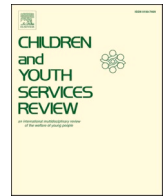




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# Parental stress of Korean immigrants in the U.S.: Meeting Child and Youth's educational needs amid the COVID-19 pandemic

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## ABSTRACT

This study investigates Korean immigrants' parental stress amid the COVID-19 pandemic, especially when they experience difficulties trying to meet their children's educational needs. Korean immigrant parents residing in the U.S. were invited to complete an online survey through purposive sampling. The final sample included a total of 341 Korean immigrant parents from 42 U.S. states. Three models of Ordinary Least Squares (OLS) regressions were conducted to examine the associations between parent-reported difficulties meeting the children's educational needs, parental stress, and the immigrant parents' resilience and social support. Findings indicate that parents' difficulties meeting their children's educational needs in general as well as language barriers were associated with increased parental stress. Moreover, parents' resilience and social support also significantly decreased parental stress levels. Implications for practice, policy, and future research are presented.

## 1. Introduction

The Coronavirus 19 (COVID-19) has significantly impacted public health and caused social and economic crises worldwide since its first report in late 2019 (Gomez-Salgado, Andres-Villas, Dominguez-Salas, Diaz-Milanes, & Ruiz-Frutos, 2020). The World Health Organization (WHO), who declared an international public health emergency, has identified over 102 million confirmed cases, including over two million deaths globally as of 2 February 2021 (World Health Organization, 2020b). Since the first COVID-19 confirmed case in late January 2020 in the United States (U.S.), the number of the COVID-19 cases has been rapidly increasing, reaching about 26 million confirmed cases, including 437,964 deaths as of 2 February 2021 (World Health Organization, 2020a). U.S. federal and state governments have put effort into mitigating the COVID-19 pandemic by restricting travel, requiring social distancing, issuing shelter-in-place or stay-at-home orders, limiting face-to-face school instruction, requiring shutdowns for certain businesses except for essential services, and mandating face covers or masks. The COVID-19 pandemic continues, however, and it affects every aspect of U.S. life.

### 1.1. The COVID-19 pandemic and its impacts on immigrant society

The public health crisis due to the COVID-19 pandemic has significantly impacted racially and ethnically diverse families in the U.S. Many Asian, Black, and Hispanic Americans have reported an increase in racial discrimination since the COVID-19 outbreak (Choi, Hong, Kim, & Park, 2020; Ruiz, Horowitz, & Tamir, 2020). Xenophobia and racism against mainly Asian populations have occurred, such as blaming China and even Asian-Americans for the COVID-19 outbreak (Marquardt & Hansler, 2020). While the pandemic has significantly impacted the U.S. labor market, resulting in declining employment, immigrant U.S. workers have experienced more significant job losses compared to U.S.-born workers (i.e., a 19% drop versus a 12% drop) (Kochhar, 2020). Foreign-born Hispanic/Latino women have been the most vulnerable group of workers during the pandemic (Capps, Batalova, & Gelatt, 2020; Kochhar, 2020). Immigrant populations have suffered from excessive psychological distress during the COVID-19 pandemic due to job loss, limited accessibility to healthcare services, and high risk of exposure to the COVID-19 (Clark, Fredricks, Woc-Colburn, Bottazzi, & Weatherhead, 2020).

In addition to the unique challenges mentioned above, immigrant families have struggled with child care and educational support due to

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moving to online instruction in most U.S. schools and programs. A lack of school staff who can communicate in the child's home language and little technological support, including computers and an internet connection, place extra strain on immigrant families (Lazarin, 2020). Although many states and school districts have worked to provide adequate support (e.g., checking appropriate technology for online instruction, using text message software to reach parents in their home language, collaborating with language interpreters, publishing educational resources in various languages) for immigrant children and parents, families in rural or less diverse communities still struggle with little support. Children of immigrant families are at risk for further learning gaps (Rani, 2020).

### 1.2. Korean immigrants in the U.S.

Among the various ethnic and racial demographics in the U.S., about 2 million U.S.-born and foreign-born Korean Americans reside in the country as of 2017 (O'Connor & Batalova, 2019). Korean Americans are a fast-growing group constituting the fifth largest Asian American subgroup in the nation (U.S. Census Bureau, 2018). In earlier U.S. Korean immigrant history at the beginning and mid 20th Century, Koreans emigrated from their home country mainly because of political asylum or insecurity, poverty, insufficient employment opportunity, and to flee military dictatorship (Boston Korean Diaspora Project). Later 20th Century and contemporary Korean immigrants tend to voluntarily move to the U.S. as white-collar workers or students representing a large international student group in U.S. higher education institutions (Boston Korean Diaspora Project; O'Connor & Batalova, 2019). Korean immigrants are more likely to have higher educational attainment and incomes compared to the overall immigrant populations as well as general U.S. individuals (O'Connor & Batalova, 2019). With other Asian Americans, Korean immigrant parents tend to highly value education and thus indicate higher educational expectations for their children than some other ethnic groups (Shin, 2004). Korean immigrants, however, are less likely to speak English fluently as compared with other immigrant groups (O'Connor & Batalova, 2019). Many Korean immigrant adults tend to remain monolingual, mostly speaking the Korean language alone and socializing within Korean communities, including at Korean churches and temples (Yasui, Kim, & Choi, 2018).

In response to the struggles of the U.S. immigrant populations amid the COVID-19 pandemic, this study will examine parental stress caused by meeting their children's educational needs and the levels of resilience and social support associated with parental stress among Korean immigrant parents. Given that Korean is one of the fast-growing ethnic groups in U.S., this study will contribute to understand Korean immigrant parents' struggles amid the COVID-19 and provide implications to support them during and beyond the pandemic.

## 2. Literature review

### 2.1. Immigrant Parents' stress in raising children

Today's U.S. schools are incredibly culturally and linguistically diverse with the increased influx of immigrants, mostly from Asian countries and Latin America (Pew Research Center, 2015). As a result, about 23% of students in the U.S. public schools come from immigrant families as of 2015 (Kayama & Yamakawa, 2020). Parenting of immigrant families is uniquely challenging as families encounter stress to adapt themselves to a new culture and environment where they often experience language difficulties and social isolation (Fung & Lau, 2010; Jambunathan, Burts, & Pierce, 2000). This challenge often negatively impacts parents' perceptions of their parenting competence among immigrant parents (Kiang, Glatz, & Buchanan, 2017). In an education setting, immigrant parents have indicated cultural and linguistic gaps when they interact with school personnel for their children (Lee, Rocco Dillon, French, & Kim, 2018). For example, Asian-American families

tend to passively agree with professionals' ideas and suggestions even when those opinions differ from their own because of the trust and respect they have for teachers (Park & Turnbull, 2001).

In close association with cultural aspects, many immigrant parents struggle with language difficulties in raising their children, in part because educators cannot meet their language needs. For example, recently, Kayama and Yamakawa (2020) found that Japanese immigrant parents experienced anxiety and frustration in supporting their children, because schools neither adequately accommodated these parents' language skills nor supported these parents' understanding of the U.S. school system and class materials (Kayama & Yamakawa, 2020). Similarly, Riggio and Avalos (2017) identified language barriers and culturally different parenting styles as stressors for Latino immigrant parents preventing involvement in their child's education (Riggio & Avalos, 2017). From interviews with parents from Korean, Somali, and Mexican cultures, it was found that educators' lack of effective communication skills based on the specific needs and cultures of families with no or limited English proficiency can impede meaningful parent-teacher collaboration (Cheatham, Duran, & Hong, 2012). Sometimes, parents require a language interpreter, or they burden their children to serve as interpreters or translators in community and school contexts (Burgos, Al-Adeimi, & Brown, 2017; Hong & Turnbull, 2013; Kayama & Yamakawa, 2020). The cultural and linguistic challenges of immigrant families often bring conflicts among the family members, which results in additional parental stress (Fung & Lau, 2010; Kwak & Berry, 2001; Yagmurulu & Sanson, 2009).

Online learning has become an inevitable educational mode for children and parents as a result of school and program closures amid the COVID-19 pandemic (National Coalition for Public School Options, 2020; Rani, 2020; Yang, Chamas, & Souisa, 2020). However, a partially- or fully-online learning experience has often been already available for students in modern society as an alternative or supplementary educational tool rather than the brick-and-mortar school (Smith, Burdette, Cheatham, & Harvey, 2016). Online instruction requires substantial parental involvement and responsibilities in the child's learning, such as organizing school lessons, creating a learning climate, collaboration with teachers, and overall parental guidance (Borup, Stevens, & Waters, 2015; Downes, 2013; Liu, Black, Algina, Cavanaugh, & Dawson, 2010). However, immigrant or culturally and linguistically diverse parents encounter challenges in taking such roles due to school's difficulties to ensure internet access, provide information about online instruction, support knowledge about navigating the U.S. school system and provide effective language interpretation services (Chen et al., 2019; Yang et al., 2020).

### 2.2. Resilience and social support for immigrant parents

Resilience refers to an ability to recover from and adapt to one's life challenges, including personal crises, adversity, or trauma (Connor & Davidson, 2003). One's resilience is changeable, influenced by various factors, such as age, gender, personality, cultural origin, past experiences, and environmental contexts; resilience can be promoted via prevention, intervention, and policy (Masten & Obradovic, 2006). For example, parents of children with severe medical conditions indicated increased resilience particularly managing painful feelings and making difficult decisions after participating in an intervention program (Baron Nelson, Riley, & Arellano, 2018). While educators have the responsibility for ensuring that collaboration with families is effective, in situations in which educators do not possess collaboration skills for effective partnerships, family resilience may be key to families' navigation of the U.S. education system and supporting their children.

In a study of Chinese American parents, their resilience was enhanced by a commitment to parenthood, which enabled them to effectively deal with adversity (Chang & Ng, 2002). Several studies indicated the positive roles of resilience in raising children with disabilities among immigrant populations (Heer, Larkin, & Rose, 2015; Su,

2008; Zechella & Raval, 2016). For instance, Zechella and Raval (2016) found religious faith and optimistic perspectives contributed to increased resilience and decreased parental stress among Asian Indian parents in the U.S. in raising their children with developmental disabilities. Likewise, Su (2008) noted that Taiwanese parents of children with disabilities in the U.S. showed resilience magnified by positive and flexible personalities, religious beliefs, stable socioeconomic status (SES), and available parenting resources. Such increased resilience decreased caregiver burdens.

In addition to resilience, social support may help immigrant parents in dealing with parenting issues in the host country. Social support, particularly concerning emotional aspects from friends, neighbors as well as family members, positively promotes resilience, resulting in better parenting (Moncher, 1995). The role of social support has been examined as a direct or moderating effect on parents' psychological well-being, parenting behaviors, and acculturation challenges among immigrant parents (Levitt, Lane, & Levitt, 2005; Liu, Zhai, & Gao, 2020; Seo, Cheah, Ozdemir, & Hart, 2018; Su & Hynie, 2011). Liu et al. (2020), for example, found that social support was a significant mediator in the relationship between parental stress (i.e., low SES and unemployment) and positive parenting behaviors. Levitt et al. (2005) also found that immigrant parents from multiple countries benefited from social support in coping with acculturation challenges and enhancing positive parenting behaviors.

Along with emotional support, instrumental (i.e., tangible support, such as childcare assistance and respite services) and structural (i.e., availability of and accessibility to services), support are key social supports needed for immigrant parents (Khanlou, Haque, Sheehan, & Jones, 2015). Seo et al. (2018) indicated that Korean immigrant parents with instrumental support from kin members experienced enhanced psychological well-being and decreased parental stress. However, immigrant parents are less likely to receive adequate social support compared to native-born, U.S. parents. Su and Hynie (2011) found that Chinese Canadian immigrant mothers had less social support compared to mainland Chinese and European Canadian parents due to limited social networks. Similarly, minority immigrant parents perceived less social support compared to nonimmigrant White parents (Turney & Kao, 2009). In this study, parents' English language ability was positively associated with increased perception of social support among Hispanic immigrant parents.

### 2.3. Aim of the current study

As the COVID-19 pandemic continues, several studies have reported increased parental stress in many countries (Cameron et al., 2020; Gomez-Salgado et al., 2020; Griffith, 2020; Spinelli, Lionetti, Pastore, & Fasolo, 2020; Wu et al., 2020). This study will contribute to the growing literature on parental experiences during the pandemic by investigating parental stress of immigrant parents, specifically from Korean backgrounds, and provide implications for future research and practice. Research questions are: (1) Is there an association between experiencing difficulties meeting children's educational needs and parental stress amid the COVID-19 pandemic?; (2) Is there an association between parents' experiences of language barriers when trying to meet their children's educational needs, and their parental stress amid the COVID-19 pandemic?; (3) Is there an association between parents' experiences of difficulties using online learning tools when trying to meet their children's educational needs, and their parental stress amid the COVID-19 pandemic?; (4) Are there associations between parents' resilience level and social support on the parental stress, respectively?; and (5) Are there moderating effects of the level of resilience and social support in between difficulties meeting children's educational needs and the parental stress amid the COVID-19 pandemic?

## 3. Materials and methods

### 3.1. Procedures

From May 2020 to June 2020, U.S. resident Korean immigrants above the age of 18 years were invited to participate in an online survey to explore various well-being outcomes. Among the survey questions, the relationship between meeting children's educational needs and parental stress during the COVID-19 pandemic was included. Through purposive and snowball sampling, participants were recruited via emails and internet postings in online Korean immigrant communities in the U.S. The popular online communities where Korean immigrants share information and network with each other were selected. The announcement asked respondents to share the survey link with their Korean friends, family members, and acquaintances who reside in the U.S. Email invitations were distributed via various Korean organizations in the U.S., such as student, scholar, and religious organizations. For respondents to be included in the original survey, the individuals needed to be residing in the U.S. (disregarding the citizenship or visa status), above the age of 18, and of Korean descent. After the data collection, the subsample of Korean immigrant parents who have children under the age of 18 years was selected for the current study.

The study's IRB was approved by the University of North Florida (IRB #: 1289431-5). Participants gave their informed consent before participating in the survey. To protect the respondents' confidentiality, collected data was stored and anonymously analyzed.

### 3.2. Measurements

Social science researchers from multicultural and bilingual backgrounds selected and developed questions for the survey. Reliable and valid scales already existing were chosen to measure parental stress, resilience, and social support. Items that did not have existing valid and reliable scales were developed by the research team in both Korean and English languages. All questions were reiteratively cross-checked by the researchers as well as outside bilingual reviewers to confirm linguistic accuracy and cultural competency.

#### 3.2.1. Parental stress

The Parental Stress Scale (PSS), composed of an 18-item scale, was used to measure the degree of parental satisfaction and stress (Berry & Jones, 1995). The PSS indicates good internal consistency with a Cronbach's alpha reliability of 0.83 and test-retest reliability of 0.81. Parent participants describe their perception of and feeling about parenting experiences in the relationship with their child(ren). Item examples include, "I am happy in my role as a parent," and "Having child(ren) has meant having too few choices and too little control over my life." Participants indicate the extent to which they agree or disagree with each item using the 5-point Likert-type scale, from (1 = strongly disagree) to (5 = strongly agree). A possible total score, which ranges from 18 to 90, was treated as a continuous variable for data analysis.

#### 3.2.2. Difficulties in meeting children's educational needs amid COVID-19 pandemic

The three items that address immigrant parents' challenges specifically in meeting children's educational needs during the COVID-19 pandemic were developed by the researchers and described as follows: (1) *Meeting children's educational needs*: To examine the overall challenges parents encounter because of their children's educational needs during the pandemic, the statement, "Due to the COVID-19 pandemic, I am struggling to meet the needs of my child(ren)'s education and activities" was used; (2) *Experiencing language barriers when trying to meet children's educational needs*: Parents' experience of language barriers in meeting children's educational needs during the pandemic was addressed to explore immigrant parents' linguistic challenges. The statement is "I am experiencing a language barrier in helping my children's schoolwork and



activities during the COVID-19”; and (3) *Experiencing difficulties with using online learning tools when trying to help children’s schoolwork*: The last statement indicates the extent to which parents feel satisfied with supporting their children’s education using online instructional tools, “*I am experiencing difficulties in helping my children’s schoolwork and activities using online instructional tools.*” Each of the responses can be either yes or no, and it was used as a dichotomous variable. The three variables were measured independently to explore different types of difficulties meeting children’s educational needs amid the COVID-19 pandemic. Moreover, a reliability of the three items was high ( $\alpha = 0.70$ ).

3.2.3. Resilience

Resilience was measured by a 10-item scale, the Connor-Davidson resilience scale-10 (CD-RISC-10) (Campbell-Sills & Stein, 2007). The scale demonstrates high validity and reliability, indicating a Cronbach’s alpha of 0.85. The scale has been used in diverse cultural and linguistic contexts to assess an individual’s resiliency. Examples of the items contain, “*I am able to adapt when changes occur*” and “*Under pressure, I stay focused and think clearly.*” Responses can range from (0 = not true at all) to (4 = true nearly all the time), indicating how often respondents agree with each statement. A possible total score ranges from 0 to 40 and was analyzed as a continuous variable.

3.2.4. Social support

The three items from the Social Interaction Scale (Schuster, Kessler, & Aseltine, 1990) were used to measure social support that an individual receives from a close relationship (e.g., family, friends, relatives) and its influence on one’s emotional functioning. The three items examine how closely a respondent relies on and contacts with family, relatives, or friends, especially when (s)he is in a difficult situation. The scale demonstrates high validity and reliability, indicating a Cronbach’s alpha of 0.88. Items include “*I have friends, family, or others whom I can open up and rely on*” and “*I have friends, family, or others who will provide support if I have a serious problem.*” Each response can range from (1 = very dissatisfied) to (5 = very satisfied), denoting the total score of from 3 to 15, which was used for analysis as a continuous variable.

3.2.5. Sociodemographic factors

Some demographic information, including age, gender, education level, marital status, employment status, and household income, was controlled for the purpose of analysis. Except for age, which was used as a continuous variable, all the other sociodemographic variables were collected and used as categorical variables.

3.3. Data analysis

Data analysis was conducted using IBM SPSS Statistics software (Version 24). To handle missing values, the authors used list-wise deletion when the remaining cases were sufficiently large. Data was also cleaned for analyses purposes by computing dummy variables for categorical variables. Descriptive statistics were performed to learn the distribution of all the variables. Next, hierarchical linear regression analyses were conducted to test the effect of difficulties meeting children’s educational needs amid the COVID-19 pandemic on the level of parental stress. Afterward, the moderating effects of resilience and social support on parental stress were tested using interaction terms.

4. Results

Table 1 presents characteristics of the final sample of Korean immigrants from 42 U.S. states (N = 341). The mean age was 41.30 years (range: 24–73, Std. Dev: 6.54). In terms of marital status, 0.9% were single, 95.3% were married, and the other 3.8% were divorced, separated, or widowed. 53.7% were female, and 46.3% were male. For educational background, 7.3% had at least a high school diploma, 21.7% had some level of college education, 28.2% had a bachelor’s degree, and

Table 1  
Characteristics of the Study Sample.

Mean or percentage			
Variables	All sample (N = 341)	Variables	All sample (N = 341)
<b>Dependent Variable</b>		<b>Sociodemographic variables</b>	
<b>Parental Stress</b> (range:18–90)		<b>Age (years)</b>	
Mean:44	Std. Dev:9.75	Min:24	Mean: 41.30
<b>Independent Variables</b>		Max:73	Std. Dev: 6.54
<b>Difficulty Child Education</b>		<b>Education</b>	
Yes	83.5%	High school diploma or less	7.3%
No	16.5%	Some level of college education	21.7%
<b>Language Barrier Child Edu</b>		Bachelor’s degree	28.2%
Yes	52.2%	Graduate degree	42.8%
No	47.8%	<b>Employment status</b>	
<b>Tech Diff Child Edu</b>		Employed full time	53.8%
Yes	30.5%	Employed part-time	14.4%
No	69.5%	Out of labor force	31.8%
<b>Resilience</b> (range:0–40)		<b>Marital status</b>	
Mean: 24.99	Std. Dev: 6.68	Married	95.3%
<b>Social Support</b> (range:3–15)		Never married	0.9%
Mean:12	Std. Dev:2.44	Widowed/separated/divorced	3.8%
		<b>Household income</b>	
		<\$34,999	14.5%
		\$35,000–\$49,999	11.5%
		\$50,000–\$99,999	42.2%
		>=\$100,000	31.9%
		<b>Sex</b>	
		Male	46.3%
		Female	53.7%

the other 42.8% had a graduate degree. In terms of the current employment status, 53.8% were employed full-time, 14.4% were employed part-time, and the other 31.8% were not in the labor force. 14.5% of the sample had below \$34,999 as their annual household income, 11.5% earned between \$35,000–\$49,999, 42.2% earned between \$50,000–\$99,999 and the other 31.9% earned above \$100,000 per year. In terms of parental stress, the mean score of the sample was 44 (Std. Dev: 9.75).

Table 2 presents a result from the Ordinary Least Square (OLS) regressions model, which estimates the effects of three different types of parent-reported difficulties when trying to meet the children’s educational needs amid the COVID-19 pandemic on the parental stress level while controlling for the respondents’ sociodemographic characteristics.

As shown in Table 2, the association between Korean immigrant parents’ perceived difficulties when trying to meet their children’s educational needs and the parental stress level were significantly associated for two cases. Experiencing difficulties meeting children’s educational needs amid the COVID-19 pandemic (B = 0.180, p ≤ 0.001; 95% CI [1.860–7.704]) and experiencing language barriers when trying to meet children’s educational needs amid the COVID-19 pandemic (B = 0.266, p ≤ 0.001; 95% CI [2.631–8.136]) were significantly associated with higher parental stress. These associations were positive and were significant after controlling the effects of demographic factors. In other words, the parents who reported that they were experiencing difficulties in meeting children’s educational needs were more likely to show higher parental stress. In terms of demographic variables, female immigrants (B = 0.193, p ≤ 0.05; 95% CI [1.249–6.591]) were more likely to experience higher parental stress than their male counterparts. For the differences by marital status, immigrant parents who are divorced, separated, and widowed (B = 0.105, p ≤ 0.1; 95% CI [–0.312 to

**Table 2**  
Ordinary Least Square (OLS) Regression Model on Parental Stress.

Korean Immigrants (N = 341) in the U.S. amid COVID-19 Pandemic			
Variables	B	S.E	95% CI
<b>Child Education Factors</b>			
Diff Child Education Needs	0.180****	(1.484)	[1.860, 7.704]
Language Barrier	0.266****	(1.398)	[2.631, 8.136]
Technology Difficulties	0.059	(1.500)	[-1.634, 4.274]
<b>Sociodemographic Factors</b>			
Age	-0.054	(0.103)	[-0.293, 0.112]
Sex	0.193**	(1.357)	[1.249, 6.591]
Marital Status (Married)			
Single	-0.004	(5.374)	[-11.001, 10.160]
Divorced, separated, widowed	0.105*	(3.234)	[-0.312, 12.422]
Education Level (Grad degree)			
High school	0.010	(2.254)	[-4.071, 4.806]
Bachelor's degree	-0.111**	(1.284)	[-5.067, -0.011]
Employment Status (Full-time)			
Part-time	-0.049	(1.812)	[-4.915, 2.220]
Out of labor force	0.066	(1.481)	[-1.460, 4.373]
Annual Income (Below \$35,000)			
\$35,000-\$49,999	-0.014	(2.181)	[-4.724, 3.864]
\$50,000-\$99,999	-0.001	(1.725)	[-3.426, 3.365]
Above \$100,000	0.080	(1.875)	[-1.951, 5.433]
F (df)	5.856 (14)	0.000	
R <sup>2</sup> = 0.234			
R <sup>2</sup> Adjusted = 0.194			

Note. Categories in parentheses are reference groups.  
\*p ≤ 0.1. \*\*p ≤ 0.05. \*\*\*p ≤ 0.01. \*\*\*\*p ≤ 0.001.

12.422]) were more stressed than the parents who were married. Last, respondents who had a bachelor's degree as their terminal degrees (B = -0.111, p ≤ 0.05; 95% CI [-5.067 to -0.011]) were less likely to be

**Table 3**  
Ordinary Least Square (OLS) Regression Model on Parental Stress.

Korean Immigrants (N = 341) in the U.S. amid COVID-19 Pandemic			
Variables	B	S.E	95% CI
<b>Child Education Factors</b>			
Diff Child Education Needs	0.136**	(1.462)	[0.724, 6.484]
Language Barrier	0.216****	(1.375)	[1.654, 7.069]
Technology Difficulties	0.013	(1.487)	[-2.632, 3.224]
<b>Sociodemographic Factors</b>			
Age	-0.061	(0.101)	[-0.301, 0.097]
Sex	0.136**	(1.354)	[0.085, 5.416]
Marital Status (Married)			
Single	-0.012	(5.201)	[-11.380, 9.102]
Divorced, separated, widowed	0.101*	(3.131)	[-0.397, 11.934]
Education Level (Grad degree)			
High school	-0.007	(2.230)	[-4.648, 4.134]
Bachelor's degree	-0.121**	(1.249)	[-5.193, -0.274]
Employment Status (Full-time)			
Part-time	-0.026	(1.772)	[-4.189, 2.788]
Out of labor force	0.111*	(1.455)	[-0.403, 5.328]
Annual Income (Below \$35,000)			
\$35,000-\$49,999	-0.008	(2.116)	[-4.410, 3.923]
\$50,000-\$99,999	-0.002	(1.680)	[-3.360, 3.258]
Above \$100,000	0.066	(1.829)	[-2.166, 5.036]
Resilience	-0.179****	(0.098)	[-0.473, -0.085]
Social Support	-0.144**	(0.262)	[-1.144, -0.111]
F (df)	6.674 (16)	0.000	
R <sup>2</sup> = 0.290			
R <sup>2</sup> Adjusted = 0.247			

Note. Categories in parentheses are reference groups.  
\*p ≤ 0.1. \*\*p ≤ 0.05. \*\*\*p ≤ 0.01. \*\*\*\*p ≤ 0.001.

stressed than those with graduate degrees or more.

Table 3 presents an Ordinary Least Squares (OLS) model which examined the same research question as the first model but added resilience and social support into the model.

There were significant associations between experiencing difficulties in meeting children's educational needs (B = 0.136, p ≤ 0.05; 95% CI [0.724-6.484]) and parental stress. Likewise, a significant association is also found between having language barriers when trying to meet children's educational needs (B = 0.216, p ≤ 0.01; 95% CI [1.654-7.069]) and parental stress. Again as shown in Table 3, gender was also a significant predictor of the parental stress; being a female immigrant parent (B = 0.136, p ≤ 0.05; 95% CI [0.085-5.416]) was positively associated with having higher parental stress in the second model as well. Likewise, having a bachelor's degree as a terminal degree (B = -0.121, p ≤ 0.05; 95% CI [-5.193 to -0.274]) was negatively related to higher parental stress. In terms of employment status, being out of the labor force showed a moderate and positive association with higher parental stress (B = 0.111, p ≤ 0.1; 95% CI [-0.403 to 5.328]) when compared with being employed full-time. Finally, resilience and social support showed strong associations with parental stress. Resilience (B = -0.179, p ≤ 0.01; 95% CI [-0.473 to -0.085]) and social support (B = -0.144, p ≤ 0.05; 95% CI [-1.144 to -0.111]) were negatively associated with parental stress, respectively. In other words, those with higher level of resilience and social support were less likely to have higher parental stress, and these associations were significant.

Table 4 shows the last Ordinary Least Squares (OLS) regression model, which was conducted to examine the moderating effects of resilience and social support. The moderating effect in between difficulties meeting children's educational needs and parental stress was

**Table 4**  
Ordinary Least Square (OLS) Regression Model on Parental Stress.

Korean Immigrants (N = 341) in the U.S. amid COVID-19 Pandemic			
Variables	B	S.E	95% CI
<b>Child Education Factors</b>			
Diff Child Education Needs	-0.188	(10.347)	[-25.371, 15.380]
Language Barrier	0.661	(10.176)	[-6.663, 33.416]
Technology Difficulties	-0.549	(10.010)	[-31.968, 7.458]
<b>Sociodemographic Factors</b>			
Age	-0.063	(0.101)	[-0.306, 0.094]
Sex	0.134**	(1.363)	[0.034, 5.401]
Marital Status (Married)			
Single	-0.013	(5.203)	[-11.520, 8.973]
Divorced, separated, widowed	0.111**	(3.153)	[0.150, 12.567]
Education Level (Grad degree)			
High school	-0.019	(2.245)	[-5.182, 3.660]
Bachelor's degree	-0.106*	(1.267)	[-4.894, 0.098]
Employment Status (Full-time)			
Part-time	-0.026	(1.777)	[-4.218, 2.781]
Out of labor force	0.113*	(1.460)	[-0.370, 5.379]
Annual Income (Below \$35,000)			
\$35,000-\$49,999	-0.002	(2.127)	[-4.256, 4.123]
\$50,000-\$99,999	0.009	(1.689)	[-3.147, 3.504]
Above \$100,000	0.065	(1.840)	[-2.211, 5.036]
Resilience	-0.149	(0.253)	[-0.731, 0.265]
Social Support	-0.326*	(0.795)	[-2.989, 0.141]
Edu Diff * Resilience	0.014	(0.268)	[-0.518, 0.537]
Edu Lang * Resilience	0.326	(0.814)	[-0.948, 2.257]
Edu Tech * Resilience	-0.178	(0.235)	[-0.567, 0.358]
Edu Diff * Social Support	-0.266	(0.621)	[-1.669, 0.776]
Edu Lang * Social Support	-0.254	(0.289)	[-0.743, 0.396]
Edu Tech * Social Support	0.811**	(0.661)	[0.245, 2.850]
F (df)	5.170 (22)	0.000	
R <sup>2</sup> = 0.308			
R <sup>2</sup> Adjusted = 0.249			

Note. Categories in parentheses are reference groups.  
\*p ≤ 0.1. \*\*p ≤ 0.05. \*\*\*p ≤ 0.01. \*\*\*\*p ≤ 0.001.

examined.

In terms of sociodemographic characteristics, gender (being female) ( $B = 0.134, p \leq 0.05; 95\% \text{ CI } [0.034-5.401]$ ), educational level (having Bachelor's degree in comparison to a graduate degree) ( $B = -0.106, p \leq 0.1; 95\% \text{ CI } [-4.894 \text{ to } 0.098]$ ), and employment status (being out of the labor force in comparison to being employed full-time) ( $B = 0.113, p \leq 0.1; 95\% \text{ CI } [-0.370 \text{ to } 5.379]$ ) still showed significant or moderate associations with parental stress, respectively.

In the model (Table 4), respondents' social support ( $B = -0.326, p \leq 0.1; 95\% \text{ CI } [-2.989 \text{ to } 0.141]$ ) was negatively associated with parental stress. When the resilience and social support were added as interaction terms, only having difficulties with using educational technologies (i.e., online learning tools) when trying to meet the children's educational needs amid the COVID-19 pandemic and social support ( $B = 0.811, p \leq 0.05; 95\% \text{ CI } [0.245-2.850]$ ) were associated with parental stress. Although the moderating effect was found, the result was inconsistent from other analyses. In Table 4, difficulties using educational technologies was first negatively associated with parental stress. In contrast, when social support was added as an interaction term in between difficulties using educational technologies and parental stress, there was a significant moderating effect, but in the opposite direction. In other words, for parents who have difficulties using educational technologies, their parental stress was higher if they had social support. Because the results from the moderating analyses were not consistent, the authors have concluded that resilience and social support did not show strong buffering effects in the model on parental stress in consistent ways.

## 5. Discussion

This study investigated Korean U.S.-immigrant parents' parental stress during the COVID-19 pandemic, particularly with regard to stress associated with meeting their children's educational needs. Additionally, this study investigated the role of resilience and social support as associated with parents' stress. To summarize, Korean immigrant parents indicated high parental stress during the COVID-19 pandemic. More specifically, Korean immigrant parents experienced significant parental stress in (1) supporting children's educational needs in general and (2) experiencing language barriers when meeting their children's educational needs in isolated situations amid the pandemic.

The results of the current study are consistent with a growing body of research investigating parental stress during the COVID-19 pandemic. For example, Cameron et al. (2020) found that a significant number of parents of children age birth-8 years old in Canada experienced a risk of a mental health crisis, particularly depression and anxiety, during the COVID-19 pandemic. Similarly, Gomez-Salgado et al. (2020), who investigated individual psychological distress in Spain during the COVID-19 pandemic, found that raising children under the age of 16 years was related to parents' higher levels of psychological stress. Finally, the current study is commensurate with Spinelli et al. (2020), who indicated that parents of children aged 2-14 years in Italy showed more stress when they reported more difficulties with quarantine during the COVID-19 pandemic.

Moreover, the current study adds to the literature by investigating U.S.-immigrant Korean parents' stress during the COVID-19 pandemic. Findings indicate that these parents' resilience and social support significantly influenced their stress during the pandemic: higher levels of parent resilience and social support indicated a strong and positive impact on considerably-relieved parental stress during the COVID-19 pandemic. The results are consistent with Wu et al. (2020), who studied social support and parents' perceived stress, depression, and anxiety in China during the COVID-19 pandemic. Wu and colleagues found that parents who received higher social support indicated lower depression and anxiety. Lower depression and anxiety together contributed to the lower parental stress. Parents' resilience level in the current study was lower than that of the general population in previous studies using the CD-RISC-10 measurement (Davidson, 2018). However, parents'

resilience level in this study is compatible with that of participants with traumatic experiences, including earthquakes, hurricanes, and wars (Davidson, 2018). In sum, the unprecedented and unexpected COVID-19 pandemic situation negatively impacted parents' resilience and increased their parental stress.

Interestingly, the current study found that parents' resilience and social support did not show moderating effects in the relationship between meeting children's educational needs and parental stress. This result may be due to limitations of sampling (see Limitations, below) and the limited measurement tools available for the pandemic situation. Regarding the social support measurement, the measurement that emphasized emotional support (rather than instrumental and instructional support) from family, relatives, or friends was implemented because of the limited in-person contacts during the COVID-19 pandemic. Moreover, regarding parents' resilience, meeting their children's daily educational needs in a foreign language rather than their native language may be an immediate and tangible responsibility not easily remedied by parents. Given the importance typically placed on educational attainment by Koreans (Shin, 2004), parents' frustration in the current study may surpass their resilience.

Another key outcome of the current study is the U.S.-immigrant, Korean parents' stress significantly differs by the parents' gender and marital status. Particularly, these mothers indicated higher parental stress than fathers. A possible explanation for this finding is the traditional role that Korean mothers assume in families (i.e., an educational manager in addition to other duties) such that more responsibility for children's education may fall upon mothers than fathers leading to greater maternal stress (Ro & Cheatham, 2009).

### 5.1. Implications

The results of the current study lead to several implications. First, this study highlights the importance of both social support and resilience interventions for U.S.-immigrant Korean parents. Interventions show promise as a way to decrease parental stress during a devastating time, such as during the COVID-19 pandemic. Thus, social service agencies could provide specific prevention and intervention programs to immigrant parents so that they can foster a higher level of resilience to decrease parental stress in preparation for devastating times such as a pandemic. For example, practical resilience strategies, such as seeking help, improving English language skills (Ornelas, Perreira, Beeber, & Maxwell, 2009), and effectively locating parental resources (Su, 2008) could be a focus of intervention for them.

Second, the current study suggests that social support is important to decrease U.S.-immigrant Korean parents' stress associated with meeting their children's educational needs. In addition to emotional support, more instrumental, structured, and formal social support from relevant social capital (e.g., assistance from local schools and immigrant communities, community service providers, etc.) in the parents' home language may decrease parental stress as a direct and/or moderating effect on parental stress. In the realm of education, schools could also provide more support to these families to help parents overcome stress of difficulties with language barriers (e.g., native language and language interpreter/translator services for parents to more effectively support their children's education, educators implementing strategies to effectively partner with bilingual families who choose to speak English) (Cheatham & Lim-Mullins, 2018).

Further studies can investigate educational challenges and parental stress, specifically for Korean immigrant families from socioeconomically disadvantaged backgrounds, including single parents. Although this study found that parental stress of single parenting exceeds that of co-parenting, less than 10% of the sample were single parents.

### 5.2. Limitations

This study had several limitations. First, purposive and snowball



sampling resulted in a non-representative sample of U.S.-immigrant, Korean parents. For example, parent participants in the current study had relatively high socio-economic status compared to the entire Korean immigrant population in the U.S. Additionally, collecting Korean immigrants' years lived in the U.S. and place of earning the terminal degree (i.e., U.S. vs. Korea) will provide more information to explore their parental stress. Furthermore, the online survey format may not have been accessible to some Korean immigrants who are unfamiliar with technology or those without sufficient income to afford internet/computer access. Additionally, there may be a lack of long-term effect of respondents' parental stress as schools are likely to continue to provide online instruction in the coming school year. Finally, the lack of reliable and valid measurements to investigate parental stress during unprecedented and devastating times may lead to insignificant results in some variables of the current study. Despite these limitations, this study makes a contribution to the field to better understand one group of parents as they support their children's education during the COVID-19 pandemic.

## 6. Conclusion

The current study examined Korean immigrant parents' parental stress when they experience challenges meeting their children's educational needs during the COVID-19 pandemic. Parent participants indicated increased parental stress when assisting with their children's educational needs and when the parents have limited English proficiency to support the children's educational needs. Resilience and social support decreased parental stress. Findings from the study provide implications regarding the importance of providing comprehensive social support as well as goal-oriented resilience programs for immigrant parents. This study meaningfully contributed to the globally-growing body of literature on parental experiences amid the COVID-19 pandemic by investigating parental stress of Korean immigrant families in the U.S.

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## CRedit authorship contribution statement

**Joo Young Hong:** Conceptualization, Methodology, Formal analysis, Writing - original draft. **Shinwoo Choi:** Funding acquisition, Methodology, Data curation, Formal analysis, Writing - review & editing. **Gregory A. Cheatham:** Formal analysis, Writing - review & editing.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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