보건교육건강증진학회지 제42권 제5호(2025. 12) pp.87-97
Korean J Health Educ Promot, Vol.42, No.5 (2025)
https://doi.org/10.14367/kjhep.2025.42.5.87

Analysis of gender specific factors influencing depression among parents of children with disabilities

Jiyeon Kim*, Sojung Lee**, Aeree Sohn***†

* Doctor of Science in Public Health, Department of Public Health, Sahmyook University,
** Graduate student, Public Health of the Graduate School, Sahmyook University,
*** Professor, Department of Public Health, Sahmyook University

Objectives: This study aimed to identify factors influencing depression in parents of children with disabilities, specifically examining sociodemographic characteristics, subjective health status, and sense of coherence. Special attention was paid to gender specific impacts of influencing factors. **Methods:** A cross-sectional survey of 411 parents of children with disabilities was conducted using an online questionnaire. Logistic regression analysis was performed to elucidate relationships between depressive symptoms and predictors including gender, age, monthly average household income, subjective health status, and sense of coherence. **Results:** Across the entire cohort and among women, the risk of depressive symptoms decreased with increasing age. In contrast with previous study results, the risk of depressive symptoms among men increased with increasing household income. The interaction term between gender (men) and income notably influenced depressive symptoms. Regardless of gender, better subjective health status and higher levels of sense of coherence significantly reduced depressive symptom risk. **Conclusion:** Depression among parents of children with disabilities is influenced by gender, age, income, subjective health status, and sense of coherence. These results highlight a need for comprehensive support strategies extending beyond women and low-income parents to provide customized interventions for all parents regardless of gender or socioeconomic background.

Key words: parents with disabled children, depressive symptoms, gender differences, sense of coherence, subjective health status

Ⅰ. Introduction

According to the 2022 Disability Health and Healthcare Statistics, the mortality rate due to violence (homicide) among children with disabilities aged 0–9 years was 6.1 per 100,000 population, markedly higher than that among their counterparts in the same age group (0.8 per 100,000) (Yonhap News, 2025). Although the specific causes of these incidents were not identified, M. O. Kim et al. (2025) analyzed news reports on the killing of children with developmental disabilities between 2000 and 2023, and reported a consistent occurrence of 1–3 cases annually, with an approximately threefold increase during the COVID-19 period. When disabilities beyond developmental disabilities are considered, the total number of such incident is likely higher. Major contributing factors include pessimism about current circumstances, excessive caregiving and parenting burdens, and depression (M. O. Kim et al., 2025), indicating that the high levels of stress experienced by parents of children with disabilities pose a serious threat to their mental health.

Depression warrants particular attention in this population because parents of children with disabilities are especially vulnerable to depressive symptoms due to sustained parenting stress. E. J. Kim et al. (2024) reported that heavy caregiving burdens

Corresponding author: Aeree Sohn
Department of Public Health, Sahmyook University, 815, Hwarang-ro, Nowon-gu, Seoul, 01795, Republic of Korea
Tel: +82-2-3399-1669, Fax: +82-2-3399-1640, E-mail: aeree@syu.ac.kr
• Received: October 24, 2025 • Revised: November 20, 2025 • Accepted: November 29, 2025

and prolonged tension frequently lead to depressive symptoms among these parents, increasing the risk of more severe mental health problems. Moreover, lifelong caregiving responsibilities expose parents to multiple stressors, including economic hardship, social isolation, and intrafamilial conflict (Shahali et al., 2024). Such stress and depression not only contribute to parental psychological burnout but also undermine parent–child relationships, underscoring the importance of early identification and targeted interventions. Identifying factors associated with depression in parents of children with disabilities is therefore essential for protecting parental well-being, promoting family health, preventing extreme outcomes, and reducing social costs. This study aims to contribute to the improvement of support systems for families of individuals with disabilities by advancing understanding of depression-related factors and exploring potential solutions.

Subjective health status, a comprehensive construct encompassing mental and social well-being beyond the presence of physical illness, is a key determinant of depression (Hoff et al., 1997). Among parents of children with disabilities, poorer subjective health status has been associated with higher levels of depressive symptoms (J. Y. Kim & Sohn, 2024). Consistent with these findings, a study of older adults with disabilities demonstrated that subjective health status is a significant predictor of depression (Jung, 2014), highlighting its relevance in disability-related populations.

Sense of coherence is another important factor influencing depression (Torinomi et al., 2022). Within the framework of salutogenesis, sense of coherence refers to "(1) the perception that situations are understandable (comprehensibility), (2) the belief that one can mobilize the necessary resources to manage situations (manageability), and (3) an attitude of perceiving life events as meaningful (meaningfulness)" (Antonovsky, 1990). Eriksson and Lindström (2006) reported that higher levels of sense of coherence are associated with more favorable perceptions of overall health. However, prior studies have shown that parents of children with disabilities tend to report lower levels of sense of coherence than parents of children without disabilities (Al-Yagon, 2015; Manor-Binyamini & Nator, 2016). In a comparative study, Gugała et al. (2019) found that parents raising children with cerebral palsy experienced higher levels of depression than parents of children without disabilities and identified sense of coherence as a determinant of depression in this population.

Parents of children with disabilities are chronically exposed to psychological and social burdens, stigma, and barriers to accessing support systems. These conditions can diminish both sense of coherence and subjective health status, thereby increasing vulnerability to depression. Antonovsky's salutogenic model explains this process through the interaction of stressors, resources, and health outcomes. In this context, sense of coherence provides a critical theoretical framework. Parents of children with disabilities frequently encounter challenges across the three dimensions of sense of coherence: comprehensibility is reduced by uncertainty surrounding caregiving demands, manageability is weakened by insufficient social and institutional resources, and meaningfulness is undermined by stigma and persistent burden. Diminished sense of coherence reduces stress adaptability and adversely affects health outcomes, ultimately elevating the risk of depression.

Despite the recognized importance of subjective health status and sense of coherence as determinants of depression, research focusing on parents of individuals with disabilities remains limited. In Korea, in particular, empirical studies examining sense of coherence in this population are scarce. Accordingly,

this study aims to examine sense of coherence as a factor influencing depression among parents of children with disabilities and to assess its potential as a key target for depression reduction. The findings are expected to provide evidence to support the development of mental health education programs and policy interventions for parents of children with disabilities.

Ⅱ. Methods

1. Study design

This study employs a cross-sectional design.

2. Sample and data collection

The study participants were parents of children with disabilities aged 19 years or younger. The required sample size was estimated at 384 using an approximate test for an infinite population. To account for potential missing data, the target sample size was increased by approximately 10% to 412 participants. Data were collected through an online survey conducted from November 18 to 27, 2024, yielding a final sample of 411 participants. Prior to data collection, Institutional Review Board approval was obtained to ensure ethical protection of participants (IRB No. SYU 2024-09-024-002). Participants were recruited through parents' associations of children with disabilities and parent groups at special schools. Recruitment notices included a link to the online survey, which participants accessed voluntarily. Only individuals who provided informed consent were permitted to complete the survey.

3. Survey tool

1) Independent variables

(1) Sociodemographic variables

In this study, sociodemographic variables, including gender, age, educational level, and monthly average household income, which are known to influence depression, were selected as independent variables (Cha et al., 2022; E. J. Park et al., 2015). Gender was coded as 0 for women and 1 for men; age was coded as 0 for ≥ 30 years, 1 for 40s, and 2 for 50s; educational level was coded as 0 for high school graduate or less and 1 for college graduate or higher; and monthly average household income was categorized into dummy variables as 0 for < 4 million won, 1 for 4–5.99 million won, and 2 for ≥ 6 million won.

(2) Health-related variables

In this study, the Korean version of the Todai Health Index (THI) was used to measure subjective health status. This scale consists of 27 items, including 10 items on physical health, 7 on mental health, and 10 on social health status, rated on a 5-point Likert scale. The items are based on the World Health Organization's definition of health (World Health Organization [WHO], 1948). All items are reverse-coded, with higher scores indicating better subjective health status. In this study, the Cronbach's α was .96. Sense of coherence was assessed using the 13-item Short Form Sense of Coherence (13-SOC), originally developed by Antonovsky (1987) and later adapted by M. J. Kim (2021) for the Korean context. This instrument comprises three core components of sense of coherence: comprehensibility (5 items), manageability (4 items), and meaningfulness (4 items). Items are rated on a 7-point Likert scale, with higher scores indicating greater sense of coherence. In this study, the Cronbach's α was .91.

2) Dependent variable

In this study, depressive symptoms were measured using the Patient Health Questionnaire-2 (PHQ-2). This instrument consists of two items assessing depressive symptoms over the preceding two weeks, rated from "not at all (0)" to "nearly every day (3)". Higher total scores indicate more severe depressive symptoms. In this study, the Cronbach's α was .79. Based on the cutoff score of 3 proposed by Shin et al. (2013), participants were classified as having no depressive symptoms (0) or the presence of depressive symptoms (1)".

4. Data analysis

Data analyses were conducted using SPSS version 21.0. Cross-tabulation analyses were performed to compare sociodemographic and health-related characteristics according to gender, consistent with the study objective of gender-based comparisons. Logistic regression analysis was used to identify factors associated with depressive symptoms and was subsequently conducted separately by gender. Because the dependent variable was binary (presence or absence of depressive symptoms), logistic regression analysis, which is suitable for probability prediction, was applied. The independent variables, sense of coherence and subjective health status, were dichotomized based on the median and entered into the model to balance variable distributions, improve the stability of regression coefficient estimates, and enhance interpretability of the results.

Ⅲ. Results

1. Sociodemographic characteristics

The sociodemographic characteristics of the participants are presented in 〈Table 1〉. Overall, 32.6% of participants reported depressive symptoms, whereas 67.4% reported none. By gender, the prevalence of depressive symptoms was higher among men (39.3%) than among women (28.0%), while the proportions without depressive symptoms were 60.7% and 72.0%, respectively. This gender difference was statistically significant (p<.05). In the women group, age was significantly associated with depressive symptoms: among participants aged ≥ 40 years, 78.3% were in the non-depressive symptoms group compared with 21.7% in the depressive symptoms group (p<.05). Among men, 38.1% of those with depressive symptoms and 61.9% of those without depressive symptoms were aged ≥ 40 years; however, this difference was not statistically significant. Educational level did not differ between groups. Monthly average household income was significantly associated with depressive symptoms among men (p<.05). The prevalence of depressive symptoms was highest in the < 4 million won income group (79.4%), followed by the ≥ 6 million won group (64.2%) and the 4.00–5.99 million won group (50.6%), with significant differences across income levels. Among women, depressive symptom prevalence varied by income level; however, these differences were not statistically significant.

2. Health-related characteristics

Health-related characteristics according to depressive symptom status are presented in 〈Table 2〉. Subjective health status and sense of coherence differed significantly between participants with and without depressive symptoms. Overall, 57.7% of participants with depressive symptoms were in the lower 50% of subjective health status, compared with 32.5% in the non-depressive symptoms group. Conversely, only 5.6% of the depressive symptoms group were in the upper 50%, compared with 67.5% of the non-depressive symptoms group, with a statistically significant difference (p<.001). In

〈Table 1〉 Sociodemographic characteristics of participants by gender

Unit: *N* (%)

	Total (*N*=411)		Men (*N*=168)		Women (*N*=243)	
	Symptoms (*N*=134)	No symptoms (*N*=277)	Symptoms (*N*=66)	No symptoms (*N*=102)	Symptoms (*N*=68)	No symptoms (*N*=175)
Gender						
Men	66 (39.3)	102 (60.7)	-	-	-	-
Women	68 (28.0)	175 (72.0)	-	-	-	-
χ^2	5.77*		-		-	
Age (year)						
Under 30s	57 (36.3)	100 (63.7)	15 (44.1)	19 (55.9)	42 (34.1)	81 (65.9)
Over 40s	77 (30.3)	177 (69.7)	51 (38.1)	83 (61.9)	26 (21.7)	94 (78.3)
χ^2	1.59		.42		4.69*	
Educational level						
High school graduate or less	7 (20.6)	27 (79.4)	3 (20.0)	12 (80.0)	4 (21.1)	15 (78.9)
Bachelor's degree or higher	127 (33.7)	250 (66.3)	63 (41.2)	90 (58.8)	64 (28.6)	160 (71.4)
χ^2	2.44		2.57		.49	
Monthly average household income (won)						
Less than 4 million won	24 (26.4)	67 (73.6)	7 (20.6)	27 (79.4)	17 (29.8)	40 (70.2)
4 million to 5.99 million won	63 (33.5)	125 (66.5)	40 (49.4)	41 (50.6)	23 (21.5)	84 (78.5)
6 million won or more	465 (32.1)	85 (64.4)	19 (35.8)	34 (64.2)	28 (35.4)	51 (64.6)
χ^2	2.22		8.71*		4.51	

Note. * p<.05

〈Table 2〉 Health-related characteristics of participants by gender

Unit: *N* (%)

	Total (*N*=411)		Men (*N*=168)		Women (*N*=243)	
	Symptoms (*N*=134)	No symptoms (*N*=277)	Symptoms (*N*=66)	No symptoms (*N*=102)	Symptoms (*N*=68)	No symptoms (*N*=175)
Self-rated health						
Upper 50%	123 (57.7)	90 (42.3)	58 (67.4)	28 (32.6)	65 (51.2)	62 (48.8)
Lower 50%	11 (5.6)	187 (94.4)	8 (9.8)	74 (90.2)	3 (2.6)	113 (97.4)
χ^2	127.20***		58.62***		71.04***	
Sense of coherence						
Upper 50%	115 (53.2)	101 (46.8)	49 (59.0)	34 (41.0)	66 (49.6)	67 (50.4)
Lower 50%	19 (9.7)	176 (90.3)	17 (20.0)	68 (80.0)	2 (1.8)	108 (98.2)
χ^2	88.24***		26.83***		68.28***	

Note. ** p<.01, *** p<.001

gender-stratified analyses, significant differences were observed in both men and women (p<.001). Among men, 87.4% of those with depressive symptoms were in the lower 50% of subjective health status, compared with 8.9% in the upper 50%. Among women, 51.2% were in the lower 50% and 2.6% in the upper 50%, and the difference was statistically significant (p<.001). Sense of coherence also differed significantly by depressive symptom status. Overall, 53.2% of participants with depressive symptoms were in the

〈Table 3〉 Logistic regression analysis of factors influencing depressive symptoms among parents of children with disabilities by gender

	Total (*N*=411)			Men (*N*=168)			Women (*N*=243)		
	OR	95% CI	*p*	*OR*	95% CI	*p*	*OR*	95% CI	*p*
Gender (ref. Women)									
Men	.60	(.186~1.967)	.403	-	-	-	-	-	-
Ages (year) (ref. Under 30s)									
Over 40s	.41	(.222~.744)	.003	.70	(.245~2.006)	.508	.30	(.141~.635)	.002
Educational level (ref. High school graduate or less)									
Bachelor's degree or higher	.98	(.501~1.911)	.948	1.99	(.372~10.677)	.420	.70	(.149~3.299)	.652
Monthly average household income (won) (ref. Less than 4 million won)									
4 million to 5.99 million won	.88	(.352~2.198)	.783	5.77	(1.762~18.871)	.004	.87	(.343~2.206)	.768
6 million won or more	1.11	(.439~2.824)	.821	5.91	(1.595~21.934)	.008	1.09	(.424~2.809)	.856
Gender by monthly average household income (won)									
Gender by 4 million to 5.99 million won	7.85	(1.788~34.483)	.006	-	-	-	-	-	-
Gender by 6 million won or more	8.85	(1.404~33.378)	.017	-	-	-	-	-	-
Self-rated health (ref. Lower 50%)									
Upper 50%	.08	(.022~.296)	.000	.07	(.024~.172)	.000	.08	(.020~.278)	.000
Gender by self-rated health (ref. Lower 50%)									
Gender by Top 50%	.76	(.150~.878)	.745	-	-	-	-	-	-
Sense of coherence (ref: Lower 50%)									
Upper 50%	.06	(.014~.299)	.000	.36	(.145~.896)	.028	.06	(.012~.279)	.000
Gender by sense of coherence (ref. Lower 50%)									
Gender by Upper 50%	5.39	(.898~32.320)	.065	-	-	-	-	-	-
Nagelkerke R^2	.533			.516			.541		

Notes. Ref=reference group; *OR*=Odds Ratio; Gender: 0=Women, 1=Men, Age: 0=Under 30s, 1=Over 40s; Educational level: 0=High school graduate or less, 1=Bachelor's degree or higher; Monthly average household income: 0=Less than 4 million won; 1=4 million to 5.99 million won; 2=6 million won or more; Self-Rated Health: 0=Lower 50%, 1=Upper 50%; Sense of Coherence: 0=Lower 50%, 1=Upper 50%

lower 50% of sense of coherence, compared with 46.8% in the non-depressive symptoms group, whereas 9.7% of the depressive symptoms group and 90.3% of the non-depressive symptoms group were in the upper 50%, showing a statistically significant difference (p<.001). In gender-stratified analyses, 20.0% of men with depressive symptoms and 80.0% of men without depressive symptoms were in the upper 50%. Among women, 98.2% and 1.8% of those without and with depressive symptoms, respectively, were in the upper 50%. These differences were statistically significant in both genders (p<.001).

3. Factors influencing depressive symptoms

The results of the logistic regression analysis with depressive symptoms as the dependent variable are presented in 〈Table 3〉. Model fit was statistically significant for overall and for both gender-stratified models (total: χ^2=198.141, df=11, p<.001; men: χ^2=80.595, df=6, p<.001; women: χ^2=114.549, df=6, p<.001). The explanatory power of the model, based on Nagelkerke R^2, was 53.3% for the overall, 51.6% for men, and 54.1% for women. Overall, gender was not significantly associated with depressive symptoms.

Participants aged ≥ 40 years had a lower risk of depressive symptoms than those aged ≤ 30 years (*OR*=0.41, *p*<.01). Educational level and monthly average household income were not independently associated with depressive symptoms; however, the interaction between gender and monthly average household income was significant. Specifically, the interaction terms were significant for the 4.00–5.99 million won income group (*OR*=7.85, *p*<.01) and the ≥ 6 million won income group (*OR*=8.85, *p*<.05). Higher subjective health status (upper 50%; *OR*=0.08, *p*<.001) and higher sense of coherence (upper 50%; *OR*=0.06, *p*<.001) were both associated with a reduced risk of depressive symptoms. Interactions between gender and subjective health status or sense of coherence were not significant. In gender-stratified analyses, men with monthly average household income of 4.00–5.99 million won (*OR*=13.59, *p*<.05) and ≥ 6 million won (*OR*=13.96, *p*<.05) had an increased risk of depressive symptoms. In contrast, higher subjective health status (*OR*=0.06, *p*<.001) and higher sense of coherence (*OR*=0.63, *p*<.05) were significantly associated with a reduced risk. Other variables, including age and educational level were not significant predictors among men. Among women, those aged ≥ 40 years had a lower risk of depressive symptoms (*OR*=0.30, *p*<.01). Higher subjective health status (*OR*=0.07, *p*<.001) and higher sense of coherence (*OR*=0.05, *p*<.001) were also significantly associated with a reduced risk of depressive symptoms. Educational level and monthly average household income were not significant predictors of depressive symptoms among women.

Ⅳ. Discussion

This study examined factors influencing depressive symptoms among parents of children with disabilities, focusing on sociodemographic characteristics as well as subjective health status and sense of coherence. By identifying factors associated with the alleviation of depressive symptoms among parents raising children with disabilities, the study aimed to provide evidence to inform policies and practical interventions that promote mental health in this population.

Gender-based analyses showed a higher prevalence of depressive symptoms among men than among women. This finding contrasts with previous studies reporting a higher prevalence of depressive symptoms among women (Cejalvo et al., 2021; Cha et al., 2022). However, it is consistent with the results of H. Li et al. (2023), which reported higher depression scores among male parents and caregivers of children with autism spectrum disorder in China than their female counterparts. These findings suggest that gender differences in depressive symptoms among parents of children with disabilities may reflect context-specific caregiving roles and stressors, highlighting the need for more detailed and multifaceted follow-up studies.

Regarding age, depressive symptoms among women were less prevalent in older age groups than in younger ones. This finding differs from previous research indicating a positive association between age and depression (Yoo, 2017). E. J. Kim et al. (2024) suggested that as mothers age, caregiving experience and accumulated coping strategies may be transformed into psychological resilience. Consistent with this interpretation, the present findings suggest that increasing age may be associated with lower depressive symptoms among mothers of children with disabilities.

Higher monthly average household income was associated with an increased risk of depressive symptoms, particularly among men. This pattern contrasts with previous studies reporting an inverse relationship between higher income and depression (E. J. Park et al., 2015; Yoo, 2017). One possible explanation is that higher-income households may

face greater difficulty accessing disability-related support services, such as child disability allowances, which are often income-restricted (J. W. Park, 2020). Another explanation may relate to the U-shaped relationship between income and depression proposed by C. Li et al. (2022), whereby income increases alleviate depression at lower levels but may exacerbate depression beyond a certain threshold due to heightened economic responsibility. However, as this study did not directly test the U-shaped relationship, this interpretation should be considered speculative. Furthermore, the composition of income categories and sample characteristics of the sample (focusing on members of disability parent associations and special school parent associations, with a potential overrepresentation of higher-income groups) may have influenced the results.

Among men, both higher income and the interaction between male gender and monthly average household income were significantly associated with increased depressive symptoms. This finding suggests that depressive symptoms among fathers cannot be explained solely by economic burden or access to support but should be understood within the broader structural and cultural context of masculinity, paternal roles, and the gendered division of labor. Fathers caring for children with disabilities may experience tension between expectations to serve as the primary economic provider and to engage actively in caregiving responsibilities. Navigating these dual roles may involve psychological pressures, including social stigma and the suppression of emotional expression, which can increase vulnerability to depression. These findings underscore the importance of considering gendered caregiving environments when interpreting mental health risks and designing support strategies.

Better subjective health status was significantly associated with a reduced risk of depressive symptoms. Consistent with previous research demonstrating a close association between subjective health and depression (J. Y. Kim & Lee, 2024), this study confirms the relevance of subjective health status among parents of children with disabilities. These findings suggest the need for policies and interventions that promote healthy lifestyles and self-care to enhance subjective health. Fathers, who often experience overlapping caregiving and economic burdens and exhibit a relatively higher risk of depression, may particularly benefit from early screening and targeted interventions. Programs that strengthen subjective health and sense of coherence are likely to enhance psychological resilience and contribute to the alleviation of depressive symptoms, with downstream benefits for overall quality of life. Intervention strategies should also be differentiated by income level. For low-income parents, strengthening livelihood stability and access to welfare services is essential. For higher-income parents, tailored counseling and support programs that address conflicts between economic responsibility and caregiving roles are needed. Such multi-layered approaches can provide a foundation for comprehensive mental health policies targeting parents of children with disabilities. International family support models offer useful reference points. For example, Novak-Pavlic et al. (2023) emphasized Family-Centered Services, which extend support beyond the treatment of children with disabilities to encompass the entire family. Given the reciprocal nature of parent–child interactions, continuous parental support may improve both parental and child health outcomes. Accordingly, health education programs for parents of children with disabilities should incorporate capacity-building components focused on stress management, self-care, and coping skills, alongside structured mental health counseling referral pathways. Family therapy and communication enhancement programs may further strengthen

intrafamilial relationships and improve parental subjective health and family quality of life.

Sense of coherence was also significantly associated with depressive symptoms, consistent with prior research identifying sense of coherence as a protective factor against depression (Eriksson & Lindström, 2006; J. Kim & Kim, 2014; Olsson & Hwang, 2002; Potier et al., 2018). These findings highlight the need to strengthen policies that promote sense of coherence among parents of children with disabilities. In particular, improvements in disability awareness education are needed to reduce social stigma and barriers to participation. Although workplace disability awareness education is legally mandated in Korea, its content and delivery vary widely, often resulting in repetitive and limited training (Baek & Yu, 2021). To enhance effectiveness, disability awareness education should move beyond one-way information delivery toward participatory, experiential, and practice-oriented approaches. Involving people with disabilities and their family members, incorporating experiential learning, and using community-based case examples may help foster meaningful understanding and reduce stigma. Ultimately, strengthening sense of coherence requires building a social environment that actively supports the inclusion and well-being of families of children with disabilities.

Several limitations should be noted. First, the cross-sectional design captures parental experiences at a single time point, limiting causal inference. Parenting trajectories, particularly in the context of disability, change over time, and future longitudinal studies are warranted to examine changes in health and depressive symptoms across life-course transitions. Second, the online survey and network-based recruitment strategy may have excluded parents not affiliated with parents' associations or special school networks, potentially overrepresenting socially connected or higher-income participants. This sampling bias may affect the observed relationships among depressive symptoms, sense of coherence, and monthly average household income, warranting caution in generalizing the findings. Third, self-reported measures may be subject to recall and social desirability biases. Fourth, dichotomization of sense of coherence and subjective health status based on median values may have reduced sensitivity to variability and influenced effect size estimates. These methodological considerations should be addressed in future research.

Despite these limitations, this study contributes to the literature by empirically examining both sociodemographic and health-related factors associated with depressive symptoms among parents of children with disabilities. Notably, while sense of coherence -based measures have been widely used internationally (Al-Yagon, 2015; Manor-Binyamini & Nator, 2016), research evaluating their applicability in Korea remains limited. This study supports the validity of the sense of coherence scale in a Korean sample and extends previous research by conducting gender-stratified analyses. By identifying gender-specific risk and protective factors, the findings provide valuable evidence to inform the development of targeted, gender- responsive mental health policies and support programs for parents of children with disabilities.

Ⅴ. Conclusion

This study examined sociodemographic and health-related factors associated with depressive symptoms among parents of children with disabilities. The findings indicate that gender, age, monthly average household income, subjective health status, and sense of coherence collectively influence depressive symptoms. Notably, depressive symptoms

were more prevalent among fathers than mothers, and older women showed a lower prevalence of depressive symptoms, distinguishing these results from those of previous studies. In addition, the positive association between income level and depressive symptoms among men suggests potential limitations related to caregiving responsibility and access to institutional support. Despite growing social awareness of the vulnerabilities faced by parents of children with disabilities, practical support remains limited. Existing policies have largely focused on women and low-income families, potentially creating support gaps for fathers and higher-income households. Addressing these gaps requires a comprehensive and tailored support system that encompasses all parents of children with disabilities, regardless of gender or income level. From a health education perspective, tailored programs that enhance parents' subjective health status, strengthen sense of coherence, and reduce psychological burden are particularly important. Moreover, such initiatives should be complemented by broader social support efforts, including the reduction of stigma and the promotion of social participation, as well as access to professional counseling and health management services. Together, these multifaceted strategies can contribute to improving the quality of life of families of individuals with disabilities and to sustaining stable and effective caregiving for children with disabilities.

References

Al-Yagon, M. (2015). Fathers and mothers of children with learning disabilities: Links between emotional and coping resources. *Learning Disability Quarterly, 38*(2), 112-128. https://doi.org/10.1177/0731948713520556

Antonovsky, A. (1990). A somewhat personal odyssey in studying the stress process. *Stress Medicine, 6*(2), 71-80. https://doi.org/10.1002/smi.2460060203

Baek, Y. E., & Yu, E. J. (2021). *A study on the effectiveness of disability awareness improvement education in the workplace* (Policy Research 2021-14). Korea Employment Agency for Persons with Disabilities Employment Development Institute.

Cejalvo, E., Marti-Vilar, M., Merino-Soto, C., & Aguirre-Morales, M. T. (2021). Caregiving role and psychosocial and individual factors: A systematic review. *Healthcare, 9*(12), Article 1690. https://doi.org/10.3390/healthcare9121690

Cha, W.-T., Joo, H.-J., Park, Y.-S., Park, E.-C., & Kim, S.-Y. (2022). Depression before and during-COVID-19 by gender in the Korean population. *International Journal of Environmental Research and Public Health, 19*(6), Article 3477. https://doi.org/10.3390/ijerph19063477

Eriksson, M., & Lindström, B. (2006). Antonovsky's sense of coherence scale and the relation with health: A systematic review. *Journal of Epidemiology & Community Health, 60*(5), 376-381. https://doi.org/10.1136/jech.2005.041616

Guga ł a, B., Penar-Zadarko, B., Pięciak-Kotlarz, D., Wardak, K., Lewicka-Chomont, A., Futyma-Ziaja, M., & Opara, J. (2019). Assessment of anxiety and depression in Polish primary parental caregivers of children with cerebral palsy compared to a control group, as well as identification of selected predictors. *International Journal of Environmental Research and Public Health, 16*(21), Article 4173. https://doi.org/10.3390/ijerph16214173

Hoff, R. A., Bruce, M. L., Kasl, S. V., & Jacobs, S. C. (1997). Subjective ratings of emotional health as a risk factor for major depression in a community sample. *British Journal of Psychiatry, 170*(2), 167-172. https://doi.org/10.1192/bjp.170.2.167

Jung, D. J. (2014). The effects of self-rated health on depression to disabled elderly: The moderating effects of psychosocial resources. *Health and Social Welfare Review, 34*(2), 247-275. https://doi.org/10.15709/hswr.2014.34.2.247

Kim, E. J., Yun, G. Y., Lee, D. Y., & Kim, B. R. (2024). Posttraumatic growth processes in mothers of children having developmental disabilities: A thematic analysis on autobiographical writing. *Korean Psychological Journal of Culture and Social Issue, 30*(4), 507-540. https://doi.org/10.20406/kjcs.2024.11.30.4.507

Kim, J., & Kim, C. (2014). The relationship of 'Sense of Coherence', suicidal thought and social support. *Health and Social Science, 36*, 77-102.

Kim, J. Y., & Lee, S. K. (2024). Effect of subjective health status on life satisfaction among older adults : Focused on the mediating effect of depression and moderated mediating effect of participation in economic activity. *Journal of Community Welfare, 88*, 31-61. https://doi.org/10.15300/jcw.2024.88.1.31

Kim, J. Y., & Sohn, A. R. (2024). Moderating effect of

self-esteem on the impact of subjective health on depression in parents of children with disabilities: Focusing on gender differences. *Korean Journal of Health Education and Promotion, 41*(2), 47-56. https://doi.org/10.14367/kjhep.2024.41.2.47

Kim, M. J. (2021). *Establishment of health model for delivery workers based on the theory of Salutogenesis* [Doctoral dissertation]. Kyungpook National University, Daegu, Korea.

Kim, M. O., Kim, H. A., & Kim, H. J. (2025). An exploratory study of homicide-suicide among parents of children with developmental disabilities. *Health and Social Welfare Review, 45*(1), 407-428. https://doi.org/10.15709/hswr.2025.45.1.407

Li, C., Ning, G., Wang, L., & Chen, F. (2022). More income, less depression? Revisiting the nonlinear and heterogeneous relationship between income and mental health. *Frontiers in Psychology, 13,* Article 1016286. https://doi.org/10.3389/fpsyg.2022.1016286

Li, H., Su, Y., Wang, C., Ran, Q., Tu, L., Zhang, E., Ran, J., Wang, H., Zhang, N., Wu, Y., & Xiang, M. (2023). Social support and depression of autistic children's caregivers: The mediating role of caregivers' self-esteem. *Research in Autism Spectrum Disorders, 108*, Article 102241. https://doi.org/10.1016/j.rasd.2023.102241

Manor-Binyamini, I., & Nator, M. (2016). Parental coping with adolescent developmental disabilities in terms of stress, sense of coherence and hope within the Druze community of Israel. *Research in Developmental Disabilities, 55,* 358-367. https://doi.org/10.1016/j.ridd.2016.05.003

Novak-Pavlic, M., Rosenbaum, P., & Di Rezze, B. (2023). Changing directions and expanding horizons: Moving towards more inclusive healthcare for parents of children with developmental disabilities. *International Journal of Environmental Research and Public Health, 20*(21), Article 6983. https://doi.org/10.3390/ijerph20216983

Olsson, M. B., & Hwang, C. P. (2002). Sense of coherence in parents of children with different developmental disabilities. *Journal of Intellectual Disability Research, 46*(7), 548–559. https://doi.org/10.1046/j.1365-2788.2002.00414.x

Park, E. J., Jun, J. A., & Kim, N. S. (2015). The association of multiple risky health behaviors with self-reported poor health, stress, and depressive symptom. *Health and Social Welfare Review, 35*(1), 136-157. https://doi.org/10.15709/hswr.2015.35.1.136

Park, J. W. (2020, April 2). *Current status and improvement directions of income security benefits for persons with disabilities* (Policy Analysis No. 130). National Assembly Research Service.

Potier, F., Degryse, J.-M., Henrard, S., Aubouy, G., & de Saint-Hubert, M. (2018). A high sense of coherence protects from the burden of caregiving in older spousal caregivers. *Archives of Gerontology and Geriatrics, 75*, 76-82. https://doi.org/10.1016/j.archger.2017.11.013

Shahali, S., Tavousi, M., Sadighi, J., Kermani, R. M., & Rostami, R. (2024). Health challenges faced by parents of children with disabilities: A scoping review. *BMC Pediatrics, 24*(1), Article 619. https://doi.org/10.1186/s12887-024-05104-3

Shin, J. H., Kim, H. C., Jung, C. H., Kim J. B., Jung, S.-W., Cho, H., & Jeong, S. H. (2013). The standardization of the Korean version of the Patient Health Questionnaire-2. *Journal of Korean Neuropsychiatric Association, 52*(3), 115-121

Torinomi, C., Lindenberg, K., Möltner, A., Herpertz, S. C., & Holm-Hadulla, R. M. (2022). Predictors of students' mental health during the COVID-19 Pandemic: The impact of coping strategies, sense of coherence, and social support. *International Journal of Environmental Research and Public Health, 19*(24), Article 16423. https://doi.org/10.3390/ijerph192416423

World Health Organization. (1948). *Constitution of the World Health Organization*. https://www.globalhealthrights.org/instrument/constitution-of-the-world-health-organization-who/

Yonhap News. (2025, April 18). *Recurring tragedies in families with disabled members… "Murder rate of disabled children six times that of all children"* (Korean, authors' translation). https://www.yna.co.kr/view/AKR20250417168000530

Yoo, C. M. (2017). 10-year trajectories of depressive symptoms and their predictors: Inequity between people with and without disabilities. *Health and Social Welfare Review, 37*(2), 150-183. https://doi.org/10.15709/hswr.2017.37.2.150

■ Jiyeon Kim http://orcid.org/0009-0005-1875-9861
■ Sojung Lee http://orcid.org/0009-0001-4811-095X
■ Aeree Sohn https://orcid.org/0000-0002-8524-2433