Risk and protective factors associated with grandparent kinship caregivers' psychological distress in COVID-19: Kinship license status as a moderator

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Abstract
COVID-19 and its related policy measures have increased the psychological distress of individuals, including grandparent kinship caregivers. Guided by the Resilience Model of Family Stress, Adjustment, and Adaptation, this study examines relationships between material hardship, parenting stress, social support, resilience and psychological distress of grandparent kinship caregivers during the COVID-19 pandemic, as well as the moderating role of kinship license status on these relationships. Kinship care licensing is a prerequisite to receiving financial assistance and other supporting services from the government. We administered a cross-sectional survey of grandparent kinship caregivers (N = 362) in the United States. Logistic regression results indicated that material hardship was associated with higher odds of experiencing psychological distress, whereas resilience and social support were associated with lower odds. Kinship license status moderated the relationships of social support and resilience with psychological distress. Results suggest that additional emergency funds and more tailored financial services should be provided to meet material needs, and interventions with a focus on resilience and social support are particularly needed. The moderating effects of license status indicate that some interventions should be specifically implemented among licensed kinship caregivers, whereas parallel services should be provided to kinship caregivers regardless of their license status.

KEYWORDS
COVID-19, kinship care license, material hardship, psychological distress, resilience, social support

1 | INTRODUCTION

COVID-19 and its related policy measures, such as keeping social distancing and sheltering in place, have caused a number of social disruptions in our day-to-day living (Galea et al., 2020). These policy measures have limited individuals' physical and social activities, which may exacerbate psychological distress among vulnerable populations, including grandparent kinship caregivers (Galea et al., 2020). Kinship care is full-time care of children who are separated from their parents by relatives and other fictive kin (The Child Welfare League of America, 1994). The majority of kinship caregivers are grandparents, and these grandparents are referred to as custodial grandparents (B. Hayslip & Kaminski, 2005). Custodial grandparents are defined as those who have assumed full responsibility for grandchildren in the same household (B. Hayslip et al., 1998).

These grandparent kinship caregivers are extremely vulnerable in the face of the COVID-19 pandemic due to high rates of poverty, job insecurity, chronic mental and physical health issues and social
isolated (N. Kelley, n.d.; Fuller-Thomson & Minkler, 2000; Y. Xu et al., 2020). Moreover, COVID-19 has disproportionately affected low-income and racial/ethnic minorities in the U.S., and racial/ethnic minorities are overrepresented among grandparent kinship caregivers (N. Kelley, n.d.; Nelson, 2020). Prior to the pandemic, the prevalence of psychological distress among grandparent kinship caregivers was 41% (Y. Lee & Jang, 2019). Mental health problems, such as depression and anxiety, are predicted to increase under the COVID-19 circumstance, particularly for those who have a history of mental health issues (Holmes et al., 2020). Similarly, one-third or more kinship families live below the federal poverty line (Ehrle & Geen, 2002; Y. Xu et al., 2021), and the pandemic has exacerbated financial hardship of these families. Kinship care licensing is a prerequisite for custodial grandparents to receive financial assistance (e.g., foster care payments) and other supporting services from the child welfare system compared with unlicensed grandparents (Child Welfare Information Gateway, CWIG, 2016), but the majority of grandparent kinship caregivers are unlicensed. We have identified risk factors (i.e., material hardship and parenting stress) and protective factors (i.e., social support and resilience) for grandparent kinship caregivers' psychological distress, discussed in detail below. The present study aims to examine (1) relationships of material hardship, parenting stress, social support and resilience with grandparent kinship caregivers' psychological distress during the COVID-19 pandemic and (2) whether kinship license status moderates these relationships.

### 1.1 Grandparent kinship caregivers: Licensed versus unlicensed

Licensing kinship caregivers is important because it ensures a high quality of care that promotes child safety and well-being (Bratteli et al., 2008). Licensed kinship families are usually eligible to receive financial assistance (i.e., foster care subsidies) and other services, such as respite care, parenting training and peer mentorship. Unlicensed kinship caregivers are not eligible for foster care subsidies and may have no access to services, training and supports that are available to their licensed counterparts (CWIG, 2016). Therefore, licensing kinship caregivers is preferred in practice.

The licensing criteria usually include several factors, such as the caregiver’s age, income, physical and mental health, home environment, capacity to care for the child and criminal background (Bratteli et al., 2008). Currently, federal policies allow some variations among states regarding licensing criteria, particularly on non-safety related standards (Bratteli et al., 2008). Jantz et al. (2002) categorized three types of kinship licensing in the U.S.: (1) same or full license, for which kin caregivers are required to meet the same standards as non-kin foster caregivers; (2) kin waiver/modified standard, which offers the same license for kin caregivers as non-kin foster caregivers, but the child welfare agency may waive or modify the standards and (3) kin-specific, for which the standards for kin can be more, less, or the same as for non-kin caregivers. Each state has a different licensing process, but it generally includes home visits, family interviews, background checks, physical check-ups and training (Department of Public Health and Human Services, n.d.).

As the current child welfare system encourages but does not require kinship caregivers to get a certification, kinship caregivers can be licensed or unlicensed (Bratteli et al., 2008). Sometimes, kinship caregivers start unlicensed but eventually become licensed through training and adjusted requirements, or they may become interested in getting licensed after understanding its benefits (Nieto et al., 2009; Victor et al., 2016). Although most kinship caregivers would like to receive more financial assistance and supporting services, many choose to remain unlicensed to minimize their involvement with the child welfare system (Wu & Snyder, 2019). Generations United (2016) found that approximately 20 times more children live with unlicensed kin caregivers than those living with licensed caregivers. Grandparents raising grandchildren are increasingly common. In fact, the majority of grandparent kinship caregivers are unlicensed because of concerns regarding the stigma associated with their involvement with the child welfare system, as well as a lack of awareness of the licensing process and its benefits (Bratteli et al., 2008).

### 1.2 Theoretical framework: The resiliency model of family stress, adjustment and adaptation

The Resiliency Model of Family Stress, Adjustment and Adaptation (hereafter referred to as the Resiliency Model; H. McCubbin et al., 2003; M.A. McCubbin & McCubbin, 1996) provides a theoretical framework for the present study to assess the stressors grandparent kin caregivers face, their family functioning and the coping strategies they use to facilitate adjustment and adaptation to stress during the COVID-19 pandemic. The Resiliency Model posits two phases of response to stress. First, the adjustment phase involves the influence of protective factors that facilitate the family’s ability and efforts to maintain functioning and fulfill developmental tasks in the midst of risk factors (Brown-Baatjies et al., 2008). Second, the adaptation phase involves the influence of recovery factors in promoting the family’s ability to bounce back from challenges (M.A. McCubbin & McCubbin, 1996; H. McCubbin et al., 2003). Guided by this model, the present study examines how stressors (material hardship and increased parenting stress during the COVID-19 pandemic), and problem solving and coping (resilience) and family resources (social support), are risk and protective factors, respectively, that are associated with psychological distress as an adaptation outcome. We also examine whether kinship licensure buffers or exacerbates the adaptation outcome (see Figure 1).

### 1.3 Risk factor: Material hardship

Material hardship, defined as difficulties in meeting all aspects of needs, including food, housing, medical and utilities (Rose et al., 2009), is a prevalent challenge among grandparent kinship caregivers. Prior studies have indicated that above one third of children residing with
grandparent kinship caregivers live below the federal poverty line (Pace et al., 2017). Baker and Mutchler (2010) identified children living in custodial grandparent-headed households as experiencing material hardship, with an elevated risk of experiencing health hardship, as opposed to food or housing insecurity, compared with two-parent households at the same income level. Since the onset of COVID-19, many grandparent kinship caregivers have experienced food and housing insecurity during the pandemic (A. Simmons, 2020; Y. Xu et al., 2020). Given these findings, it follows that material hardship may be a magnified stressor during these times. In terms of the relationship between material hardship and psychological well-being, strong evidence indicates that material hardship is a risk factor for mental health issues (e.g., Heflin & Iceland, 2009) and that lower income is negatively associated with custodial grandparents’ psychological well-being (Doley et al., 2015).

1.4 | Risk factor: Increased parenting stress

Increased stress related to parenting may be another significant stressor facing custodial grandparents during the COVID-19 pandemic. Serving as primary caregivers in late adulthood for a second time around, custodial grandparents experience a high level of parenting stress (S.J. Kelley et al., 2000). E. Lee et al. (2016) identified factors associated with parenting stress among kinship caregivers, including financial burden, children’s behavioural or health problems, the stress of dealing with authorities (e.g., the child welfare system) and difficult relationships and conflicts with birth parents. Also, grandparents’ poor physical and mental health and lack of social support have been found to contribute to parenting stress (Butler & Zakari, 2005; Leder et al., 2007). In the context of COVID-19, children are out of school and/or childcare, without access to in-person education or school activities. The reliance on online teaching and homeschooling might magnify parenting stress due to preexisting challenges faced by custodial grandparents, including work responsibilities, lack of technological skills and lack of access to parenting and social support resources to support their grandchildren’s schooling and daily activities (Coyne et al., 2020).

1.5 | Protective factor: Resilience

Resilience has been broadly defined as the ability to bounce back from adversity or challenging situations (Masten, 2001; M.A. McCubbin & McCubbin, 1996). It is important for caregivers to meaningfully interpret adversities and foster a positive outlook in order to deal with stressors during uncertain times (Prime et al., 2020). From a strengths-based perspective, research finds that resilient custodial grandparents have more positive outlooks on situations, are socially connected, perceive caregiving as a rewarding experience and are more likely to maintain caregiving activities in the face of adversity (B. Hayslip & Smith, 2013; Tang et al., 2015). Resilience might relate to grandparent kinship caregivers’ well-being during the COVID-19 pandemic.

1.6 | Protective factor: Social support

It is well documented that social support provides material and psychological resources to cope with stressors (Cohen & Syme, 1985). Prior research has indicated that social support reduces families’ vulnerability and promotes resilience (Mendoza et al., 2018; Metzger, 2008) and it acts as a protective factor to improve the psychological well-being of custodial grandparents (Choi et al., 2016;
B. Hayslip & Kaminski, 2005; S.J. Kelley et al., 2000). Grandparent kinship caregivers need ongoing support to deal with the burden and stress related to raising their grandchildren (Gleeson et al., 2016). Prior studies found that some factors (e.g., race, residential locale and regional differences) are associated with grandparent kinship caregivers’ social support (Kohn & Smith, 2006) and attending social support groups increases kinship caregivers’ social support compared with those who did not attend (Kohn & Smith, 2006). In the face of COVID-19, vulnerable and isolated families may need continuous support to combat the psychological and economic consequences of the COVID-19 pandemic.

1.7 | Research purposes and hypotheses

The present study aims to examine how material hardship, parenting stress, resilience and social support relate to the psychological distress of grandparent kinship caregivers during the COVID-19 pandemic. We also examine the moderation role of kinship license status on these relationships. Research hypotheses include the following: (1) material hardship and parenting stress are associated with higher odds of psychological distress; (2) resilience and social support are associated with lower odds of psychological distress and (3) kinship license status moderates the relationships between material hardship, parenting stress, resilience and social support and psychological distress. Given the limited literature on kinship license status, no directional hypotheses are provided for the third hypothesis.

2 | METHOD

2.1 | Study procedure

A cross-sectional survey was administered in June 2020 to understand the material hardship, parenting stress, resilience, social support and psychological well-being of grandparent kinship caregivers in the United States during the COVID-19 pandemic. We used Qualtrics Panels (Qualtrics, n.d.), which maintain a database including millions of U.S. residents who have consented to participate periodically in survey research. To select eligible custodial grandparents, we used a convenience and purposive sampling strategy with the following inclusion criteria: (1) participants identify themselves as a primary caregiver of their grandchildren; (2) children’s biological parent(s) did not live in the same household for most of the time and (3) custodial grandparents were not living outside of the U.S., were born before 1985 and had at least one grandchild living in the household. If multiple grandparents lived in the household, survey questions applied only to the oldest grandchild. A total of 1,908 participated in the survey, but only 362 met the inclusion criteria. Participants who completed the survey were compensated, with the amount (<$14/participant) determined and provided by Qualtrics. This study received a determination of exempt for human subjects by the University Institutional Review Board.

3 | MEASURES

3.1 | Dependent variable

Grandparent kinship caregivers’ psychological distress was measured by a brief version of the Mental Health Inventory-5 (MHI-5), which included five items from four major mental health dimensions (i.e., anxiety, depression, loss of emotional control and psychological well-being; Ware & Sherbourne, 1992). The MHI-5 has been used in previous studies among older adults, with a reliability of 0.78 (e.g., Trainor et al., 2013). The original response options were on a 6-point scale from none of the time to all of the time. After reverse coding three items about the absence of psychological distress, we transformed the summative score to a standardized scale from 0 to 100, with higher scores indicating better psychological well-being. Because of the extreme positive skewness of the summative score, we followed the convention of previous studies (e.g., Holden et al., 2015) and used 52 as the cut-off point to generate a dummy variable \(D = \begin{cases} 1 & \text{Experienced psychological distress if less than or equal to 52,} \\ 0 & \text{Did not experience psychological distress if greater than 52.} \end{cases} \) Reliability was not examined as we treated psychological distress as a categorical variable.

3.2 | Independent variables

Material hardship was measured by seven questions asking custodial grandparents whether they had ever not paid for rent/mortgage; experienced housing instability; disconnected gas/electricity, telephone or internet services; refrained from visiting doctors when needed or experienced food insecurity since the onset of the COVID-19 pandemic (The Bendheim-Thoman Center for Research on Child Wellbeing, 2018). A summative score of seven items was used and higher scores indicated more material hardship that custodial grandparents had experienced during the COVID-19 pandemic. The reliability was 0.74 in this sample.

Increase in parenting stress during the COVID-19 pandemic was measured by one item, ‘I feel my parenting stress has been increased’, using a 4-point response scale (4 = Strongly disagree and 1 = Strongly agree). We collapsed strongly disagree and disagree to No and strongly agree and agree to Yes (1 = Yes and 0 = No) as a dichotomous variable. Reliability was not reported for this item.

Resilience was measured by the Brief Resilience Scale (Smith et al., 2008), which captures the likelihood of individuals to bounce back from stress. This scale has six items (e.g., ‘I tend to bounce back quickly after hard times’) with a 5-point Likert scale (1 = Strongly disagree and 5 = Strongly agree). This scale was used in previous research among older adults with good reliability and validity (e.g., A. M. Taylor et al., 2020). The average score was used in this study, with higher scores indicating more resilience. The Cronbach’s alpha was 0.73 in this sample.

Social support was measured by eight questions with a 5-point Likert-type scale (1 = I get much less than I would like and 5 = I get as
much as I like) using the Duke-University of North Carolina Functional Social Support Questionnaire (Broadhead et al., 1989). This scale was used in prior studies among grandparent kinship caregivers with good reliability and validity (e.g., A. Simmons, 2005). A sample item was ‘I get chances to talk to someone I trust about my personal or family problems’. An average score was used with higher scores indicating more social support. The Cronbach’s alpha was 0.93 in this sample.

3.3 | Moderator

Grandparents’ kinship license status was treated as a moderator. It was measured by custodial grandparents’ self-reports on whether they were a licensed kinship caregiver (1 = Yes and 0 = No).

3.4 | Control variables

We controlled for custodial grandparents’ and their grandchildren’s characteristics in our analyses. For the former, we controlled for trigger events that led to them taking on the care of their grandchildren, such as child maltreatment, parental incarceration, mental illness, death, substance abuse, intimate partner violence, economic needs and other reasons. Each trigger was included as a dummy variable. Categorical control variables included grandparents’ race (1 = Non-White and 0 = White), gender (1 = Female and 0 = Male), marital status (1 = Not married, including divorced, separated, single, widowed or other, and 0 = Married), household income (1 = ≤$30 000, 2 = $30 001–$60 000 and 3 = >$60 000), education (1 = Below college and 0 = College and above), number of children in the household (1 = More than one child and 0 = One child), years of care (1 = More than 1 year and 0 = Less than or equal to 1 year) and labour force participation (1 = Full-time, 2 = Part-time and 3 = Don’t work because of retirement, with working full-time as reference group). Continuous control variables included grandparents’ age, which was measured by year. Physical health was measured with a 5-point scale (1 = Poor and 5 = Excellent) with higher scores indicating better physical health. In addition, we measured grandparents’ financial stress (1 = Yes and 0 = No) by asking caregivers to rate their financial well-being on four options: no impact financially, saving a little money, just getting by and struggling to make it. We collapsed ‘saving a little’ and ‘no impact financially’ as no financial stress, whereas ‘just getting by’ and ‘struggling to make it’ indicated having financial stress. We also included variables measuring whether they had lost their job (1 = Yes and 0 = No) and whether they received financial assistance from the government (1 = Yes and 0 = No) during the COVID-19 pandemic. Financial assistance was measured by asking whether they received any of the following during the past month: Temporary Assistance for Needy Families, foster care payment, kinship guardianship, Supplemen-tal Nutrition Assistance Program and unemployment insurance or worker’s compensation. If they received any of the above, we considered them to have received financial assistance from the government; otherwise, it was no.

In terms of grandchildren’s characteristics, we included child age (measured by year), gender (1 = Female and 0 = Male) and physical and mental health as reported by the caregiver. Child physical and mental health were measured using 5-point scales, with higher scores indicating better physical and mental health.

3.5 | Data analysis

We conducted descriptive analyses to describe grandparents’ and grandchildren’s characteristics. Chi-square tests and t tests were conducted to compare differences between licensed and unlicensed grandparent kinship caregivers. Because of the dichotomous outcome variable, logistic regression analyses were conducted to examine factors associated with grandparents’ psychological distress. To examine the possible moderating role of license status, four interaction terms (material hardship × license status; parenting stress × license status; social support × license status and resilience × license status) were added in logistic regression models. All data analyses were conducted using STATA 15.0.

To examine multicollinearity between variables, we examined the variance inflation factors (VIFs) for each characteristic. The VIF ranged from 1.19 (child gender) to 4.29 (parental economic needs), with an average VIF of 1.81, all well below the cutoff point of 10 (Hair et al., 1995). The sample size (N = 362) had sufficient power to conduct logistic regression with 23 predictors, according to the rule of having at least 10 cases per predictor (Peduzzi et al., 1996). Missing data ranged from 0.28% (e.g., child gender, grandparents’ license status and physical health) to 1.66% (e.g., labour force status).

4 | RESULTS

4.1 | Characteristics of licensed and unlicensed grandparent kinship caregivers

Among custodial grandparents in the sample, 39.61% were licensed kinship caregivers and 60.39% were unlicensed. Licensed custodial grandparents were more likely to be Non-White ($\chi^2 = 38.35, p < 0.001$), male ($\chi^2 = 44.76, p < 0.001$), younger ($t = 3.52, p < 0.01$), married ($\chi^2 = 30.37, p < 0.001$) and not retired ($\chi^2 = 37.80, p < 0.001$), with better physical health than their unlicensed counterparts ($t = -8.05, p < 0.01$). They were more likely to have lost a job during the pandemic ($\chi^2 = 30.28, p < 0.001$) and receive financial assistance ($\chi^2 = 25.08, p < 0.001$). They were less likely to have experienced financial stress ($\chi^2 = 5.12, p < 0.05$). Grandchildren of licensed grandparents were more likely to be younger (8.52 vs. 10.14, $p < 0.01$) and have better mental health status (4.46 vs. 4.11, $p < 0.01$). Detailed characteristics of licensed versus unlicensed grandparents and their grandchildren are presented in Table 1.

More than half of grandparents reported psychological distress (58.56%) and increased parenting stress (59.94%) during the COVID-19 pandemic. The average scores for grandparents’ material hardship,
| Variable                                      | Full sample (N = 362) | Licensed (N = 143) | Unlicensed (N = 218) | \chi^2/t test |
|-----------------------------------------------|-----------------------|--------------------|----------------------|---------------|
| Psychological distress                        |                       |                    |                      |               |
| Yes                                           | 212 58.56%            | 116 81.1%          | 96 44.0%             | 49.99***      |
| No                                            | 150 41.44%            | 27 18.9%           | 122 55.9%            |               |
| Material hardship                              | 362 1.62 (1.82)       | 143 2.64 (2.05)    | 218 0.94 (1.26)      | −9.73***      |
| Increased parenting stress during COVID-19     |                       |                    |                      | 5.89          |
| Yes                                           | 217 59.94%            | 46 32.17%          | 120 44.95%           |               |
| No                                            | 145 40.06%            | 97 67.83%          | 98 44.95%            |               |
| Social support                                | 362 3.36 (1.11)       | 143 3.19 (1.09)    | 218 3.47 (1.11)      | 2.40          |
| Resilience                                    | 362 3.38 (0.73)       | 143 3.16 (0.56)    | 218 3.53 (0.79)      | 4.84***       |
| Trigger event                                 |                       |                    |                      | 36.4***       |
| Child maltreatment                            | 26 7.18%              | 6 4.20%            | 20 9.17%             |               |
| Parental incarceration                        | 18 4.97%              | 11 7.69%           | 7 3.21%              |               |
| Parental mental illness                       | 29 8.01%              | 29 14.69%          | 8 3.67%              |               |
| Parental death                                | 34 9.39%              | 15 10.49%          | 19 8.72%             |               |
| Parental substance abuse                      | 62 17.13%             | 20 13.99%          | 42 19.27%            |               |
| Parental intimate partner violence            | 20 5.52%              | 8 5.59%            | 12 5.50%             |               |
| Parental economic needs                       | 122 33.70%            | 55 38.46%          | 67 30.73%            |               |
| Other                                         | 51 14.09%             | 7 4.90%            | 43 19.72%            |               |
| Grandparent race                              | 38.35***              |                    |                      |               |
| White                                         | 246 68.72%            | 72 50.35%          | 174 81.31%           |               |
| Non-White                                     | 112 31.28%            | 71 49.65%          | 40 18.69%            |               |
| Grandparent gender                            | 44.76***              |                    |                      |               |
| Male                                          | 136 37.57%            | 84 58.74%          | 52 23.85%            |               |
| Female                                        | 226 62.43%            | 59 41.26%          | 166 76.15%           |               |
| Grandparent age                               | 362 56.5 (7.75)       | 143 54.71 (7.35)   | 218 57.89 (7.72)     | 3.52          |
| Grandparent marital status                    | 30.37***              |                    |                      |               |
| Married                                       | 252 69.61%            | 123 86.01%         | 128 58.72%           |               |
| Not married                                   | 110 30.39%            | 20 13.99%          | 90 41.28%            |               |
| Grandparent household income in 2019          |                       |                    |                      | 5.86          |
| ≤$ 30 000                                     | 103 29.28%            | 41 28.67%          | 65 29.82%            |               |
| $30 000 to $60 000                            | 135 37.29%            | 63 44.06%          | 71 32.57%            |               |
| >$60 000                                      | 121 33.43%            | 39 27.27%          | 82 37.61%            |               |
| Grandparent education                         | 3.38                  |                    |                      |               |
| Below college                                 | 218 60.22%            | 78 54.55%          | 140 64.22%           |               |
| College and above                             | 144 39.78%            | 65 45.45%          | 78 35.78%            |               |
| Grandparent physical health                   | 361 3.48 (1.01)       | 143 4 (1.01)       | 217 3.14 (0.99)      | −8.05***      |
| Number of children in the household           |                       |                    |                      | 0.33          |
| One child                                     | 64 17.68%             | 73 51.05%          | 118 54.13%           |               |
| More than one child                           | 298 82.32%            | 70 48.95%          | 100 45.87%           |               |
| Years of care                                 |                        |                    |                      |               |
| One year or less than one year                | 77 19.15%             | 20 13.99%          | 44 20.18%            | 2.27          |
| More than one year                            | 325 80.85%            | 123 86.01%         | 174 79.82%           |               |
| Labour force status                           | 37.80***              |                    |                      |               |
| Full time                                     | 157 43.37%            | 81 56.64%          | 76 34.86%            |               |
| Part time                                     | 83 22.93%             | 41 28.67%          | 42 19.27%            |               |
social support and resilience were 1.62 out of 7, 3.36 out of 5 and 3.38 out of 5, respectively. In terms of differences between licensed and unlicensed grandparents, results show that licensed grandparents experienced significantly more psychological distress (81.1% vs. 44.0%, \( p < 0.001 \)) and material hardship (2.64 vs. 0.94, \( p < 0.001 \)). Licensed grandparents also had less social support (3.19 vs. 3.47, \( p < 0.05 \)) and resilience (3.16 vs. 3.53, \( p < 0.001 \)) than their unlicensed counterparts. However, fewer licensed grandparents (32.17% vs. 44.95%, \( p < 0.05 \)) experienced increased parenting stress than unlicensed grandparents.

### 4.2 Risk and protective factors of psychological distress

Table 2 presents the results of logistic regression predicting grandparent kinship caregivers' psychological distress. Model 1 shows that material hardship (OR = 1.68, \( p < 0.01 \)) was significantly associated with higher odds of experiencing psychological distress, whereas increased parenting stress during the COVID-19 pandemic was not significant. Social support and resilience were found to be protective factors against psychological distress. Higher levels of social support (OR = 0.42, \( p < 0.001 \)) and resilience (OR = 0.09, \( p < 0.001 \)) were significantly associated with lower odds of reporting psychological distress.

Licensed kinship caregivers had significantly higher odds of reporting psychological distress than unlicensed caregivers (OR = 3.49, \( p < 0.05 \)). Some trigger events, such as a biological parental death (OR = 13.39, \( p < 0.01 \)), substance abuse (OR = 8.35, \( p < 0.05 \)) and intimate partner violence (OR = 10.12, \( p < 0.05 \)) were significantly associated with higher odds of grandparent kinship caregivers' psychological distress.

### 4.3 Kinship license status as a moderator

The moderating role of license status was not significant in the relationships between material hardship, parenting stress and psychological distress (Models 2 and 3). Model 4 indicates that kinship license status did moderate the relationship between custodial grandparents' social support and psychological distress (OR = 0.21, \( p < 0.05 \)). For every one-point increase in the score of social support, there was a larger decrease in the odds of reporting psychological distress for licensed caregivers than for unlicensed caregivers (Figure 2). Model 5 shows that kinship license status moderated the relationship between custodial grandparents' resilience and psychological distress (OR = 4.78, \( p < 0.05 \)). For every one-point increase in the score of resilience, there was a larger decrease in the odds of reporting psychological distress for unlicensed kinship caregivers than for that of licensed caregivers (Figure 3).

### 5 DISCUSSION

We examined the relationships between custodial grandparents' material hardship, parenting stress, social support, resilience and psychological distress during the COVID-19 pandemic, and we further investigated whether kinship license status moderated these
### Table 2: Predictors of grandparent kinship caregivers' psychological distress (N = 343)

| Independent variables | Model 1: Main effect | Model 2: Material hardship × license | Model 3: Parenting stress × license | Model 4: Social support × license | Model 5: Resilience × license |
|-----------------------|----------------------|--------------------------------------|------------------------------------|----------------------------------|-------------------------------|
|                       | OR                   | OR                                   | OR                                 | OR                               | OR                            |
| Material hardship     | 1.68 **              | 1.62 *                               | 1.73 **                            | 1.75 **                          | 1.75 ***                      |
| Increased parenting stress during COVID-19 | 2.07     | 2.04                                | 2.49                               | 2.11                             | 2.23                          |
| Social support        | 0.42 ***             | 0.42 ***                             | 0.42 ***                           | 0.59 **                          | 0.40 ***                      |
| Resilience            | 0.09 ***             | 0.09 ***                             | 0.09 ***                           | 0.08 ***                         | 0.05 ***                      |
| Moderator             |                      |                                      |                                    |                                  |                               |
| Licensed kinship caregivers: Yes (ref. No) | 3.49 *   | 3.19 *                              | 5.30 *                             | 1127.80 ** a                     | 0.02                          |
| Interaction term      | -                    | -                                    | -                                  | -                                | -                             |
| Material hardship × license | -       | 1.08                                | -                                  | -                                | -                             |
| Parenting stress × license | -        | 0.52                                | -                                  | -                                | -                             |
| Social support × license | -            | -                                   | 0.21 *                             | -                                | -                             |
| Resilience × license  | -                    | -                                    | -                                  | 4.78 *                           | -                             |
| Control variables     |                      |                                      |                                    |                                  |                               |
| Trigger event (Ref. Child maltreatment) |            |                                      |                                    |                                  |                               |
| Parental incarceration | 2.76                | 2.68                                 | 2.84                               | 2.85                             | 3.15                          |
| Parental mental illness | 10.06          | 10.12                               | 10.15                              | 12.04                            | 9.42                          |
| Parental death        | 13.39 **            | 13.10 **                            | 13.74 **                           | 11.74 **                         | 17.66 **                      |
| Parental substance abuse | 8.35 *          | 8.19 *                              | 9.02 *                             | 8.11 *                           | 9.14 *                        |
| Parental intimate partner violence | 10.12 * | 9.91 *                               | 10.30 *                            | 12.30 *                          | 8.40 *                        |
| Parental economic needs | 1.77          | 1.75 *                              | 1.80                               | 1.81                             | 1.96                          |
| Other                 | 2.24                | 2.19                                | 2.33                               | 1.73                             | 2.02                          |
| Grandparent race: Non-White (Ref. White) | 1.93            | 1.97                                | 1.81                               | 1.78                             | 1.94                          |
| Grandparent gender: Female (Ref. Female) | 2.23          | 2.30                                | 2.20                               | 2.17                             | 2.32                          |
| Grandparent age        | 1.00                | 1.00                                 | 1.00                               | 0.99                             | 1.00                          |
| Grandparent marital status: Not married (Ref. Married) | 0.47           | 0.46                                | 0.45                               | 0.53                             | 0.48                          |
| Grandparent household income in 2019 (Ref. ≤ $30 000) |            |                                      |                                    |                                  |                               |
| $30 000 to $60 000    | 0.96                | 0.97                                | 0.93                               | 1.06                             | 1.05                          |
| >$60 000              | 0.59                | 0.59                                | 0.56                               | 0.58                             | 0.63                          |
| Grandparent education: College and above (Ref. Below college) | 0.43          | 0.42                                | 0.44                               | 0.43                             | 0.45                          |
| Grandparent physical health | 0.75           | 0.75                                | 0.75                               | 0.74                             | 0.80                          |
| Number of children in the household: More than 1 child (Ref. 1 child) | 0.91         | 0.92                                | 0.91                               | 0.97                             | 0.86                          |
| Years of care: More than 1 year (Ref. ≤ 1 year) | 1.78          | 1.78                                | 1.75                               | 1.80                             | 1.82                          |
| Labour force status (Ref. Full time) |            |                                      |                                    |                                  |                               |
| Part time             | 0.82                | 0.84                                | 0.81                               | 1.16                             | 0.95                          |
| Don't work because of retirement | 1.05           | 1.06                                | 1.05                               | 1.35                             | 1.17                          |
The findings of this study partially support research hypotheses that material hardship is associated with higher odds of experiencing psychological distress, whereas social support and resilience are associated with lower odds of experiencing psychological distress. Unexpectedly, we did not find that increased parenting stress during the COVID-19 pandemic was associated with custodial grandparents’ psychological distress. Regarding the hypothesized moderating role of license status, we found that license status moderated only the relationships of resilience and social support with psychological distress.

Consistent with prior research (e.g., S.J. Kelley et al., 2000; Minkler & Fuller-Thomson, 2005), we found that material hardship contributes to the psychological distress of kinship caregivers. The COVID-19 pandemic has increased economic instability and has hit economically vulnerable populations hard (Nelson, 2020). Sufficient food and stable housing are fundamental safety and security needs for individuals; thus, it is not surprising that material hardship has significant negative effects on custodial grandparents’ psychological wellbeing.

Although sheltering in place and school closures have increased stress on parents (Cluver et al., 2020), we did not find increased parenting stress to contribute to psychological distress, as found in previous studies (e.g., Sharda et al., 2019). A potential explanation is that increased parenting stress may not immediately contribute to

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**TABLE 2** (Continued)

|                          | Model 1 Main effect | Model 2: Material hardship × license | Model 3: Parenting stress × license | Model 4: Social support × license | Model 5: Resilience × license |
|-------------------------|---------------------|-------------------------------------|-------------------------------------|----------------------------------|-----------------------------|
| Financial stress during COVID-19 (Ref. No) | 0.91 | 0.91 | 0.91 | 0.97 | 0.90 |
| Lost job during COVID-19 (Ref. No) | 1.37 | 1.35 | 1.42 | 1.59 | 1.25 |
| Received financial assistance during COVID-19 (Ref. No) | 0.53 | 0.53 | 0.55 | 0.51 | 0.50 |
| Child age | 1.03 | 1.03 | 1.03 | 1.05 | 1.04 |
| Child gender: Female (Ref. Male) | 0.48 | 0.47 | 0.48 | 0.44 | 0.42 |
| Child physical health | 1.47 | 1.47 | 1.51 | 1.57 | 1.40 |
| Child mental health | 0.66 | 0.66 | 0.66 | 0.62 | 0.62 |
| Pseudo R² | 0.54 | 0.54 | 0.54 | 0.56 | 0.55 |

*The odds ratio of license status in Model 4 was extremely large and the 95% confidence interval [13.98, 91000.58] was extremely wide; therefore, the effect of license status on psychological distress should be interpreted with caution when controlling for the interaction term between social support and license status.

*P < 0.05. **P < 0.01. ***P < 0.001.

**FIGURE 2** The moderating role of kinship license status on the relationship between social support and psychological distress among grandparent kinship caregivers.
clinically significant psychological distress, as we used a clinical cutoff point to dichotomize psychological distress to adjust severe skewness of this variable in this study. In addition, this may be related to the measure of the parenting stress variable. Using an item may not capture the full dimension of parenting stress experienced by custodial grandparents during the pandemic. On the other hand, it is possible that custodial grandparents perceive grandparenting as a rewarding experience (M.F. Taylor et al., 2018), and the positive perception of caregiving might have buffered negative effects of caregiving on psychological distress (L. Xu et al., 2017).

Consistent with the theoretical framework, we found that custodial grandparents’ resilience and social support were protective factors for psychological distress. As many grandparent kinship caregivers were socially isolated (Choi et al., 2016) and sheltering in place may exacerbate social isolation (Marziali et al., 2020), this study confirms that social support mitigates the risk of experiencing psychological distress in this population (Sharda et al., 2019). Furthermore, results reaffirm findings of B. Hayeslip and Kaminski (2005) that more resilient custodial grandparents were less likely to experience psychological distress. Resilient custodial grandparents often have specific traits, such as being positive toward their family life and keeping active social connections (Bailey et al., 2013), which are vital in coping with psychological distress during the COVID-19 pandemic.

In this study, we identified significant differences between licensed and unlicensed kinship caregivers in psychological distress and associated risk and protective factors. Licensed custodial grandparents are at a higher risk of experiencing psychological distress, material hardship and parenting stress, which is aligned with the more vulnerable nature of licensed kinship caregivers as these families are often of colour and may experience more adverse life experiences (C.C. Goodman et al., 2004; C.C. Goodman et al., 2007; Swann & Sylvester, 2006). The complex challenges faced by licensed kinship caregivers may have been exacerbated by the COVID-19 pandemic.

License status significantly moderated the relationships of resilience and social support with psychological distress. Results showed that the relationship between resilience and psychological distress was weaker for licensed grandparent kinship caregivers compared with unlicensed caregivers. Although becoming licensed is associated with increased financial assistance and entitled services, our results may indicate that receiving these supports is not sufficient for licensed caregivers to buffer against their vulnerability and achieve the same outcomes as unlicensed caregivers. On the other hand, unlicensed grandparent kinship caregivers received fewer services and resources and may have had to rely more on their resilient traits to overcome adversities, which may explain why the relationship between resilience and psychological distress was stronger for unlicensed grandparent kinship caregivers. Conversely, the relationship between social support and psychological distress was stronger for licensed grandparent kinship caregivers. Licensed kinship caregivers may have a broader network and receive more assistance from the public system (C.C. Goodman et al., 2004), increasing their perceived social support, especially during the COVID-19 pandemic. Whereas grandparent kinship caregivers are perhaps isolated at home, social support from multiple sources may be more salient in their lives to overcome psychological distress. Thus, informing custodial grandparents about licensing and its benefits may promote caregivers’ psychological well-being.

In the present study, we also identified some trigger events that have a profound impact on grandparent kinship caregivers’ psychological distress, such as parental death, substance abuse and intimate partner violence, compared with child maltreatment. Parental death would be a crisis for the family, including grandparents. The grief, loss
and unpreparedness to be parental caregivers would significantly increase custodial grandparents’ psychological distress (Davis et al., 2020). Some grandparents are chronically stressed by their conflict with their adult children due to their substance abuse problems (Hansen et al., 2020). Likewise, grandparents may feel powerless and frustrated when their grandchildren are exposed to intimate partner violence in their biological parents’ household (Sandberg, 2016). The profound impact of trigger events on the psychological distress of grandparents may indicate the need for mental health services and therapy for the entire family.

The results of this study have specific implications for practice. To help meet custodial grandparents’ material hardship during this pandemic, local state agencies could allocate additional emergency funds to custodial grandparents and simplify application procedures. Local agencies serving kinship caregivers and grandparents could reach out to their clients via phone calls, email and social media and help raise funds to meet their emergency material needs or help with grocery shopping. As license status did not moderate the relationship between material hardship and psychological distress, it appears that material hardship has hit both licensed and unlicensed caregivers equally. Thus, tailored financial services should be provided to both licensed and unlicensed custodial grandparents via multiple systems (e.g., social services system and school system).

To address grandparent kinship caregivers’ psychological distress, telemental health services and grandparenting support groups could be beneficial in the era of COVID-19. Because we are practicing social distancing, these support groups could be conducted virtually using phone calls, video calls and apps (e.g., Zoom). To enhance caregivers’ resilience, strengths- and resilience-building components should be incorporated into interventions, as they help build personal strengths, identify family resources and obtain social support (Tang et al., 2015).

The significant moderating effects of license status on relationships of resilience and social support with psychological distress imply that licensing and its corresponding services help build more formal support for custodial grandparents. Receiving a license might be beneficial for all grandparent kinship caregivers. In addition to relying on their personal traits, such as resilience, caregivers could use a broader network to combat the psychological consequences of the COVID-19 pandemic. As the relationship between resilience and psychological distress was weaker among licensed custodial grandparents, this suggests that interventions to improve licensed custodial grandparents’ resilience are much needed.

This study contributes to our understanding of grandparent kinship caregivers’ psychological distress in the context of the COVID-19 pandemic. It also addresses important gaps in research on licensed and unlicensed custodial grandparents, as kinship caregivers are increasing and there needs to be more attention on supporting both licensed and unlicensed caregivers. However, there are several limitations to be considered. First, survey data are limited in their cross-sectional design. Therefore, causality among these relationships cannot be determined. Relatedly, we did not collect any pre-COVID-19 data about psychological distress or risk and protective factors.

Thus, we cannot conclude whether the COVID-19 pandemic has intensified these relationships. Second, we used a convenience sampling method via Qualtrics Panels to collect data, which is likely to exclude custodial grandparents who have no access to the internet or are not included in Qualtrics database. Thus, results are not generalizable to all custodial grandparents in the United States. Third, grandparents’ licensure status was reported by themselves, and licensure criteria and entitled services vary by state, which introduces variation in examining the moderating effects of license status on their psychological well-being. Fourth, the social support scale we used in our study measured only two dimensions (confidant support and affective support) and did not capture instrumental support received from others (López & Cooper, 2011). Fifth, this sample was predominantly White (69.62%), and we combined other races/ethnicities as a Non-White group, which failed to examine differences between different racial/ethnic groups. Lastly, the primary focus of the Resiliency Model is on family change and adaptation over time (Inci & Temel, 2016; H. McCubbin et al., 2003); however, we do not have longitudinal data to track the adjustment and adaptation process.

Further investigation of the long-term effects of the COVID-19 pandemic on psychological well-being and its related risk and protective factors would be enhanced through longitudinal research designs. Future research would also benefit from a more representative sampling method that would be better generalizable. For example, future studies should sample more racial/ethnic minorities and examine racial/ethnic differences in custodial grandparents’ psychological well-being. Also, future research could explore different dimensions of custodial grandparents’ psychological well-being, such as depression and anxiety. Future research may consider collecting other components described in the Resiliency Model, such as situation appraisal, to better understand custodial grandparents’ behaviour and functioning in the process of adaptation over time. In addition, family relationships in grandparent-headed families can be complex. Future research may consider the relationships between the child and their biological parents and the frequency of contact with their biological parents. Future research also can consider measuring the number of primary caregivers in the household and custodial grandparents’ marital status. Lastly, future attention should be devoted to further exploring differences in custodial grandparents by license status. When comparing differences between licensed and unlicensed caregivers, future research should consider grandparents’ legal relationships with their grandchildren and take account of other services (e.g., respite services and parenting training) in addition to financial services. Although our results indicate that the public services system mostly serves more vulnerable (i.e., licensed) custodial grandparents, they still raise the question of whether current public services effectively help combat the repercussions of this pandemic or improve these families’ well-being. Thus, future research needs to further examine the effect of licensing on kinship caregivers’ outcomes.

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CONFLICT OF INTEREST
The authors declare that there is no conflict of interest regarding the publication of this paper.

ETHICS APPROVAL STATEMENT
This study received a determination of exempt for human subjects by the University of South Carolina Institutional Review Board (IRB number: Pro00100671).

CONSENT STATEMENT
Participants’ electronic written informed consent was granted in the survey.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request.

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