Examining Anxiety Among Minnesota Child Care Providers During COVID-19

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Executive Summary

The COVID-19 pandemic has dramatically changed child care services in Minnesota and across the nation. The Minnesota Child Care Policy Research Partnership project team wanted to better understand how child care providers might have experienced anxiety, both to document the prevalence of anxiety in child care providers during a difficult time in the pandemic and to offer considerations to policymakers about how to support child care providers' well-being.

We invited Minnesota child care providers[a] to complete a survey in the summer of 2020. Using the Generalized Anxiety Disorder–7 (GAD-7) scale, we asked respondents questions regarding the levels of anxiety they may have been experiencing at that time, as well as other aspects of their experience of the pandemic and program operations. This brief summarizes key findings from this survey. We offer considerations for policymakers who are dedicating federal, state, and local resources to supporting the child care field, including individual providers' mental health.

Key findings

- 17 percent of respondents indicated moderate or severe anxiety (GAD-7 score of 10+).
- Providers who were not confident in implementing new COVID health and safety practices were 2.18 times more likely to be clinically anxious than those who expressed confidence.
- Providers who indicated they were likely to close their child care business were more likely to be anxious than providers whose businesses were not likely to close.
- Providers who had participated in any professional development since the pandemic began were more likely to be anxious than those who had not participated in professional development.
- Family child care providers were less likely to be anxious than center-based providers.
- Rural and urban providers had similar odds of feeling anxious.
- Providers who declined to provide their race/ethnicity information were more likely to be anxious than the comparison group of non-Hispanic White providers. Compared to non-Hispanic White providers, Hispanic, Native American, Asian, and Multiracial providers appeared to have higher odds of feeling anxious, however, there was not sufficient sample size for the research team to have certainty in these findings.

[a] Center-based and home-based child care providers who applied to the Peacetime Emergency Child Care Grant program (PECC) were invited to complete the survey. Minnesota created the PECC grant program to help child care providers withstand the financial burden caused by the pandemic and distributed the first round of funds in April 2020. A total of 1,898 center-based and family child care grant applicants (36%) completed the survey between July 31, 2020 and September 9, 2020. Among the respondents, 58 percent applied for and received the grant (PECC Grant recipients) and 42 percent applied but did not receive the grant (nonrecipients).

Child care providers face many work stressors, which the pandemic has elevated. The mental health of child care providers can directly impact their ability to provide high-quality care.[1,2] Given this fact and our survey findings, we recommend that policymakers, including program administrators and agency leaders, regularly ask about the well-being of child care providers and learn where inequities exist to facilitate equitable access to mental health resources. This brief will provide the context of child care providers' mental health during the pandemic followed by our analysis methods and findings. Finally, we end with implications for policymakers in Minnesota.

Introduction

When COVID-19 reached the United States, many states included child care providers in their definitions of essential workers. Yet, despite this recognition, the pandemic has brought the large inequities and disparities that the child care industry faces into the national spotlight. While child care providers serve as a critical pillar to the U.S. economy, low compensation, lack of guaranteed benefits, and challenging working conditions impact providers in ways that many employees outside service occupations do not experience. In 2019, the median hourly wage for child care workers was among the lowest of all occupations at $11.65, or $24,230 annually.[3] In 2018, 46 percent of the early childhood education (ECE) workforce was enrolled in at least one public assistance program.[4] These challenging conditions have led to provider burnout and decades-long challenges with high rates of turnover.[5,6] These challenges are experienced primarily by women nationwide, and often women of color. In Minnesota, the majority of licensed child care workers are women, and 95 percent of center and home-based teachers and caregivers are White.[7,8]

COVID-19 pandemic has exacerbated child care employment challenges due to programs reducing hours or laying off staff and providers leaving the field for other sectors or leaving the labor force all together.[9] These factors have impacted conditions for child care providers which has had profound implications on their mental health.

In the summer of 2020 (several months into the COVID-19 pandemic), center-based child care administrators and licensed family child care providers in Minnesota were surveyed to gain an understanding of how Minnesota's Peacetime Emergency Child Care Grant (PECC) funds were used. Respondents were also asked questions regarding the levels of anxiety they may be experiencing. This brief summarizes key findings from this survey. We offer considerations for policymakers who are dedicating federal, state, and local resources towards supporting the child care field, including individual providers' mental health.

About the Minnesota Child Care Policy Research Partnership

This brief is part of the Minnesota Child Care Policy Research Partnership, a collaborative between Child Trends, the University of Minnesota, and the Minnesota Department of Human Services. The research partnership is funded through a grant from the federal Office of Planning, Research, and Evaluation in the Administration for Children and Families, U.S. Department of Health and Human Services.

The goal of the partnership is to support children and families in Minnesota by addressing pressing questions that policymakers and researchers have related to equitable access to early care and education (ECE) and improving stakeholders' understanding of the effectiveness of policies and practices that support access.

Find out more information, including publications from the project, on the Child Trends website.

COVID-19 surveys on child care provider mental health around the United States

Research conducted during the pandemic demonstrates the effects of COVID-19 on child care providers' health. In a Nebraska child care provider survey led by Buffet Early Childhood Institute at the University of Nebraska in June 2020, family child care and center-based respondents were asked about their health and well-being since the start of the pandemic. Providers reported high levels of physical and mental health concerns due to the pandemic; more than three-quarters of providers reported changes to sleep, 20 percent reported they had trouble performing regular work duties because of their physical health, over 60 percent reported feeling a lack of control, and just under 50 percent reported feeling sadness or depression.[10] In Massachusetts, a survey of community-based centers, family child care providers, Head Start, and public school pre-kindergarten programs found that 60 percent of all respondents agreed that the pandemic had taken a toll on their mental health.[11] The Virginia Preschool Development Grant Birth-to-Five (PDG B5) led a baseline survey in 2019 and a follow up survey in May 2020 containing a sample of family child care providers (called family day home teachers in the Virginia study). Researchers found that from the baseline survey, those who reported "clinically relevant levels of depressive symptoms" rose from 7 to 13 percent. [12]

Researchers in Virginia also examined provider well-being in relation to how the pandemic had affected them financially. Among ECE teachers, 63 percent reported concern that they would run out of money before being paid again. Forty-two percent reported using credit cards to purchase goods in hopes that they would have money later.[13] In another Virginia PDG B5 report, researchers found that child care providers were twice as likely to report financial difficulties compared to other early childhood educators (for example, those working in schools).[14]

Survey respondents across studies also reported concerns about contracting and spreading COVID-19. Just under half of respondents in the Massachusetts survey reported feeling that their work posed a risk to their health.[15] Researchers at Buffet Early Childhood Institute found that one-third of respondents were concerned that friends and family members may contract the virus and 30 percent worried they may infect the families they served.[16]

Fewer studies have looked at the role of mental health among child care leaders (including center directors), specifically as it relates to their responsibility for creating a safe and supportive work environment for teachers, and for keeping programs operating during emergencies like the pandemic or natural disasters.

Focusing on mental health

Mental health is a broadly defined concept that has different definitions in the research literature. For example, mental health can be constructed as the absence of a negative condition (such as depression or anxiety) or the presence of a positive condition.[17] It can also encompass emotional, psychological, and social well-being.[18]

In previous research, researchers have been particularly attuned to concepts of well-being that affect responsive caregiving (i.e., depression).[19] The role of well-being, particularly mental and emotional well-being, in responsive caregiving is well established in the literature. For example, several studies have found connections between mental health and ECE teaching and caregiving practices,[20,21,22] children's social emotional development,[23,24] and teacher's relationships to children.[25]

However, our motivation for studying mental health in child care providers during the pandemic extends to our overall concern for their well-being as individuals and is also related to supporting ECE program-level leaders who play an important role in keeping programs open and creating safe work environments for ECE professionals. Our study aimed to identify if there were particular groups of providers who were

experiencing diminished mental health and who may benefit from additional resources to help them recover from the strain of the pandemic.

Anxiety as a component of mental health

For the purpose of this brief, we focus on anxiety among child care providers in the context of COVID-19. We asked survey respondents to answer a well-validated measure of generalized anxiety— the Generalized Anxiety Disorder–7 (GAD-7),[26] a seven-item questionnaire that asks about how frequently the respondent was bothered by things like feeling nervous or not being able to control worrying in the past two weeks. We focused on generalized anxiety for two reasons. First, generalized anxiety disorder is a common condition, and tends to present in women more than men.[27] We wanted a measure that would be particularly attuned to the conditions affecting women, since nearly all child care providers in Minnesota identify as women. Second, the nature of the pandemic (e.g., abrupt changes in routine, enforced shutdowns and isolation, difficulty meeting basic needs, uncertainty about the future, possibility of contracting the virus[28]) may have made child care providers especially susceptible to increased anxiety about everyday circumstances. We selected the GAD-7 as a measure of anxiety because it can easily be self-reported by the respondent and it has also been found to be a valid screening tool for other anxiety conditions such as panic disorder, social anxiety disorder, and post-traumatic stress disorder.[29]

Methodology and Data

About the survey

The research team developed a survey for applicants to the Minnesota PECC Grant program – a competitive grant program for child care centers and licensed family child care providers in Minnesota – in the spring of 2020.[b] The survey asked about several topics, including the providers' experiences applying for and using the grant funds, their programs' abilities to stay open during the pandemic, professional development participation, and challenges they may have experienced due to the pandemic. With few exceptions, nearly all licensed center-based and family child care programs were eligible to apply for the grant. Providers with questions about the grant application or survey could call Child Care Aware of Minnesota to receive application interpretation and survey assistance. About 58 percent of licensed center-based providers (n=1,036) and 68 percent of licensed family child care providers (n=5,085) applied for a grant. The rate of being awarded the grant was the same across both provider types – 84 percent of family child care and center-based providers who applied at least once received the grant (see Table 1).

All applicants to the grant program with verified email addresses were invited to participate in the survey (n=5,297), and about 36 percent (n=1,898) responded to the survey. Respondents from center-based programs were administrators (who may not have had a teaching role), while family child care applicants had both administrative and caregiving roles. Survey respondents represent various regions in Minnesota (see Table 1 for a description of respondents by Child Care Aware of Minnesota regions).

While we found a few statistically significant differences (i.e., a slightly higher proportion of licensed family child care applicants responded to the survey than center-based applicants, 27% vs. 24%), the research team did not use sampling weights for the analysis because the differences were not practically signficant.

[b] Eligible child care programs could apply for a grant each month for April, May, and June of 2020. Applications were scored by the grant administrators based on criteria where higher points were given to applicants serving essential workers or other priority populations. About one-third of child care providers applied in every round, another one-third never applied, and the remaining third applied just once or twice. Read more about application patterns in this fact sheet published by the research team.

Table 1. Overview of the survey sample

Variable	Number of respondents		Percent of respondents	
	Family child care	Child care center	Family child care	Child care center
Child Care Aware of MN Region				
Metro	468	160	75%	25%
Northeast	181	31	85%	15%
Northwest	183	18	91%	9%
Southern	262	28	90%	10%
West/Central	299	28	91%	9%
Applicant status				
Awarded	820	155	84%	16%
Not awarded	573	110	84%	16%

Source: Authors' analysis of the Peacetime Emergency Child Care Grant Funds Survey, Summer 2020.

About the measures

Anxiety measure

The GAD-7 is a seven-item measure that allows individuals to self-report the degree to which different symptoms of anxiety have bothered them over the past two weeks. If a respondent marks all items, the columns are totaled to get a summed score, which can range from 0-21. In clinical settings, scores of 10 or above are considered the threshold for seeking further evaluation and treatment for anxiety symptoms. For this reason, providers with a summed GAD-7 score of 10 or above were marked as clinically anxious and providers with a summed GAD-7 score below 10 were marked as minimally (score=0-5) or mildly (score=6-9) anxious. Survey participants who did not provide responses to at least one of the seven questions were removed from analysis. For our analysis, the outcome variable was the clinical "10 or above" threshold.

Other measures

We wanted to understand how various characteristics of programs, or individual respondents were associated with anxiety. For example, indicating concern that their programs were likely to close in the next several months could be a contributing factor to respondents' anxiety levels. Alternatively, receiving a grant or other financial assistance may mitigate respondents' anxiety. Some of these measures were taken from survey responses. Others, such as age of business, Parent Aware[c] rating, and race and ethnicity were merged from administrative data sources. Table 2 describes the sample in terms of these key variables.

Program-level characteristics

- **Program type:** Whether the program was a center-based or family child care program

[c] Parent Aware is Minnesota's Quality Rating and Improvement System (QRIS)

- **Urbanicity:** Whether the program was located in an urban area[d]
- **Age of business:** The number of years the program has been licensed with the state licensing agency
- **Parent Aware rated:** Whether the program was rated in Parent Aware, Minnesota's Quality Rating and Improvement System (QRIS)
- **Peacetime Emergency Child Care Grant recipient:** Whether the program ever received grant funds
- **Likelihood of closure:** Whether the program reported any likelihood to close in the next six months
- **Receipt of other financial assistance:** Whether the program reported receiving any other kind of pandemic-related financial assistance for their business

Individual-level characteristics

- **Confidence implementing new health and safety practices:** Whether a respondent marked "not at all confident" on at least one question on a six-item scale asking about confidence in implementing health and safety practices such as managing mask wearing, temperature checks, increased sanitizing, etc.
- **Participated in professional development:** Whether the respondent had participated in any virtual professional development activities since the pandemic began
- **Race/ethnicity** (for family child care only)[e]: Self-reported race and Hispanic ethnicity

Table 2. Overview of the survey sample

Variable	N	Mean/%
Program type		
Center	265	16%
Family	1,393	84%
Urbanicity		
Rural	940	57%
Urban	718	43%
Age of business	1,657	13 (SD 10.61)
Parent Aware rated		
Rated	488	30%
Not rated	1,165	70%
Peacetime Emergency Child Care Grant recipient		
Recipient	975	59%
Non-recipient	683	41%

[d] This brief defines rural and urban based on Census definitions: "urban" includes providers located in urbanized areas (population of 50,000 or more) and "rural" includes those located in urban clusters (population 2,500 to 50,000 outside of urbanized areas) and those in rural areas.

[e] Race/ethnicity information was not asked directly in the survey. Family child care providers report their race/ethnicity in other administrative databases that were available to the research team and used for this analysis. Were they collecting this data, the research team would have used the following alternative U.S. Census Bureau categories: "Native American/Alaska Native" and "A race not listed here", as well as allowed respondents to select more than one race and ethnicity. Race and ethnicity are not asked of center-based administrators in the administrative databases and were not available for use in these analyses.

Variable	N	Mean/%
Likelihood of closure		
Likely to close	232	15%
Not likely to close	1,327	85%
Missing	99	6%
Confidence implementing new health and safety practices		
Confident	1,203	73%
Not confident	452	27%
Missing	3	0.2%
Receipt of other financial assistance		
Received	1,092	66%
Did not receive	566	34%
Participated in professional development		
Yes	1,003	60%
No	649	39%
Missing	6	0.4%
Race/ethnicity (Family child care only)*		
White	996	72%
Declined to answer in administrative data	54	4%
Multiracial	31	2%
Black	25	2%
Hispanic	17	1%
Asian	11	0.8%
Native American	<10	**
Other	<10	**
Missing	252	18%

Source: Authors' analysis of the Peacetime Emergency Child Care Grant Funds Survey, Summer 2020. *Note: Providers could check the option that they declined to answer in the administrative data collection which asked about their race/ethnicity and other demographic characteristics. This is different than those who were missing these data, which means that the provider just left it blank.

<10/** Exact sample size is too small to report without potentially compromising the respondent's privacy.

Analysis methods

Descriptive analysis

Initial descriptive analysis included running frequencies, means, proportions, and standard deviations for the key variables listed in Table 2. Next, variables were cross tabulated with the binary GAD-7 categories (clinically anxious and minimally anxious). We then conducted t-tests to determine if there were any

significant differences in the proportions of providers' GAD-7 score across each key variable. Among the family child care providers who reported race/ethnicity data, White child care providers comprised 72% of the sample. For this reason, the research team used the White sample as the reference group.

Multivariate analysis

The research team used logistic regression to examine whether any of the program-level or individual-level variables were associated with providers' anxiety. The outcome measure was binary (either 10 or above or below 10 on GAD-7). To be included in this analysis, the provider needed to have outcome variable information (i.e., those who did not complete the GAD-7 items were not included and we did not attempt to impute their GAD-7 score), and information for all other variables.[f] The same variables used in the descriptive comparisons were included as covariates in the logistic regression model.[g]

In total, 1,662 providers were included in the multivariate analysis. Two hundred and forty providers had missing data on GAD-7 and were not included (see Appendix Table 1).[h]

Findings

Descriptive findings

Figure 1 shows the distribution of all four GAD-7 categories (minimal, mild, moderate, and severe) by respondents.[i] Almost 60 percent of respondents indicated minimal anxiety, 25 percent indicated mild anxiety, and 17 percent indicated moderate or severe anxiety. For the purposes of this brief, respondents' summed scores from the seven-item scale were placed in one of two categories: clinically anxious (score of 10 or above) and minimally anxious (score below 10).

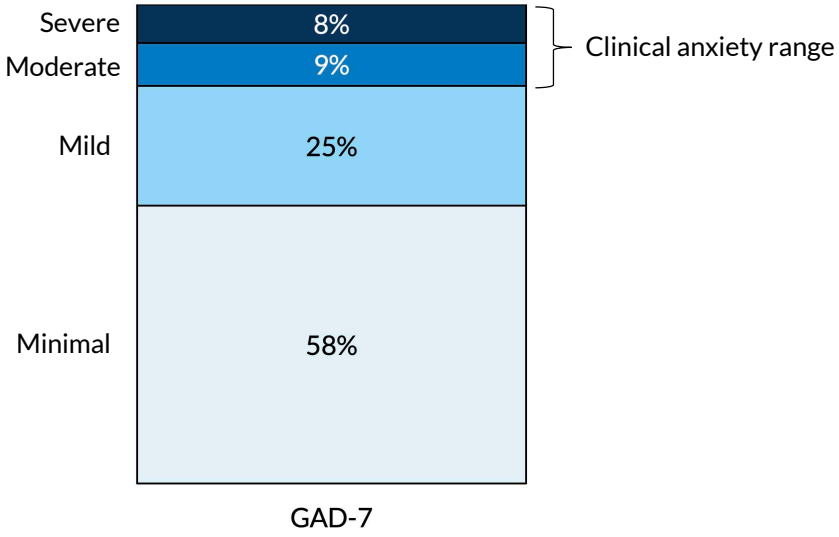
[f] Two control variables in the dataset—whether the program received any other financial assistance beyond the PECC Grant and whether the program was likely to close—frequently had missing values. To address this, we created a variable for whether the program was missing either of these variables and included this "missing" binary variable in the model. By including these "missing" flags, we could determine if those who did not answer these questions on the survey had significantly different GAD-7 scores than those that did provide this information in the survey. In both instances, neither of the "missing" flags emerged as significant in the model.

[g] We included all variables in the multivariate regression models simultaneously. Given that some variables were somewhat correlated to one another, the research team examined the models for multicollinearity using the variance inflation factor (VIF) measure. The VIF in each model was lower than the conventional tolerance threshold of 10, thereby ruling out any concerns that the variables were too highly correlated (i.e., collinear) and creating imprecise estimates.

[h] Survey respondents were included in analysis if at least one of the GAD-7 questions were answered whether or not the survey was partially or entirely completed.

[i] For additional data on anxiety by respondent type, please see a fact sheet on provider well-being here: https://www.childtrends.org/wp-content/uploads/2021/03/MinnesotaFactSheetProviderChallenges_ChildTrends_March2021-1.pdf

Figure 1. Proportion of GAD-7 categories among survey respondents



Source: Authors' analysis of the Peacetime Emergency Child Care Grant Funds Survey, Summer 2020.

Among the program- and individual-level measures, program type, likelihood of closure, confidence in implementing health and safety practices, receipt of other financial assistance, and professional development participation were all associated with having scores in the clinically anxious range. This analysis examines the relationship between each characteristic and anxiety without controlling for other program- or individual-level variables.

Significant program-level characteristics:

- **Program type:** Center-based respondents were significantly more likely than family child care providers to indicate clinically anxious scores (27% and 15%, respectively).
- **Likelihood of closure:** Respondents who reported that their programs were "somewhat likely", "very likely", or "extremely likely" to close in the next six months were significantly more likely to indicate clinically anxious scores compared to those who reported that closure was "somewhat unlikely", "very unlikely", or "extremely unlikely" (28% and 14%, respectively).
- **Receipt of other financial assistance:** Providers who received other financial assistance for their programs were significantly more likely to indicate clinically anxious scores than those who reported not receiving other additional assistance (18% and 14%, respectively).

Significant individual-level characteristics:

- **Confidence in implementing health and safety practices:** Providers who were "not at all confident" on at least one question related to COVID-related health and safety practices were significantly more likely to indicate clinically anxious scores than those who were "confident" (25% and 14%, respectively).
- **Professional development participation:** Providers who reported taking a virtual professional development training since the Stay-At-Home order was imposed were significantly more likely to indicate clinically anxious scores compared to those who had not taken any virtual professional development trainings (19% and 13%, respectively).

Multivariate findings

Our multivariate method produced a statistic called the "odds ratio", which explains if a group of providers in the sample is more or less likely to be clinically anxious than another group in the sample. Odds ratios are interpreted such that odds ratios higher than 1.00 indicate that a group is more likely than the comparison group to be anxious, while odds ratios lower than 1.00 mean that a group is less likely to be anxious when compared to another group. In contrast to the descriptive findings above, this multivariate method examines the relationship between anxiety and program- or individual-level characteristics while controlling for other factors.

Using this method, several factors at the program- and individual-level emerged as significantly associated with being clinically anxious (i.e., scoring 10 or above on GAD-7) among providers in our sample. [10] Figure 1 describes each of these significant factors in detail, including the odds ratio from the regression model, and a statement of how to interpret that finding in this context. For the full regression table, please see the Appendix Table 2.

Significant program-level characteristics:

- **Program type:** Family child care providers were less likely to be anxious than center-based providers.
- **Likelihood of closure:** Providers who reported that their programs were at all likely to close were more likely to be anxious than providers whose programs were not likely to close.

Significant individual-level characteristics:

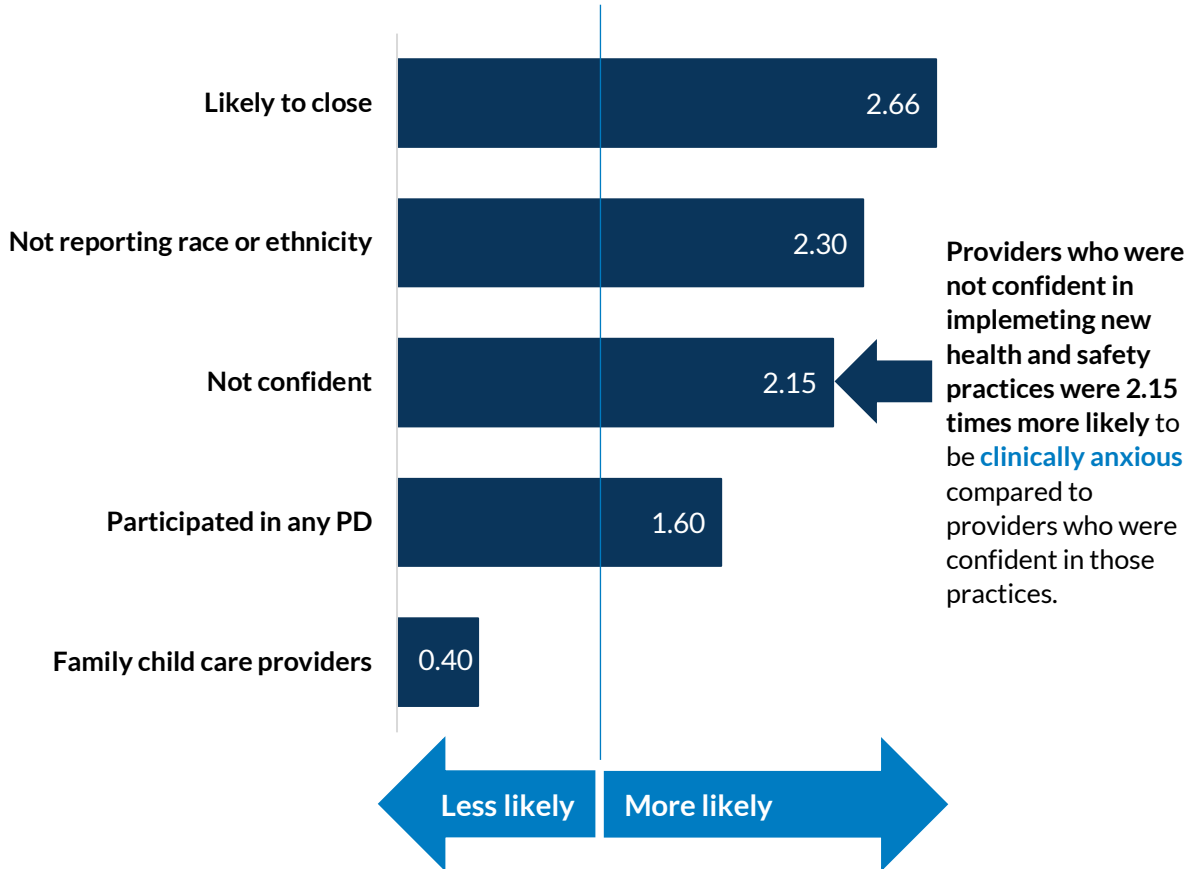
- **Confidence in implementing health and safety practices:** Providers who reported being "not at all confident" on at least one of six questions related to COVID-related health and safety practices were more likely to be anxious than providers who had some or full confidence in implementing these practices.
- **Participated in professional development:** Providers who participated in any professional development since the pandemic began were more likely to be anxious than those who did not participate in professional development.
- **Race/ethnicity *(family child care providers only):*** Providers who declined to provide their race or ethnicity information were more likely to be anxious than the comparison group of non-Hispanic White providers.[11]

Racial identity groups that were included but that did not have significantly different odds of anxiety than non-Hispanic White respondents were Black, Native American, Asian, Multiracial, and Other. The odds of anxiety for Hispanic and non-Hispanic White providers were nearly significantly different, but the sample size was too small to confidently detect differences. As noted, race and ethnicity information were not available for center-based respondents as it was not available in administrative data.

[10] The research team also conducted similar analyses using a categorical anxiety variable. These analyses examined differences in who was more likely to report being minimally anxious (0-4 on GAD-7), mildly anxious (5-9 on GAD-7), moderately anxious (10-15 on GAD-7) or severely anxious (15-21 on GAD-7). The results were not substantively different compared to the two-category model. The same program-level and individual-level factors were significantly associated in this categorical/ordinal logistic regression model as when using the binary version of the outcome outlined above.

[11] The research team sought to understand if there were any patterns in which family child care providers were not reporting race and ethnicity in the administrative data files. However, there were not any notable patterns when we examined other provider characteristics and the unreported race and ethnicity data.

Figure 2. Odds of being clinically anxious (10 or above on GAD-7) for Minnesota child care providers during COVID-19 (Logistic regression)



Source: Authors' analysis of the 2020 Peacetime Emergency Child Care Grant Survey.

Note: Other control variables were included in the model but were not significant. The non-significant variables included: urbanicity, being Parent Aware rated, age of the child care business, PECC Grant recipient status, whether the provider received any other financial assistance, whether information about receipt of other financial assistance was missing, and whether information about the likelihood of closure was missing.

Discussion and Implications

Many child care providers in Minnesota experienced high levels of anxiety during the pandemic. Our analysis shows that 15 percent of family child care and 27 percent of center-based providers had moderate or severe anxiety in the summer of 2020. The typical rate of clinical anxiety in a non-COVID year is about eight percent in adult women.[12] While the context of the pandemic has changed since summer of 2020 in a number of ways that may be alleviating providers' stress (e.g., availability of vaccines, time to adjust to the "new normal", fully in-person K-12 school for school-age children in fall 2021), we know that child care in Minnesota is still far from a stable or predictable field. Child care providers still face challenges and structural barriers to well-being that pre-date the pandemic, including low wages, few benefits, difficulties finding and retaining qualified staff, and more.[30]

[12] In large population estimates, Generalized Anxiety Disorder tends to be more prevalent in women than men (7.8 percent of women score 10 or above on GAD-7 compared to 4.3 percent of men). See https://www.cdc.gov/nchs/products/databriefs/db378.htm.

Our analysis also indicates that the prevalence of anxiety was not evenly distributed across providers with different characteristics or different pandemic experiences. For example, family child care providers had significantly lower odds of feeling anxious than center-based providers. It may be the case that center-based providers (administrators in our survey) were experiencing additional stress associated with running their programs (e.g., keeping staff safe, stabilizing enrollment, and managing larger fixed costs) compared to family child care providers. Providers who reported they were likely to close in the near future were also more likely to be anxious. This indicates that the period before program closure could be particularly stressful for providers. They could be experiencing stress related to the logistics of closing their programs, potentially retiring, or starting new careers, or experiencing a sense of loss if the closure was not part of their initial longer-term plans.

It was also the case that factors about individual providers' experiences during the early stage of the pandemic also predicted whether they were clinically anxious. For example, providers who reported they were "not at all confident" about implementing new health and safety practices such as daily temperature checks and managing masks for staff and children had higher odds of feeling anxious than providers who expressed confidence This is likely because providers who did not feel confident with implementation understood that the risk of contracting or spreading COVID-19 as a result of not following these protocols was high. Existing literature on the role of self-efficacy, or confidence in one's skills, in teachers supports this finding. Previous research has found connections between teachers' high levels of self-efficacy, high job satisfaction, and lower levels of job-related stress.[31]

Interestingly, providers who reported taking part in any professional development during the pandemic also had higher odds of feeling anxious than those who did not participate in professional development. It may be the case that providers were seeking professional development to increase their confidence or alleviate anxiety, or simply that participating in professional development along with their many other daily tasks caused additional stress.

Finally, it is interesting to note the individual- and program-level characteristics that were not significantly associated with provider's anxiety. For example, rural and urban providers had similar odds of feeling anxious, as did providers who received or did not receive the PECC Grant. It may be that, considering other factors, in the face of likely program closure, even receiving grants and financial assistance may not have been enough to affect levels of anxiety. While compared to non-Hispanic White providers, Hispanic and Native American providers appeared to have higher odds of feeling anxious, there was not sufficient sample size for the research team to have certainty in this finding. Given this uncertainty, we hope future studies can better examine rates of anxiety in Hispanic and Native American child care provider populations in Minnesota.

- **Implications for policymakers:**
    - **Learn about where inequities exist and facilitate equitable access to mental health resources.** Child care providers' mental health can directly impact children in their care, affecting their abilities to provide compassionate, stable care and learning. Policymakers, including program administrators and agency leadership at state and local levels, may have resources to support provider mental health, including funds to increase public awareness and discussions about mental health, increase access to mental health providers, and help uninsured providers navigate and afford access to health insurance. With funds from the American Rescue Plan Act, Minnesota recently launched the application process for The Child Care Stabilization Base Grant that allows child care programs to use a portion of their grant to provide mental health supports to their staff and families.[32] It is important for policymakers to ensure they have a plan to address equity in access to these resources. For example, program administrators and agency leadership should work with organizations that have day-to-day contact with providers (i.e., Child Care Aware staff, early childhood mental health consultants, coaches) to ask child care providers who is a trusted source of support for their mental well-being. It may be the case that certain community

organizations or health institutions are more reputable among groups of providers while others are avoided. Policymakers should also prioritize supports for those providers who might have barriers to receiving typical mental health services. National studies show that adults who have a mental health condition receive services at rates that vary by race and ethnicity. About 33 percent of Black and Hispanic adults with mental health conditions received services in 2019, compared to 50 percent of White adults. [33] State agencies should work with community organizations to make additional efforts to reach out to child care providers who identify as Black, Indigenous, or as a person of color (BIPOC) to make sure resources are best meeting their needs, are culturally and linguistically relevant, and are offered by trusted sources of support.

- **Connect center leaders to resources that specifically address anxiety and support overall well-being.** Our analysis finds that center-based respondents had among the highest rates of clinical anxiety (27%). While our study cannot fully answer *why* center-based providers have increased rates of anxiety relative to family child care providers (15% clinically anxious), it is important for policymakers to pay attention to ECE leaders' mental well-being. Particularly in centers, leaders have influence over the tone and culture of the program as a workplace for other ECE professionals.[34] They ensure that center staff have a safe and healthy work environment, a regular schedule and adequate breaks, and access to professional development. They also implement other strategies to support ECE professionals and reduce burnout and turnover among front-line teachers and caregivers.[35] If center leaders are experiencing their own anxiety, it will be challenging for them to promote the well-being of their staff.
- **Regularly ask about providers' well-being.** Policymakers, as well as program leaders, can work with researchers to regularly assess providers' overall health and well-being, including mental health, through surveys, focus groups, and other outreach methods. They should also ask about important demographic factors including race, ethnicity, language, geographic location, and other social determinants of health,[13] and analyze well-being data based on these factors. Although asking about demographic information can be difficult—particularly if there is perceived or real sensitivity about asking this information—collecting and analyzing data based on demographics such as race and ethnicity is a key strategy to increasing equity and reducing disparities based on these demographic factors.[36] This child care provider COVID survey guide may be useful to state leaders and researchers interested in learning more from providers' demographic characteristics. Of those who responded to this survey, 86 percent completed the GAD-7 questions, indicating to researchers that questions were not too intrusive. However, researchers should be prepared to provide accessible mental health resources when asking about sensitive topics.

Study Limitations and Future Research

Our study has a few notable limitations. First, our survey was conducted at one point in time in the summer of 2020, relatively early in the pandemic. This limits our ability to discuss changes in anxiety (our key measure of mental health for this brief) over time. Our future research efforts will continue to include mental health measures to understand how this has changed for child care providers in Minnesota over the course of the pandemic.

Second, our sample for the survey was limited to those providers who applied to the PECC Grant Program. While this was inclusive of the majority of licensed child care providers, our sample does not include front-line teachers in center-based programs or staff from ECE programs that were not eligible for the grants (i.e.,

[13] Social determinants of health are aspects of a person's life that affect their health, such as where they live, their education, access to healthy food, income, and access to culturally responsive health care. For more information, please see: https://www.kff.org/racial-equity-and-health-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/

Head Start programs or school-based programs that were not licensed by the child care licensing agency).[14] This limitation is important to note for two primary reasons because there are demographic differences among providers and teachers working in different ECE settings and because professional experiences differed during the pandemic. Demographically, staff in licensed child care programs tend to identify as White (95%)[37], as do licensed ECE teachers in school-based programs (93%)[38]; however, data are not available for non-licensed staff like paraprofessionals. Head Start staff in Minnesota are more racially and ethnically diverse, with 9.6 percent of Hispanic origin, 66 percent non-Hispanic White, 11 percent non-Hispanic Black, 7 percent non-Hispanic American Indian or Alaska Native, 5 percent non-Hispanic Asian, and 1 percent non-Hispanic Biracial.[39] Thus, we may be missing perspectives from more BIPOC members of the ECE workforce. Regarding professional experiences during the pandemic, Head Start and many school-based programs initially closed and provided only virtual services for children and families, whereas licensed child care programs remained open for in-person services. The experience of providing virtual versus in-person services could have affected teacher and providers' anxiety levels. Finally, the grant application was only available in English, and while providers could call Child Care Aware of Minnesota to ask questions or have the application translated, this step may have prevented non-English speakers from applying for the program, limiting our survey sample. The survey was also only available in English and Spanish.

In our future research, we are considering including other measures of mental well-being that may be more sensitive to conditions more commonly diagnosed among BIPOC respondents. GAD-7 gave us preliminary insights into one mental health condition—generalized anxiety-- which is a common condition among women (particularly White women) in national studies. However, in selecting only this measure, we may have overlooked other conditions that are more prevalent in BIPOC adults. For example, one large study[40] of a diverse sample of adult Americans found that Black adults had the highest rates of post-traumatic stress disorder (PTSD), another anxiety condition affecting daily well-being. Future research should also consider selecting measures that highlight a wider variety of conditions, including those that are more commonly present in BIPOC adult populations.

Finally, because the primary purpose of the survey in this study was to gain an understanding about the PECC Grant Funds, we did not focus on other contextual factors that may also contribute to anxiety during the pandemic such as experiencing racism, food insecurity, or large reductions in family income. Our future surveys will include questions about other contextual factors present in ECE providers' lives to better understand their well-being, including asking providers what resources they have already been using to support themselves and what would they find helpful.

[14] Child care centers and home-based programs are licensed by the Minnesota Department of Human Services. Individually licensed teachers who work in a school-based program are licensed by the Minnesota Professional Educator Licensing and Standards Board through the Minnesota Department of Education.

Additional Readings

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Appendix

Appendix Table 1. Characteristics of respondents missing GAD-7 scores

Variable	Has GAD-7 score (%)	Missing GAD-7 score (%)
Program type		
Family	1,393 (88%)	185 (12%)
Center	265 (83%)	55 (17%)
Parent Aware rated		
Rated	488 (89%)	60 (11%)
Not rated	1,165 (87%)	180 (13%)
PECC grant recipient		
Awarded	975 (88%)	127 (12%)
Not awarded	683 (86%)	113 (14%)
Age of business available	1,657 (88%)	240 (13%)
Receipt of other financial assistance		
Received additional assistance	1,092 (83%)	223 (17%)
Did not receive additional assistance	566 (97%)	17 (3%)
Participated in professional development		
Completed Participated in professional development	1,003 (97%)	26 (3%)
Did not participate in professional development	649 (96%)	30 (5%)
Attendance during COVID compared to before		
About the same or more	941 (92%)	80 (7%)
Less than	621 (95%)	34 (5%)
Urbanicity		
Rural	940 (88%)	129 (12%)
Urban	718 (87%)	111 (13%)

Source: Authors' analysis of the Peacetime Emergency Child Care Grant Funds Survey, Summer 2020.

Appendix Table 2. Logistic regression results predicting the odds of being clinically anxious

Variable	Estimate	St. Dev Error	Pr(>|z|)	p-value level	OR	2.50%	97.50%
Intercept	-2.90	0.38	0.00	***	0.06	0.03	0.11
Family child care	-0.93	0.24	0.00	***	0.40	0.25	0.63
In urban areas	0.20	0.20	0.32		1.22	0.82	1.82
Currently Parent Aware rated	0.19	0.21	0.35		1.21	0.81	1.81
Age of business	0.00	0.02	0.88		1.00	0.97	1.04
Age of business[2]	0.00	0.00	0.78		1.00	1.00	1.00
Peacetime Emergency Child Care Grant recipients	-0.31	0.20	0.11		0.73	0.50	1.08
Received other financial assistance	0.44	0.23	0.05		1.55	1.01	2.46
Missing data on receipt of other financial assistance	0.17	0.40	0.68		1.19	0.51	2.50
Likely to close	0.98	0.22	0.00	***	2.66	1.70	4.08
Missing data on likelihood of closure	0.44	0.38	0.24		1.58	0.70	3.10
Not confident in health and safety practices	0.76	0.20	0.00	***	2.15	1.44	3.18
Received professional development	0.47	0.21	0.02	*	1.60	1.07	2.45
Race/ethnicity							
White				Reference			
Hispanic	1.36	0.71	0.06	+	3.89	0.80	14.03
Black	-14.73	769.46	0.98		0.00		
Native American	1.83	1.15	0.11		6.20	0.31	44.07
Asian	1.01	1.09	0.36		2.73	0.14	16.04
Multiracial	0.23	0.76	0.76		1.26	0.20	4.58
Other	-13.68	3956.18	1.00		0.00		
Unreported	0.84	0.33	0.01	**	2.30	1.21	4.37

Source: Authors' analysis of the 2020 Peacetime Emergency Child Care Grant Survey. Results were from two models – estimates of all covariates except race/ethnicity were from a model including both family child care and child care centers, estimates of race/ethnicity covariates were from a model including only family child care providers. [2]The researchers included a variation of the age of business variable (age of business squared) that would account for other ways that the age of business might influence providers anxiety. Neither variation of this variable were significant in the results. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; + $p < 0.1$

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