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Parenting style in childhood and depressive symptoms among family caregivers in middle and later adulthood in the United States: The role of perceived control

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ABSTRACT

Background: Childhood experiences with parents can impact family caregivers' attitudes and well-being in middle and later adulthood. This study aims to examine the association between remembered parenting style of parents in childhood and depressive symptoms among family caregivers in middle and later adulthood.
Method: Data were from the Midlife in the United States (MIDUS) study, a longitudinal national survey that included 7108 adult participants at baseline (1993). Conditional process modeling was conducted using data from 629 participants who had given personal care to their family members for one month or more in the second (2003) wave.
Result: The results showed the direct path between parental affection and depressive symptoms (direct effect: -0.105, 95% CI: -0.008, -0.116) and the direct path between parental discipline and depressive symptoms (direct effect: 0.027, 95% CI: 0.014, 0.037) were significant. Perceived control (indirect effect: 0.002, 95% CI: 0.001, 0.005, κ2= 0.001) significantly mediated the relationship between parental affection and depressive symptoms. The indirect effect between parental discipline and depressive symptoms through perceived control (indirect effect: 0.005, 95% CI: 0.003, 0.007, κ2= 0.011) was also significant.
Conclusion: The findings supported the mediation effects of perceived control on the association between parenting styles and depressive symptoms among family caregivers in their middle and later life. Knowledge about the impact of parenting styles on family caregivers may help in developing and targeting support interventions.

1. Introduction

More than one in six adults in the U.S. provide care to an adult aged 50 or older. This estimated 42 million family caregivers (FCGs) often perform this role without being paid for it and while juggling their other daily tasks (e.g., working, raising children) [1]. Unfortunately, research shows FCGs have worse mental health outcomes than their non-caregiver counterparts [2–4]. These poor mental health outcomes are of particular concern because the need for FCGs will increase as life expectancy in the U.S. continues to grow [5], and chronic diseases result in limitations in activities of daily living and dependency on FCGs [6]. In the U.S., it is estimated that between 40% and 70% of FCGs have clinically significant symptoms of depression (e.g., loss of interest in most things, thinking a lot about death), with approximately one-quarter to one-half of these FCGs meeting the diagnostic criteria for major depression [7]. Depression is defined as a mood disorder that causes severe symptoms that affect how one feels, thinks, and handles daily activities. Major depression includes symptoms of depression most of the time for at least two weeks that typically interfere with one's ability to work, sleep, study, and eat [8]. Women, primarily wives and daughters, provide the majority of caregiving for older adults. In the U.S., approximately 12 million women experience clinical depression each year, about twice the rate of men [8]. Additionally, higher levels of depressive symptoms have been reported among FCGs than among their non-caregiving peers [9,10]. Well-established research literature has identified several risk factors associated with undermining FCGs' health

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and well-being, including role conflicts [11], current relationship quality with a care recipient [12], and the health conditions of both the FCG and care recipient [13]. FCG depression and perceived burden have been found to increase as the care recipient's functional status declines [14]. Low relationship quality with a care recipient and difficulties in caring for family members can also negatively impact FCGs' life satisfaction [15].

1.1. Childhood experience with parents and mental health outcomes in adulthood

Findings from previous studies suggest that childhood experiences with parents can impact FCGs' attitudes and well-being [16–18]. Studies show that when FCGs were abused in childhood, they had worse mental health when caregiving for loved ones as adults [16,17]. Previous research has also shown that experiences with parents in childhood may influence FCGs' motivations for providing care [18]. Such motivations include reciprocating good care, performing obligatory care, and stopping the generational transference of negative care [18].

Researchers typically have identified four parenting styles based on the levels of discipline and affection displayed by parents regularly and in a variety of situations: authoritarian (high discipline, low affection), permissive (low discipline, high affection), authoritative (high discipline, high affection), and neglectful, characterized by low discipline and low affection [19]. Considering theories of family socialization [20], a balance of parental affection and discipline is critical to children's development and safety. Children count on the environment for emotional security, physical safety, and well-being. Parental affection is important because it predicts strong perceived self-worth and security, greater psychological well-being, and other positive outcomes [21]. Multiple studies bring forth evidence of low parental affection fostering worse mental and physical health in childhood and adulthood [22,23]. Parental discipline helps to shape responsible conformity and self-control in children. The rules and guidelines teach children about group and societal behavior standards [21]. Over time, children's experience with rules and the consequences for breaking them helps them develop independent decision-making skills and internalize control of their behavior [21]. Thus, a childhood marked by adequate parental affection and discipline is associated with greater perceived security, positive behavioral and emotional outcomes, and better adult functioning [24].

1.2. Perceived control and psychological outcomes

The concept of perceived control is a cognitive attribute discussed within the social and behavioral sciences in various forms, such as personal control, locus of control orientation, instrumentalism, self-efficacy, mastery, self-directedness, personal autonomy, helplessness, and perceived control [25,26]. These terms are often used interchangeably despite having distinct features. We discuss perceived control as a construct generally reflecting whether life outcomes are subjectively ascribed to a person versus something external to a person [27]. On one end of a continuum, perceived control is the learned, generalized belief that one can and does master and shape one's own life [28]. At the opposite end of the continuum is perceived powerlessness, the belief that external forces shape one's life, such as luck, chance, fate, or powerful others [28]. When an individual becomes an FCG, their life drastically alters to accommodate the care recipient's needs. This may include shifting work schedules, spending more time caring for an individual, having less time to attend to other matters and coordinate care [29]. In addition to changing daily activities, finding stability in the day-to-day routine may prove difficult depending on the severity and volatility of the care recipient's condition. These factors can contribute to feelings of losing control among FCGs, which may contribute to feelings of depression and hopelessness [29].

A high level of perceived control is related to proactive behavior and positive psychological outcomes [28]. Perceived control is linked to an ability to take preventative action and to feel healthy [30]. Conversely, impairment of perceived control is associated with depression, stress, and anxiety-related disorders [31]. Indeed, cognitive theorists and clinicians associate mental well-being with feeling in control of one's internal psychological environment, specifically cognitions, beliefs, thoughts, and emotions [32].

1.3. Theoretical framework

The life course perspective considers social and cultural events within one's life and how those events may influence an individual's decisions and relationships throughout their lives [33]. When looking at family caregiving through the lens of the life course perspective, researchers can consider how caregiving relationships with their parents during childhood may influence how the child may provide care to their aging parent [18]. Experiences from childhood can impact the dynamics and consequences of caregiving in middle and later life [16,17]. There is a lack of research that examines the relationship between childhood experiences and the health outcomes of FCGs. Furthermore, while there is one study that explored the childhood parenting style of mothers [17], no studies have focused on the association between childhood experiences with both parents' parenting styles related to future health outcomes as FCGs.

Stress Process Model. The stress process model aims to identify interactions among each caregiving domain and evaluate the intensity of different stressors [34]. It is a well-organized and evidence-informed conceptual framework used by many researchers to examine how caregiving responsibilities influence FCGs' physical, emotional, and social health. This framework aims to compare the impacts of different primary stressors on FCGs' depression and to explore social support's moderating effect. Pearlin et al. (1990) proposed that the primary stressors referred to the direct needs that stemmed from a broad spectrum of care-related tasks. Research on FCGs of Alzheimer's disease care recipients suggests the primary stressors of patients' cognitive impairments, behavioral problems, and decreased functional abilities [34,35]. Health outcomes of stressors can include FCG depression, FCG poor physical health, and placement of a care recipient in a nursing home [34].

1.4. Current study

The first aim of this study was to examine the association between remembered parenting style of parents in childhood and the mental health outcomes of caregiving in middle and later adulthood and explore the role of perceived control. We tested the following hypotheses: (a) parenting style during childhood has long-term effects on mental health outcomes among FCGs in middle and later life, and (b) high discipline and high affection (i.e., authoritative parenting) are associated with a high level of perceived control and a low level of depressive symptoms among FCGs. The second aim of this study was to further extend the literature on this topic by testing the mediating effect of perceived control on the relationship between parenting style in childhood and depressive symptoms in midlife among FCGs. For this, we tested the hypothesis that the association between parenting style and depressive symptoms is mediated by perceived control.

2. Methods

2.1. Participants

The current study used the three waves of the Midlife in the United States (MIDUS) national database. The first wave, MIDUS 1 (M1), was collected between 1995 and 1996, with 7108 noninstitutionalized participants in 48 states selected *via* random digit phone dialing. These original participants ranged in age from 24 to 75 years ($M = 46.40$, SD =

13.00) and had a mean education level of 13.2 years. Women comprised 48.3% of the sample. Nine years later, the second wave, MIDUS 2 (M2), included 75% (N= 4963) of the respondents who participated in the study's first wave. The third wave, MIDUS 3 (M3), was conducted 9.12 years later, on average (SD = 0.53). Of the sample from M2, 76.9% of those eligible (N = 3294) were retested at M3 (Hughes et al., 2018). The average age of the participants was 58.69 (SD = 11.37), with 53% women. Most of the participants (93%) were white, and more than 70% of the participants were married or cohabiting. The average education level of the participants at M2 was 14.32 years (SD = 2.62). At M3, participants ranged in age from 42 to 92 years (M = 64.30, SD = 11.20) and had a mean education level of 14.6 years (SD = 2.60). Women comprised 55.3% of the sample.

The sample for all analyses included participants who had responded "Yes" to the question that they gave personal care to their mothers or fathers for one month or more during the past 12 months (n = 629) in MIDUS wave 2, age range from 34 to 84, 65% female. Table 1 shows the demographic characteristics of the FCGs. [Table 1 here]

2.2. Measures

Our dependent variable was depressive symptoms, range from 0 to 7, higher score means higher level of depressive symptoms. it was calculated as the sum of seven "yes" or "no" questions (see Table 2). The depressive symptom variable from wave 3 was used in the analysis. The independent variables were parental affection and parental discipline (from wave 1), which was measured using a valid and reliable questionnaire containing seven questions with 4- or 5-point scales [36]. The mediator was perceived control (from wave 2), which was indicated by the mean of 12 questions (listed in Table 2). Age, gender, race, education, marital status, and self-reported health were covariates (from wave 2). These covariates were selected because of their well-established relationships with the independent and dependent variables in previous research [3,10,14]. Detailed information on each variable is shown in Table 2.

2.3. Analysis

We described all study variables using means and frequency analyses. Conditional process modeling was applied using PROCESS in SPSS. PROCESS is an observed variable OLS and logistic regression path analysis modeling tool. It is widely used through the social, business, and health sciences for estimating direct and indirect effects in single and multiple mediator or moderator models [37]. To determine if perceived control was a mediator, we used Baron and Kenny's (1986) three criteria that indicate a mediation relationship [38]: (1) The predictor variable needs to significantly predict the outcome variable, (2) the predictor variable must significantly predict the mediator variable(s), and (3) the mediator variable(s) must significantly predict the outcome variable while controlling for the predictor variable. If both direct and indirect effects remain significant, the association is said to be partially mediated [37].

Mediation analyses were based on 1000 bootstrapped samples using Hayes' PROCESS Macro v2.15 [37], allowing for formal tests of the total, direct, and indirect effects of parenting style on depressive symptoms among FCGs. The predictor variable was parenting style at M1, and the mediator variable was perceived control at M2. The outcomes were depressive symptoms at M3. All analyses controlled for age, marital status, gender, race, education, and self-reported health and depressive symptoms and sense of control from M2.

3. Results

3.1. Findings of univariate and bivariate analyses

The descriptive statistics and correlations between dependent and independent variables are displayed in Table 1. Participants who were older, more educated, in better physical health, with a higher level of parental affection, or with a lower level of parental discipline showed lower levels of depressive symptoms. Participants who had parents with a higher level of affection or lower level of discipline showed a higher level of sense of control. In addition, participants with a higher level of sense of control showed a lower level of depressive symptoms.

3.2. Findings from mediation models

For the mediation models, coefficients and 95% confidence intervals (CIs) are provided (see Tables 3 and 4). Model 1 tested whether parental affection was related to depressive symptoms at M3 and whether this relationship was mediated by perceived control. The direct effect that did not consider the effect of the mediator demonstrated that parental affection was significantly related to depressive symptoms (direct effect: b= −0.105, 95% CI: −0.008, −0.116). High parental affection was associated with a low level of depressive symptoms.

For the mediational effect, kappa squared (κ2) is provided as a measure of effect size, as recommended by Preacher and Kelley (2011). With the guidelines of Cohen (1988), small, medium, and large effect sizes are stated as 0.01, 0.09, and 0.25, respectively, for mediation analysis [39]. As shown in Table 3, while controlling for age, gender, race, education, self-reported health, and marital status, the direct path between parental affection and depressive symptoms was significant (direct effect: b= −0.105, 95% CI: −0.008, −0.116). Parental affection

Table 1
Descriptive Statistics of the Family Caregivers and Bivariate Correlations between Predictors and Depressive Symptoms in MIDUS 2.

Variables	M (SD) or N/%	1	2	3	4	5	6	7	8	9	10
1. Depressive symptoms	0.99 (2.13)	1.00									
2. Parental affection	3.15 (0.66)	−0.231**	1.00								
3 Parental discipline	2.87 (0.69)	.114**	0.086*	1.00							
4. Sense of Control	4.31 (2.69)	−0.095***	.075*	−0.012	1.00						
5. Age (Range)	53.09 (9.78) (34–84)	−0.117*	.029	.001	.131**	1.00					
6. Education	7.26 (2.37)	−0.150**	.032*	−0.074**	.111**	−0.149**	1.00				
7. Self-reported health	2.47 (0.98)	−0.215**	.096**	.011	.162**	−0.174**	.258**	1.00			
8. Gender (Female)	414 (65.80)	–	–	–	–	–	–	–	–		
9. Race (Caucasian)	527 (83.80)	–	–	–	–	–	–	–	–	–	
10. Marital Status (Married)	423 (67.20)	–	–	–	–	–	–	–	–	–	–

Note: *$p < 0.05$
** $p < 0.01$
*** $p < 0.001$. M: Mean, SD: standard deviation.

Table 2
Definitions of study variables used in the MIDUS dataset.

Variable	Definition (Wave Assessed)
Dependent	
Depressive symptoms	Indicated "yes" or "no" to questions: During two weeks in the past 12 months, when you felt sad, blue, or depressed, did you "lose interest in most things?" "Feel more tired out or low on energy than is usual?" "Lose your appetite?" "Appetite increased?" "Have more trouble falling asleep than usual?" "Have a lot more trouble concentrating than usual?" "Feel down on yourself, no good, or worthless?" "Think a lot about death?" Range from 0 to 7, higher score means higher level of depressive symptoms. (Wang et al., 2000) (M1, M2, M3)
Mediator	
Perceived control	Participants answered questions regarding two dimensions: 1) personal mastery (e.g., "I can do just about anything I really set my mind to"), and 2) perceived constraints (e.g., "There is little I can do to change the important things in my life"). Individuals rated their responses on a scale of 1 (strongly agree) to 7 (strongly disagree). Perceived control scores at each wave were created by calculating the mean of the 12 items. Items from "personal constraints" were reverse coded so that higher scores represent higher levels of the overall perceived control. The coefficient alpha of reliability was 0.70 for personal mastery and 0.86 for perceived constraints. (M2)
Independent	
Parental affection	Indicated using a valid and reliable questionnaire containing seven questions with 4- or 5-point scales (Rossi, 2001) (M1) The first question, "How would you rate your relationship with your mother (father) during the years you were growing up?" was measured using a 5-point scale (1 as excellent, 5 as poor). The other six questions regarding the quality of the parental relationships during childhood were measured using a 4-point scale (1 as a lot, 4 as not at all). For example: "How much did she/he understand your problems and worries?" and "How much time and attention did she/he give you when you needed it?" Mothers and fathers were rated separately. The answers were re-coded so that higher scores reflect greater levels of affection. Maternal affection and paternal affection were constructed by calculating the mean of the seven questions. Both the maternal and paternal composites showed high internal consistency ($\alpha = 0.91$ and 0.92, respectively). Parental affection was calculated as the mean of maternal and paternal affection.
Parental discipline	Indicated using a valid and reliable questionnaire containing four questions with 4- or 5-point scales (Rossi, 2001) (M1) For example: "How strict was she/he with her rules for you?" and "How consistent was she about the rules?" Items were re-coded so that higher scores reflect higher levels of maternal discipline. Both the maternal and paternal composites showed high internal consistency ($\alpha = 0.77$ and 0.83, respectively). Parental discipline was calculated as the mean of maternal and paternal discipline.
Covariates	
Age	Age of respondent (M2), coded in years.
Gender	Gender of respondent (M2) men coded as 1 and women coded as 2.
Marital status	Marital status of respondent (M2) married coded as 1, separated, divorced, widowed and never married all coded as 0
Education	Level of education completed (M2), coded in years.
Race	Race of respondent categorized as White (coded as 1) or Non-white (coded as 2) (M2)
Self-rated physical health	Indicated level of physical health on a five-point scale ranging from 1 (poor) to 5 (excellent) (M2)

Note. M1 = MIDUS 1; M2 = MIDUS 2; M3 = MIDUS 3.

was positively and significantly associated with perceived control (b= 0.062, 95% CI: 0.048, 0.075). FCGs who had parents with high parental affection in their childhood reported a high level of perceived control in mid and later life. Perceived control was negatively and significantly associated with depressive symptoms, indicating that FCGs who had a higher level of perceived control experienced a lower level of depressive symptoms. The mediation analysis demonstrated that perceived control (indirect effect: b= 0.002, 95% CI: 0.001, 0.005, $\kappa 2$= 0.001) had a small but significant mediation effect on the relationship between parental affection and depressive symptoms, see Fig. 1.

As shown in Table 4, the results also supported the mediation effects of perceived control on the association between parental discipline and depressive symptoms at M3. The direct effect between parental discipline and depressive symptoms was significant (direct effect: b= 0.027, 95% CI: 0.014, 0.037), indicating that FCGs who had parents with a high level of parental discipline in childhood reported a higher level of depressive symptoms in mid and later life. Parental discipline was negatively and significantly associated with perceived control (b= −0.053, 95% CI: −0.076, −0.043). FCGs who had parents with high parental discipline in their childhood reported a low level of perceived control in mid and later life. Perceived control was negatively and significantly associated with depressive symptoms, indicating that FCGs who had a higher level of perceived control experienced a lower level of depressive symptoms. The indirect effect between parental discipline and depressive symptoms through perceived control (Indirect effect: b= 0.005, 95% CI: 0.003, 0.007, $\kappa 2$= 0.011) was also significant, indicating that perceived control had small but significant mediation effects on the relationship between parental discipline and depressive symptoms, see Fig. 2.

4. Discussion

Our study based on a national longitudinal dataset showed that parenting style during childhood may have long-term effects on depressive symptoms among FCGs in middle and later life. We also showed that high discipline and high affection parenting styles are associated with a high level of perceived control and fewer depressive symptoms among FCGs. This association between parenting style and depressive symptoms is mediated by perceived control. These findings confirmed our original hypotheses and have important implications for public health interventions aiming to improve FCGs' health and well-being. Knowledge about the impact of childhood experiences can help FCG program designers develop interventions to help lessen FCG burdens that consider childhood care-receiving experiences. This includes developing programs knowing the challenges and opportunities related to childhood care-receiving experiences, empowering parents with improved parental competence and confidence, and enhancing mental health in middle and later life.

Our finding that greater perceived control was associated with fewer depressive symptoms among FCGs is consistent with another research survey-based study of 140 FCGs that found greater perceived control was associated with less negative changes in life [40]. A step that healthcare providers can take to potentially help FCGs improve psychosocial factors like perceived control and depression is to educate FCGs about caregiving and provide more support [41]. Additionally, researchers who study FCGs' mental health outcomes should incorporate perceived control as a measure when testing FCG educational or support interventions to learn more about the role of perceived control in family caregiving.

Research on FCGs of individuals with dementia shows that female and adult children (as opposed to spousal) FCGs are more likely to have depressive symptoms [42]. Martín-María and colleagues (2022) found that concomitant medical conditions in FCGs who are daughters caring for an individual with dementia is associated with greater depressive symptoms. Considering demographic and health-related variables in developing and targeting educational and supportive interventions for FCGs is important since some groups are in greater need of assistance with their role and in managing their own health conditions [43].

Knowledge from this study may aid in developing interventions to decrease depressive symptoms among FCGs and, in turn, help their care recipients. Litzelman and colleagues (2016) used data from the Cancer Care Outcomes Research and Surveillance (CanCORS) consortium (N = 689) and found that patients whose FCG had higher levels of depressive symptoms were significantly more likely to report fair or poor quality of

Table 3
Coefficients, Standard Errors, and 95% Confidence Intervals for the Mediation Model for Parental Affection and Depressive Symptoms.

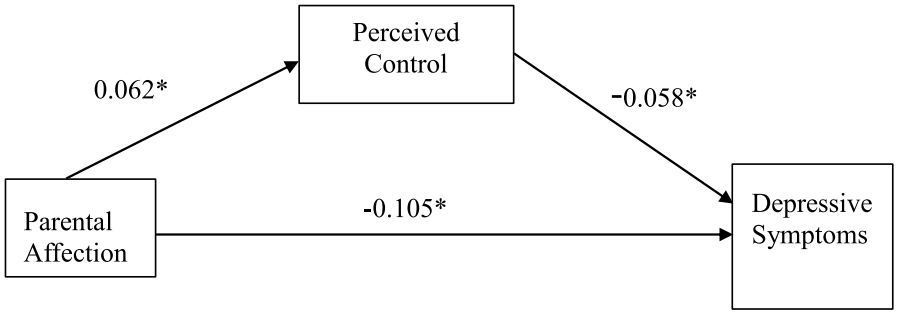
Variables	Direct Effects Depressive Symptoms		Indirect Effect Perceived Control			
	b(SE)	CI	*b*(SE)	CI	*b*(SE)	CI
Age	−0.039*(0.149)	−0.042, −0.027	−0.027***(0.002)	−0.030, −0.024		
Gender (Female)	0.114***(0.027)	0.008,0.142	0.057***(0.041)	0.029, 0.188		
Race/Ethnicity (White)	0.023(0.048)	0.012,0.032	−0.063(0.019)	−0.115, 0.468		
Education	−0.106*(0.377)	−0.147, −0.071	0.102***(0.008)	0.056, 0.187		
Health	−0.211**(0.064)	−0.281, −0.137	0.168*** (0.022)	0.126, 0.207		
Marital Status	−0.045*(0.013)	−0.120, −0.036	−0.038(0.001)	−0.051, 0.005		
Parental Affection	−0.105*(0.012)	−0.008, −0.116	0.062**(0.002)	0.048, 0.075		
Perceived Control	−0.058***(0.021)	−0.067, −0.046			0.002(0.001)	0.001, 0.005

Notes. *$p<0.1$.
** $p<0.05$.
*** $p<0.01$.

Table 4
Coefficients, Standard Errors, and 95% Confidence Intervals for the Mediation Model for Parental Discipline and Depressive Symptoms.

Variables	Direct Effects Depressive Symptoms		Indirect Effect Perceived Control			
	b(SE)	CI	*b*(SE)	CI	*b*(SE)	CI
Age	−0.029***(0.001)	−0.032, −0.028	−0.026***(0.002)	−0.031, −0.025		
Gender	0.184***(0.027)	0.025,0.192	0.110***(0.041)	0.028, 0.186		
Race/Ethnicity (White)	0.223***(0.048)	0.122,0.324	−0.032(0.069)	−0.195, 0.160		
Education	−0.060***(0.176)	−0.089, −0.092	0.072***(0.008)	0.036, 0.109		
Health	−0.057**(0.014)	−0.081, −0.037	0.166*** (0.016)	0.119, 0.172		
Marital Status	−0.044*(0.013)	−0.060, −0.038	−0.043(0.001)	0.001, 0.016		
Parental Discipline	0.027**(0.002)	0.014, 0.037	−0.053**(0.012)	−0.076, −0.043		
Perceived Control	−0.013***(0.021)	−0.056, −0.107			0.005***(0.001)	0.003, 0.007

Notes. *$p<0.1$.
** $p<0.05$.
*** $p<0.01$.



Indirect effect of perceived control: 0.002, 95% CI: 0.001, 0.005, κ^2= 0.001

Fig. 1. Mediation models for depressive symptoms, the relationship of parental affection, mediated by perceived control. *p < 0.05.

life than their counterparts [44]. Additionally, a systematic review by Griffin and colleagues (2013) found that interventions should also target the care recipient to improve their health outcomes [45]. Mental health interventions targeting the patient-FCG dyad can have reciprocal benefits with the patient and FCG helping one another cope with the stress of the illness [46,47].

Given our study findings showing the influence parenting style in childhood may have on health outcomes in later life as FCGs, support interventions targeting FCGs could incorporate addressing childhood experiences as a starting point for discussions. Additionally, workshops and parent support groups that empower parents with improved parental competence and confidence may benefits their children in the long run. Supportive parents can help children build key capacities to handle situations such as family caregiving later in their lives [23]. Furthermore, policies to help FCGs improve mental health outcomes should include benefits and programs that address FCGs' past experiences that may affect their outlooks and current health.

Policy initiatives to aid FCGs, in general, may also help ease the burden placed on this group [48]. For example, the RAISE Family Caregivers Act that became law in 2018 has increasing access to services and supports for FCGs as one of its key priorities [49]. The RAISE Family Caregivers Act's Initial Report to Congress in 2021 recognized the lack of supported educational interventions for FCGs and the importance of offering an array of solutions to FCGs to meet their diverse and dynamic needs [50].

The COVID-19 pandemic has increased depression and anxiety among FCGs [51–53], highlighting an even greater need to better understand factors contributing to poor health outcomes among FCGs.

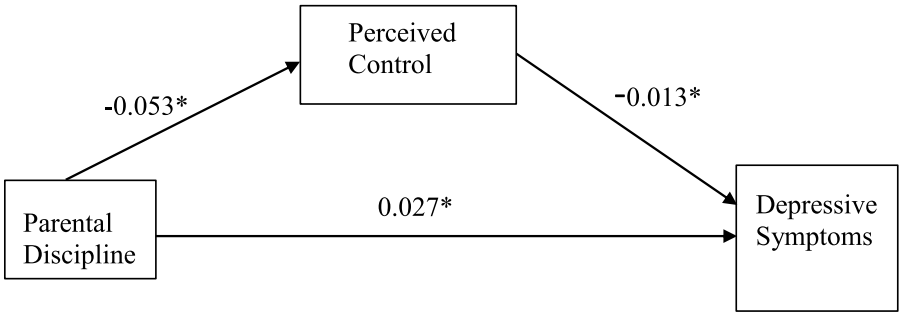


Fig. 2. Mediation models for depressive symptoms, the relationship of parental discipline, mediated by perceived control. *p < 0.05.

Future research using data from during or after the pandemic will help determine the impact of pandemic-related aspects like increased social isolation and stress have in relation to childhood experiences and perceived control on FCGs.

This study has some limitations. First, there is a lack of racial diversity in the MIDUS sample, with the majority of participants being non-Hispanic Whites. Some research notes differences in health outcomes by race based on parenting styles [54], while other research has reported limited or no such differences by race [55]. Additional research is needed to determine whether racial differences exist in these associations between parenting styles in childhood and health outcomes in adulthood utilizing more diverse samples. In addition, due to the limited number of participants with information available about occupation/employment and financial conditions, occupation/employment and financial conditions variables were not included into the analysis. Future research should include these variables as previous research indicates they correlate with depression and other mental health outcomes among FCGs [62].

Another limitation of our study is the retrospective accounts of childhood experience and parental behavior in childhood. Potential sources of error in retrospective reports of childhood experiences include low reliability and validity of autobiographical memory [56]. However, previous researchers also indicated that retrospective studies contribute valuable information [56,57]. Henry and colleagues (1995) noted that retrospective measures "may constitute valid indicators of the individual's current perception of those features [of interest to social scientists], and as such, may be useful in understanding psychological development or adjustment" (p. 93) [58]. Relatedly, participants' mental health conditions may have differentially influenced the reporting of parenting style in childhood. There is also the possibility that errors in reporting these experiences may be correlated resulting in small mediation effects. Such correlation may explain the small mediation effects in our study. In future studies, mediation analysis with latent variables could include a correlated error term between mediating and outcome variables to help overcome this limitation.

The use of a U.S. sample is limiting in that while our findings may be informative to researchers and practitioners focused on FCGs globally, it is not fully generalizable to other countries. For example, in China, there is more multigenerational co-residence [59]. Such increased exposure to and caregiving for grandchildren is associated with fewer depressive symptoms for FCGs in China [60]. It is likely that other aspects of multigenerational co-residence (e.g., living with a parent care recipient) may also impact the relationship between parenting styles in childhood and depression levels as an FCG.

5. Conclusions

Our study shows that parenting styles with high discipline and high affection are associated with higher perceived control and less depressive symptoms among FCGs. Furthermore, our analyses supported the mediation effects of perceived control on the association between parenting styles and depressive symptoms among FCGs in their middle and later life. These findings advance the understanding of the long-term consequences of parenting style in childhood on depressive symptoms among FCGs in mid and later lives. We recommend future research on childhood experiences with parents and FCG health in middle and later life that considers additional factors such as FCG medical conditions and the COVID-19 pandemic. With the significant burden of care increasingly being placed on FCGs, more governmental and employer policies that help FCGs have the time and resources necessary to perform their caregiving role and take care of their own health could help support FCGs in what many of them describe as a "lonely" experience [61].

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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Compliance with Ethical Standards

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