an average of the 7 weeks before the launch, and "during the program," which was an average of the 9 weeks when program content was being actively released to establish the impact of partners and active release of materials on engagement. To test Aim 2, we used paired-samples *t* tests. Correlations assessed stability in responses over time. To test Aim 3, we used multilevel models of the weekly usage surveys (i.e., 540 to 657 observations nested in 74–80 individuals), with each of the four feelings as an outcome in separate series of models in the following steps:

1. Unconditional models to determine the percent variance attributable to between- versus within-person variability in each of the feelings measures.
2. Predictor-only models (time and activities) to provide an unadjusted effect size for our focal associations. Time-specific (within-person centered) variables were level 1 predictors, and each individual's average (person-average) time spent and activities across weeks were Level 2 predictors.
3. Both within-person-centered and person-average versions of the other outcomes were added to Step 2 models to assess robustness and specificity of findings.

4. Additional person-level covariates: family resilience, family dysfunction, perceived stress, and self-efficacy, drawn from the pre–post surveys were added to Step 2 models to assess robustness of the between-person correlations.

All models were conducted in Mplus using the MLR estimator; missing data were accommodated using full information maximum likelihood.

RESULTS

Engagement analytics

Facebook group

A total of 1,748 individuals or families were reached through the Facebook group during the fall 2020 cycle; 287 joined during recruitment period or during the program cycle. Each week during the cycle, a mean of 566 participants were active in the Facebook group. There were 752 total interactions (i.e., posts, comments, and reactions) during the cycle.

Membership

The Facebook group increased in size and in the numbers and proportion of members actively viewing or engaging during the fall 2020 program cycle compared with before launch (Figure 1). Total members increased from 1,428 members 7 weeks before launch, to 1,636 at launch, to 1,748 by the end of the cycle. The largest weekly membership increase (6%) aligned with recruitment of study partners the week before launch. The largest spike in new members aligned with our recruitment push the week before launch; the rate of new members joining slowed thereafter. The median percent of active membership (total active members / total members * 100) during the program was higher (66%) than prelaunch (41%), as was the average number of members active each week (303.33/week prelaunch, 566.11/week during the program).

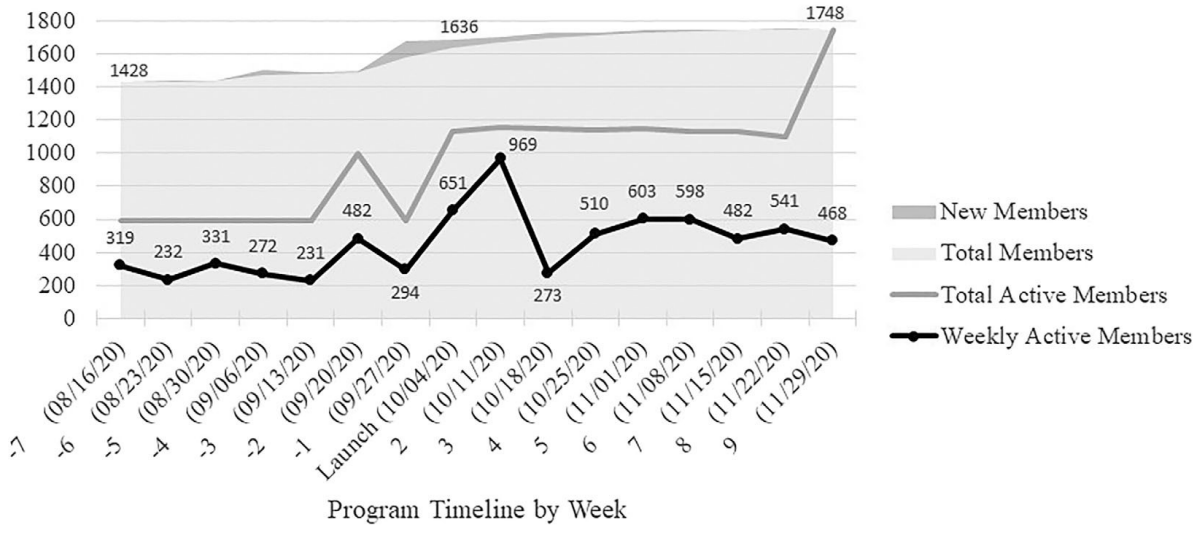

FIGURE 1 Facebook group membership by week. Weeks of the program are numbered relative to program launch (T = 0), with the date reflecting the first day of the week's data provided in parentheses (i.e., 8/16/20 reflects the week of 8/16 to 8/22). The y-axis reflects the number of people. Numbers of total members at T = −7, launch, and the last week of the fall 2020 cycle are provided at the top. *n*s for weekly active members are provided (values labeling the black line). New members show periods of increased membership over time, adding to the total membership

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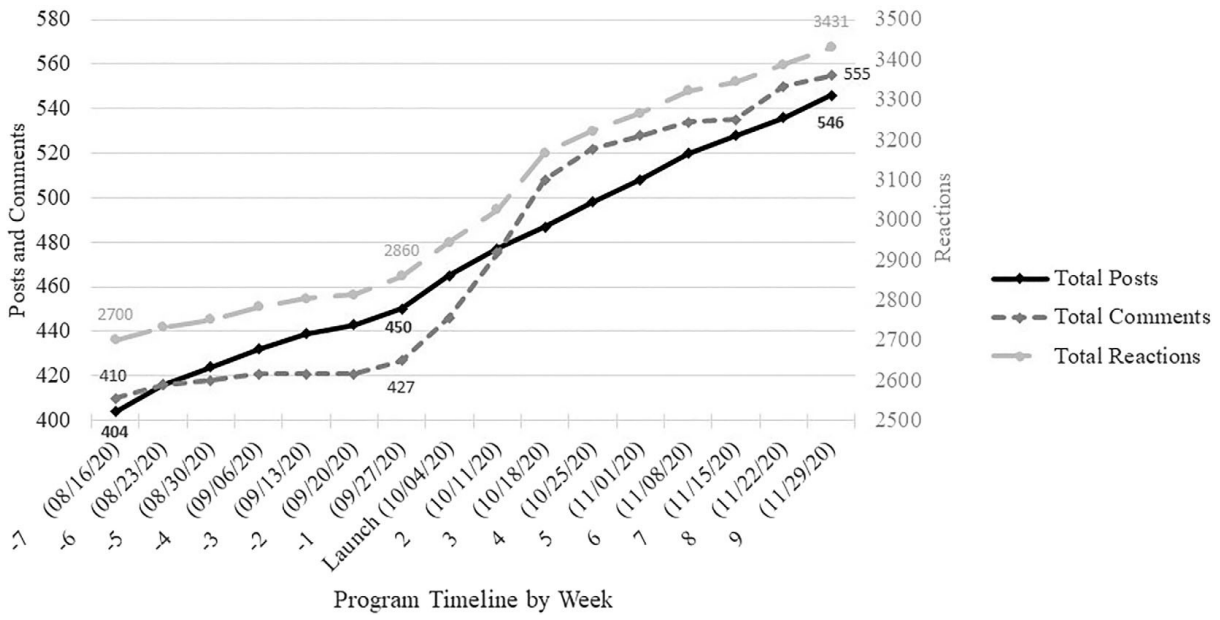

FIGURE 2 Facebook activity by week. Weeks of the program are numbered relative to program launch (T = 0), with the date reflecting the first day of the week's data provided in parentheses (i.e., 8/16/20 reflects the week of 8/16 to 8/22). The left-hand y-axis reflects the number of posts and comments. The number of reactions is labeled on the right-hand y-axis

Engagement

Active engagement with the Facebook group was greater during the program than pre-launch (Figure 2). Total posts increased from 404 seven weeks prior to the launch, to 450 the week prior to the launch, to 546 at the end of the program. New posts per week averaged 7.67 pre-launch and 13.67 during the program. A total of 128 comments were added during the program, with more new comments and new reactions each week during the program ($M = 17.22$ and 79.22, respectively) than pre-launch ($M = 3.22$ and 24.33, respectively).

Engagement was more evenly spread across the week during the program cycle and did not appear tied to days in which content was released (data available in the supplemental figure "Engagement Broken Down by Day of the Week" in the online supplemental materials). The highest levels of weekly activity occurred during weeks 1 (theme = *gratitude*) and 3 (theme = *encouraging each other*). Otherwise, engagement declined to near prelaunch levels of activity as the program progressed.

FT website

During the program, the website was accessed 2,285 times, ($M = 205$ users/week). Users averaged 1.25 sessions each week and visited 2.21 pages per session on average. Sessions ranged from a median of 1:35 to 3:15 minutes. Use varied over time, mirroring the engagement in the Facebook group: The number of users increased from 276 at launch to 453 after the first week. After peaking in Week 2, the number of users steadily decreased. Two weeks after the program ended, 121 users accessed the website 154 times.

Pre- to Post-FT comparisons

We did not detect any differences from pre- to post-FT using paired samples *t* tests (*t*s = −0.54 to 0.80, *df*s = 15–16, *p*s > .44). Effect sizes (Cohen's *d*) were small for potential change in family

resilience ($d = .06$), general family dysfunction ($d = .04$), self-efficacy (d = .21), and perceived stress ($d = .10$). Consistent with no evidence of pre–post-FT differences, there was high between-person stability (i.e., large correlations) from the pre- to post-FT assessment on family resilience ($r = .84$), general family dysfunction ($r = .85$), self-efficacy ($r = .74$), and perceived stress ($r = .75$). Due to the high stability and lack of change, we used post-FT scores for individuals missing baseline to increase the sample size available for person-level covariates in the within-person weekly usage analyses that follow. See supplemental table "Correlations Among Survey Measures" in the online supplemental materials for correlations across survey measures from the combined pre–post-FT data.

Weekly usage

Participants engaged in $M = 9.61$ activities across all weeks ($SD = 9.8$; range = 1–49), with $M = 2.27$ activities/week ($SD = 1.66$, range = 1–10). Summing across weeks, respondents tried on average 1.86 activities designed for children ($SD = 1.38$, range = 1–6), 2.87 activities designed for youth/adolescents ($SD = 2.49$, range = 1–10), 3.77 activities designed for young adults ($SD = 3.23$, range = 1–14), 3.0 activities designed for families ($SD = 2.21$, range = 1–9), and 3.43 activities designed for older adults ($SD = 2.96$, range = 1–14). The online supplemental materials (tables labeled "Activities by Category and Number Tried Each Week") includes the weekly activities offered and the number of participants reporting having tried them. Averaged across weeks, 30% of participants spent less than 30 min/week, 35% spent between 30 minutes and 1 hour, and 35% spent more than an hour/week on the program. Intraclass correlations (Step 1) showed that about half (44%–52%) of the variance in each of the four outcomes (i.e., feeling connected to one's family, positive, purpose, and stressed) occurred at the between-person level (47%–57% within-person). Table 2 contains results from model Steps 2 through 4.

Within-person associations

In Step 2, during weeks that participants did more than their average level of activities/week across the program, they also felt less stressed and more positive (relative to weeks in which they did fewer than their average number of activities). Further, during weeks families spent more time with the FT program materials than their average time spent across the program, they also felt a greater sense of purpose and family connectedness (relative to weeks they spent less time with FT materials). In Step 3, the within-person associations of stress and level of program activity and between family connectedness and time spent were robust to controlling for the other feelings. However, associations between purpose and time spent and between positivity and level of program activity disappeared (i.e., these findings were driven by stress and family connectedness, respectively).

Between-person associations

There were fewer between-person correlations of average time spent and activities per week with the outcomes in comparison to the within-person correlations. In Step 2, individuals who on average did more activities also felt more connected to their families. This was robust to additional covariates in Step 3 but explained by the addition of the other between-family predictors.[1] In Step 3, people who reported more average weekly stress relative to the rest of the sample also reported less average weekly connectedness and positivity, and people who reported

TABLE 2 Results from multilevel models of usage surveys

Outcome	Stressed						Connected						Positive						Purpose					
Model	Predictors only		Time-varying covariates		Person-level covariates		Predictors only		Time-varying covariates		Person-level covariates		Predictors only		Time-varying covariates		Person-level covariates		Predictors only		Time-varying covariates		Person-level covariates	
	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*
Within person																								
Time spent	−0.08	0.11	−0.09	0.10	−0.08	0.11	0.31	0.11	0.18	0.09	0.31	0.11*	0.17	0.13	−0.03	0.09	0.16	0.13	0.23	0.1*	0.09	0.06	0.23	0.10*
No. activities	−0.18	0.06*	−0.14	0.06*	−0.18	0.06*	0.12	0.07	0.03	0.09	0.12	0.07	0.20	0.10*	0.05	0.06	0.20	0.10	0.14	0.12	0.04	0.09	0.14	0.12
Covariates																								
Stressed									0.11	0.09					−0.28	0.07*					0.08	0.06		
Connected			0.15	0.12											0.18	0.09*					0.31	0.07*		
Positive			−0.39	0.10*					0.19	0.10											0.36	0.07*		
Purpose			0.14	0.10					0.46	0.09*					0.51	0.08*								
Between person																								
PA time spent	−0.12	0.20	0.11	0.13	−0.11	0.18	−0.08	0.18	−0.13	0.13	−0.05	0.14	0.33	0.19	0.24	0.10*[s]	0.47	0.12*[a]	0.18	0.2	−0.08	0.12	0.31	0.14*
PA no. activities	0.32	0.18	0.28	0.17	0.22	0.16	0.43	0.17*	0.29	0.11*	0.22	0.13	0.07	0.18	−0.01	0.09	−0.02	0.11	0.26	0.2	−0.06	0.11	0.09	0.12
Covariates																								
PA stressed									−0.10	0.10					−0.27	0.06*					0.26	0.09*		
PA connected			0.51	0.15*											0.02	0.11					0.41	0.11*		
PA positive			−0.94	0.23*					0.06	0.19											0.92	0.12*		
PA purpose			−0.23	0.14					0.48	0.11*					0.55	0.08*								
Family resilience					−0.34	0.59					0.92	0.48					0.18	0.36					0.09	0.58
Perceived stress					0.83	0.43					−0.99	0.40*					−0.88	0.29*					−0.98	0.39*
Family problems					−0.59	0.76					0.16	0.36					0.27	0.47					−0.10	0.67
Self-efficacy					0.16	0.58					−0.35	0.29					0.79	0.32*					1.25	0.36*
Positive impacts					0.14	0.13					0.16	0.09					0.17	0.05*					0.27	0.08*
Stressful impacts					0.08	0.05					0.02	0.05					0.02	0.07					0.02	0.07

Note: Positive and stressful impacts are of the COVID-19 pandemic, measured on the EPII. Est = unstandardized estimates from the multilevel models; PA = person-average; *SE* = standard error of the estimate.
[a]Suppression effect that may be a statistical artifact or may indicate that smaller between-person correlations of positivity and engagement with program materials emerge once stress and purpose are held constant.
*$p < .05$.

more average weekly purpose relative to the rest of the sample also reported higher average weekly connectedness and positivity. In Step 4, more perceived stress was associated with lower average feelings of positivity, purpose, and family connectedness (but unrelated to average weekly stress). Higher self-efficacy and perceived positive impacts of the pandemic each were associated with higher average weekly feelings of positivity and purpose.

In sum, there were small between-person correlations of program engagement with feelings of family connectedness, positivity, and purpose (but not stress) that were not robust to covariates or different model specifications. Instead, associations of program use and particularly feelings of family connectedness and stress operated at the week-specific, within-person level and were not attributable to stable differences in these constructs between people.

DISCUSSION

We sought to assess the use and usefulness of the FT program. On the basis of digital engagement metrics and self-reports of offline activity, families used the FT program during a peak time of the COVID-19 pandemic. Leveraging social media and providing a website to reference allowed us to reach many families from diverse parts of the country and around the world at a time when they were isolated and not free to travel to programs, while facing increased demands on their time and increased need for mental resources and well-being.

Program use: Strengths of using social media

The FT program relied heavily on social media to establish initial connections with family participants, disseminate materials, support partners, and encourage engagement in the program. Our engagement metrics suggest that social media—in this case, Facebook—can be an effective platform to connect with and support families during a disaster of this kind, also consistent with some other studies (Mano, 2020; Marzouki et al., 2021). However, there was also a decline in engagement and use across the 9 weeks, consistent with prior family resilience interventions (Yi-Frazier et al., 2017). It could be assumed that the program was too long (i.e., burnout or disengagement once families thought they got all they needed out of it), or it may be that the families were getting busier at the start of the holidays. Data from qualitative interviews, currently being analyzed, may shed some light on such possibilities.

Program usefulness: Pre- and Post-FT comparisons

In terms of usefulness, we found no evidence of change from pre- to post-FT measures. One limitation was low participation rates in the pre- and post-FT surveys, along with small effect sizes. Critically, the measures we selected for the pre- and post-FT surveys index trait-like constructs, which are harder to change than perceptions that are likely to be more volatile over the 9-week program period (which were indexed by the weekly usage surveys discussed subsequently). Another study found used SMS text-based supportive messages among families during the pandemic, showed reductions in perceived anxiety, stress, and depression among families after 6 weeks (Agyapong et al., 2021). Speculatively, this type of intervention may have been more effective because it offered more direct and personal support or required less effort than FT.

It is also possible that our null results could suggest that our measures were not accurately calibrated to the *kinds* of positive experiences of the participants. Culturally and contextually sensitive measures that assess specific family functions (i.e., specifically tailored to filling particular functions, rather than general dys/function), satisfaction with family life, and gains from

confronting risk may be more appropriate (Maurović et al., 2020). In the future, it will be important to assess perceptions of growth and content knowledge gained from the FT program and targeting for specific resilience skills in the FT program. Optimistically, given the surge in cases that occurred simultaneously, it is possible that our program bolstered, or prevented a decline in, family resilience and functioning and individuals' ability to notice positive impacts of the pandemic, although this is speculative given our lack of a counterfactual (i.e., a non-pandemic/surge condition).

Weekly usage and usefulness: Evidence of within-family level processes

The strongest evidence of program usefulness came from within-person/family correlations, which map on to theories of resilience-building as a process occurring within families. Engagement with the FT program provided a positive experience for participants and their families. Further, the program may be more related to decreasing stress felt in the moment than increasing positivity directly, because on weeks that participants felt less stressed, they felt more positive, and the within-person correlation of number of activities and stress survived statistical control for feelings of positivity, but not the reverse. Findings demonstrated enhanced feelings of family connectedness. Program activities encouraged family members to interact with each other from easy conversations about "what I am grateful for today" to more challenging conversations about sharing difficult emotions. Presumably, FT activities provided families with ways to unite and find a safe platform and with options to enhance their well-being. In sum, weekly engagement in the FT program seemed to be useful in fostering social connectedness and reducing stress. However, it is important to note that we did not find any causal relationships around these constructs.

Strengths and limitations

A key strength of the program was the use of social media during a time when in-person programming was not feasible. The use of social media and a website increased the reach and use of the FT program. The largest limitations of this work are the small sample sizes achieved for the program assessment and that the sample was mostly White and therefore limited in racial/ethnic representativeness. Implementing and evaluating a program in times of disaster is often challenging, and high attrition is expected. Our choices in terms of social media platform and execution (a Facebook group that expanded reach but was also large in terms of group size) likely led to a certain amount of anonymity and less investment in the group (Kraut & Resnik, 2012). This trade-off may have added to the challenges of recruiting participants into the assessment portion of the initiative. Additional limitations include (a) that the sample was mostly White, nearly entirely female, mainly between 35 and 55 years of age, and reported had relatively low levels of stress, which limits generalizability; (b) that family resilience was rated by an individual (from the perspective of a single family member rather than measured as a truly family-level construct), and therefore the study captures individual perceptions of family resilience; and (c) that if data are missing not at random (which our data were unable to adequately test), the standard errors of our estimates may be underestimated; in all, results should be interpreted with caution appropriate to research with small sample sizes and missing data.

Implications

Our preliminary evidence of both desirability and helpfulness support the need for refinement and further rigorous evaluation of the FT program in the future. Social media proved to be an

effective platform for reaching families during the pandemic. Practitioners may weigh how best to leverage social and digital media to amplify program impact and extend program reach to provide family life education appropriately in the midst or aftermath of disasters, when families' access to resources may be limited and families themselves may be finding it difficult to function. Future implementation of this program during disasters that impact Internet access or cell connection would require adaptation of dissemination and engagement strategies.

Our findings also have implications for future research. Despite our failure to detect changes from pre- to post-assessment of the program, the inclusion of weekly usage surveys allowed us to maximize the utility of a small number of subjects with repeated measures. This strength in study design allowed us to make inferences about the usefulness of the program at the theoretical level it ought to operate: within families over time. We will continue to work to identify the best key metrics for assessing changes pre- to post-program. We will also continue to work on finding the balance between reducing burden to support families and collecting sufficiently rigorous quantitative data to evaluate the program adequately, including a continued focus on identifying key factors that support effectiveness. In the meantime, FT program materials are freely available on the program website (https://www.purdue.edu/hhs/families-together) and Facebook page (https://www.facebook.com/groups/HHSFamiliesTogether).

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ENDNOTE

[1] In addition to perceived stress, family resilience and perceived positive impacts likely help to explain these correlations because they were correlated and each contributed variance to family connectedness, although narrowly missing the p value threshold ($p < .06$).

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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