# Multidimensional discrimination toward single-parent families and its association with depressive symptoms of parents: A cross-sectional study of Korean single-parent households

Seonguk Baek, Jin-Ha Yoon

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## *Abstract*

**Background:** Discrimination toward single-parent families (SPFs) is prevalent at structural and individual levels.

**Objective:** This study examined the association between perceived discrimination toward SPFs and parental depressive symptoms in South Korea.

**Methods:** This study included a nationally representative sample of 3,300 single mothers (66.8%, n=2,205) and fathers (33.2%; n=1,095). Perceived discrimination toward SPFs by single parents was measured using eight items evaluating the discrimination toward both participants and their children, which were categorized into four groups (lowest, low, high, and highest). Depressive symptoms were evaluated using the Patient Health Questionnaire-9. To examine the association between discrimination toward SPFs and depressive symptoms in single mothers and fathers, logistic regression models were employed. Odds ratios and 95% confidence intervals (CIs) were determined.

**Results:** Of all participants, 11.7% (N = 386) reported depressive symptoms. The prevalence of depressive symptoms was 7.7%, 6.4%, 8.2%, and 21.7% among individuals with the lowest, low, high, and highest levels of discrimination, respectively. Compared to those experiencing the lowest level of discrimination, the highest level of discrimination was associated with 4.97-fold (95% CI: 3.34–7.42) and 5.60-fold (95% CI: 2.67–11.75) higher odds of depressive symptoms among single mothers and fathers, respectively. Further analyses demonstrated that discrimination directed toward both oneself and one's children was associated with depressive symptoms.

**Conclusions:** Discrimination against SPFs was prevalent in Korea and associated with depressive symptoms in both single mothers and fathers. Comprehensive policy interventions are needed to mitigate discrimination toward SPFs.

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# Original Manuscript

# Multidimensional discrimination toward single-parent families and its association with depressive symptoms of parents: A cross-sectional study of Korean single-parent households

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## ABSTRACT

**Background:** Discrimination toward single-parent families (SPFs) is prevalent at structural and individual levels.

**Objective**: This study examined the association between perceived discrimination toward SPFs and parental depressive symptoms in South Korea.

**Methods:** This study included a nationally representative sample of 3,300 single mothers (66.8%, n=2,205) and fathers (33.2%; n=1,095). Perceived discrimination toward SPFs by single parents was measured using eight items evaluating the discrimination toward both participants and their children, which were categorized into four groups (lowest, low, high, and highest). Depressive symptoms were evaluated using the Patient Health Questionnaire-9. To examine the association between discrimination toward SPFs and depressive symptoms in single mothers and fathers, logistic regression models were employed. Odds ratios and 95% confidence intervals (CIs) were determined.

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**Conclusion:** Discrimination against SPFs was prevalent in Korea and associated with depressive symptoms in both single mothers and fathers. Comprehensive policy interventions are needed to mitigate discrimination toward SPFs.


**Keywords**: family; mental health; single father; single mother; single parenthood; stigma

## 1. Introduction

In recent decades, sociocultural shifts have increased societal interests in diverse family structures. These family forms, which often include civil partnerships, same-sex parent families, and single-parent families (SPFs), challenge the traditional and often narrowly defined concept of a family as consisting of a heterosexual couple and their biological children [1]. This shift reflects diverse ways in which individuals form meaningful familial relationships. In Korea, approximately 1.5 million households consisted of SPFs in 2023, accounting for 6.9% of the total households [2]. In light of the growing interest in SPFs, the Korean government has implemented policies aimed at assisting child-rearing and providing financial resources for SPFs [3, 4].

The mental health of SPF members has garnered substantial public health interest, as both single parents and their children are more vulnerable to various risk factors for mental health deterioration, including material deprivation, dual burden of work and childcare, and lack of social support [1, 5, 6]. For instance, previous studies have demonstrated that various factors, such as socioeconomic status, work-life balance, and social acceptance and support, can be associated with the mental health of single parents [5, 7, 8]. Indeed, single parents are more likely to have mood disorders and depressive symptoms than couple parents [9, 10].

SPFs face various forms of discrimination at the institutional, structural, and individual levels [11]. In South Korea, influenced by Confucianism, which upholds the traditional family structure as the norm [12], cultural acceptance and institutional support for SPFs have progressed more slowly than in Western societies [13]. Parents of SPFs often experience stigmatization and discrimination in their daily lives, which negatively affects their mental well-being and overall health. For example, single mothers, particularly those who are divorced, face negative perceptions and stigmatization from neighbors and even close acquaintances [5, 14]. Moreover, single parents are frequently stigmatized as having a lower socioeconomic status, rendering them more vulnerable to institutional discrimination in public and professional spheres than partnered parents [5, 14, 15]. Such stigmatization and discrimination can limit access to resources, employment opportunities, and social support systems [13].

Discrimination, irrespective of its nature, is a well-documented risk factor for poor mental health; however, the specific link between discrimination experienced by SPFs and depressive symptoms has been scarcely investigated. Experiencing discrimination can act as a major trigger for depressive symptoms by increasing chronic stress and lowering self-esteem [16]. Furthermore, social isolation and loneliness caused by discrimination can mediate the link between discrimination and depressive symptoms [17]. Moreover, most current literature on single parents primarily focuses on single mothers, leaving gaps in the understanding of differences in levels of discrimination and their association with depressive symptoms based on parental sex. Therefore, this study examined the association between perceived discrimination toward single mothers and fathers and depressive symptoms using a nationwide survey conducted in Korea.

## 2. Methods

### 2.1. Study population

The study sample was collected from the Single-Parent Family Survey, administered by the Korean Women's Development Institute under the Ministry of Gender Equality and Family in Korea. The survey was conducted between August and November 2021. To ascertain a representative sample, the selection process involved probability proportional sampling of 331 administrative districts across South Korea, each containing at least eight single-parent households. Systematic sampling was conducted within each district to select 8–15 households, and the household heads were surveyed. The survey response rate was 86.5%. If a selected household head refused to participate or remained unavailable despite repeated contact attempts, the household was classified as nonresponsive and replaced with an adjacent reserve household (13.5%). Consequently, 3,300 parents of SPFs were included in the survey. In the survey, a single-parent household was defined as one in which the head of the household was divorced, widowed, never married, or separated, and the household included the head and at least one of their children aged ≤18 years. A standardized survey weight was calculated for each individual to enhance the representativeness of the sample. Data collection involved structured one-on-one household interviews conducted in compliance with coronavirus disease 2019 prevention guidelines. This study was a secondary data analysis based on anonymized raw data from the Single-Parent Family Survey, which is publicly available at https://mdis.kostat.go.kr/index.do. The Institutional Review Board of the Yonsei Health System approved the study protocol (reference number: 4-2024-1607).

### 2.2. Discrimination toward SPFs

The perceived discrimination toward SPFs was evaluated in eight contexts. Specifically, participants were asked, "How often do you and your child experience unfair treatment or discrimination as a single-parent family? Please provide your responses from the perspectives of yourself and your child for each of the following contexts:" The first five items measured perceived discrimination toward participants in the following contexts: (i) neighborhood or community, (ii) school or childcare facilities, (iii) family and relatives, (iv) workplace, and (v) public institutions. The remaining three items assessed participants' perceived

discrimination against their child in the following contexts: (i) neighborhood or community, (ii) school or childcare facilities, and (iii) family and relatives. To facilitate the participants' understanding and ensure standardized responses, two-to-three examples were provided for each item, as detailed in Table S1 of the supplementary material. Each item was rated on a 4-point Likert scale: 1 = "Never experienced discrimination," 2 = "Tended not to experience discrimination," 3 = "Tended to experience discrimination," and 4 = "Experienced severe discrimination." Furthermore, participants could specify whether they had disclosed their single-parent status in each context rather than responding on a 4-point Likert scale. In such cases, the corresponding item was considered missing and replaced using multiple imputations. The total discrimination score ranges from 8–32, with higher scores indicating greater perceived discrimination toward SPFs. The Cronbach's alpha was 0.93 for the sample. Based on the quartile values of the discrimination scores in the sample, participants were categorized into four groups: lowest (scores 8–10), low (scores 11–14), high (scores 15–17), and highest (scores 18–32) levels of discrimination.

### 2.3. Depressive symptoms

The Korean version of the Patient Health Questionnaire-9 (PHQ-9), a validated tool comprising nine items that evaluate mood and vitality over the past two weeks, was used to assess depressive symptoms [18, 19]. Each item is scored on a scale ranging from 0–3, resulting in a total score between 0–27. Based on previous literature, a total score ≥10 was classified as indicative of depressive symptoms [18, 20].

### 2.4. Covariates

The following sociodemographic features of the participants were considered confounders in the analyses: sex (male, female), age (< 40 years, 40–49 years, ≥50 years), education level (middle school or below, high school, college or above), marital status (divorced, others [separated, widowed, never married]), monthly household income (<1,000, 1,000–1,999, 2,000–2,999, and ≥3,000; unit: 1000 KRW), employment status (employed, unemployed), and the number of children (one, two, three, or more).

### 2.5. Analysis plan

For the descriptive analysis, the sociodemographic characteristics of the study participants were examined according to their perceived discrimination levels. The prevalence of depressive symptoms was explored according to study variables. Moreover, the response frequency for each item was examined to analyze the distribution of discrimination responses for each context.

Multivariate logistic regression models were used to evaluate the association between discrimination of SPFs and depressive symptoms. Subsequently, discrimination was separated into two types: discrimination toward parents and discrimination toward children. Specifically, we assessed how an increase in the summed scores for the five items assessing discrimination toward parents and an increase in the three items assessing discrimination toward their children were associated with depressive symptoms. Odds ratios (ORs) and 95% confidence intervals (CIs) were determined. All analyses were conducted not only for the overall sample but also stratified by the sex of the parent to account for potential sex differences. Missing values were handled using multiple imputations, with 20 complete datasets generated through multiple imputations using the chained equations (MICE) technique. Pooled estimates were calculated and presented. Statistical analyses and visualizations were conducted using the R software (version 4.4.1). The R package “stats” and its function “glm” were employed to conduct logistic regressions and the package “mice” was employed to conduct the MICE. We also assessed the robustness of our findings by performing a sensitivity analysis of all cases (N = 2,801).

**3. Results**

Table 1 shows the characteristics of the study participants. The sample consisted of 1,095 male parents (33.2%) and 2,205 female parents (66.8%). Compared to those who experienced the lowest level of discrimination, individuals who reported higher levels of discrimination were more likely to be younger, have a marital status other than divorced, have lower income levels, are employed, and have only one child. However, no clear difference was noted in the proportions of males and females across the levels of perceived discrimination.

Table 2 presents the prevalence of depressive symptoms. Of the participants, 11.7% (N = 386) had depressive symptoms. The prevalence of depressive symptoms was 7.7%, 6.4%, 8.2%, and 21.7% among those with the lowest, low, high, and highest levels of discrimination, respectively. Furthermore, the

prevalence of depressive symptoms was higher among women, those with low educational levels, low income levels, unemployed individuals, and individuals with three or more children.

Table 3 presents the response frequencies for the discrimination items. Approximately 13.4–18.3% of the participants reported tending to experience or experiencing severe discrimination. Specifically, 1.4–2.6% of the participants reported experiencing severe discrimination.

Table 4 shows the association between perceived discrimination toward SPFs and parental depressive symptoms. Compared with those with the lowest discrimination level, those with low (OR: 1.57, 95% CI: 1.05–2.36), high (OR: 1.74, 95% CI: 1.17–2.57), and highest (OR: 5.06, 95% CI: 3.57–7.19) levels were more likely to have depressive symptoms. Furthermore, the highest discrimination level was associated with 5.60-fold (95% CI: 2.67–11.75) and 4.97-fold (95% CI: 3.34–7.42) increases in the odds of depressive symptoms in men and women, respectively.

Figure 1 shows the associations between domains of perceived discrimination and depressive symptoms among single parents. A 5-point increase in discrimination toward oneself, as measured by the summed score, was associated with a 2.02-fold (95% CI: 1.47–2.78), 1.95-fold (95% CI: 1.00–3.80), and 2.02-fold (95% CI: 1.40–2.89) increase in the odds of depressive symptoms in the overall, male, and female samples, respectively. Similarly, a 3-point increase in discrimination toward one’s children, as measured by the summed score, was associated with a 1.54-fold (95% CI: 1.13–2.09), 1.73-fold (95% CI: 0.89–3.39), and 1.49-fold (95% CI: 1.06–2.11) increase in the odds of depressive symptoms in the overall, male, and female samples, respectively.

Table S2 demonstrates the association between discrimination toward SPFs and depressive symptoms in the complete cases. The findings of the sensitivity analysis were consistent with those of the main analysis, demonstrating a similar positive association between discrimination experience and depressive symptoms.

## 4. Discussion

This study demonstrated an association between perceived discrimination toward SPFs and depressive symptoms in single parents. Single mothers and fathers who experienced the highest levels of discrimination were more likely to report depressive symptoms than those who experienced the lowest levels of discrimination. Furthermore, discrimination directed towards both parents and their children was positively associated with parents' depressive symptoms. Therefore, the findings underscore the need for active policy efforts to reduce discrimination toward SPFs and promote their mental well-being.

Descriptive analysis revealed that 11.7% of the participants presented with depressive symptoms. This figure is notably higher than the prevalence of depressive symptoms measured by the PHQ-9 in nationally representative Korean samples, which ranged from 2.8–5.2% [21, 22]. Furthermore, while a substantial number of single parents reported experiencing discrimination across various domains, clear sex-differences in their levels of discrimination were not evident. These findings highlight the need for proactive policies to promote the mental health of single parents and underscore the importance of addressing the needs of both single mothers and single fathers.

Our findings align with those of the existing literature, indicating that experiences of discrimination can contribute to mental health problems such as depressive symptoms, suicidal behaviors, and anxiety [23, 24]. Furthermore, the results of our study are consistent with those of previous research, showing that discrimination toward minority family structures is closely associated with poor mental health outcomes in affected individuals. For instance, discrimination targeting families with same-sex marriage has been linked to adverse mental health outcomes for themselves and their children [25, 26]. Moreover, perceived discrimination negatively correlated with happiness among unmarried mothers [27]. Although various forms of discrimination, including those based on sex and race/ethnicity, have been consistently identified as risk factors for mental health problems [23, 24], this study adds to the literature by exploring the relationship between discrimination directed toward SPFs and depressive symptoms.

Complex mechanisms may explain the association between perceived discrimination toward SPFs and depressive symptoms of single parents. Multiple pathways may link the experience of discrimination to mental health deterioration, and the existing literature suggests that discrimination can induce psychological,

physiological, and behavioral responses that contribute to poor health outcomes [16]. Prolonged exposure to discrimination can lead to chronic psychological distress by inducing anxiety regarding exclusion or by reducing self-esteem [28, 29]. The persistence of stress can eventually result in the development of depressive symptoms. Second, physiologically, chronic stress arising from the experience of discrimination was linked to the dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, which manifests as increased cortisol levels [30, 31]. HPA axis overactivity plays a key role in the pathophysiology of depressive symptoms [32]. Third, the discrimination experienced by SPFs may lead to behavioral changes. For instance, experiencing chronic stress may induce individuals to rely on coping mechanisms, such as smoking or alcohol consumption, which can contribute to the deterioration of mental health [33].

This study had certain limitations. First, the causal effects of discrimination toward SPFs on depressive symptoms could not be identified as the analyses were based on cross-sectional survey data. Therefore, longitudinal studies are needed to examine whether experiences of discrimination experiences can predict the onset of depressive symptoms over time. Second, key variables, including depressive symptoms, were assessed using self-reported measures, which may be subject to measurement errors, such as recall bias. Future studies should consider utilizing medical records or physician diagnoses to verify the association between discrimination and objective clinical diagnoses. Third, certain factors that could influence both discrimination and depressive symptoms, such as psychiatric history, personality, social support, and health behaviors, were not accounted for due to the lack of available information. Fourth, our discrimination survey questionnaire aimed to capture experiences of discrimination toward SPFs across various daily contexts. However, as it relies on subjective recall, it may be subject to recall bias. Additionally, the survey responses demonstrated high reliability, the instrument has not undergone formal validation. Future research should establish a theoretical framework for understanding discrimination experiences among single-parent families (SPFs) to enable systematic measurement of these phenomena.

Despite these limitations, this study contributes to existing literature in several ways. First, the study sample was selected through systematic sampling, representing a nationally representative population, which enhances the generalizability of the findings. Second, our study provides novel insights by analyzing the scarcely studied association between discrimination toward SPFs and mental health. This highlights the need

for active policy efforts to reduce discrimination toward SPFs and provide valuable evidence to support such initiatives.

## 5. Conclusion

This study showed that single parents experience discrimination toward both themselves and their children owing to their single-parent status, which is closely associated with depressive symptoms. An association between perceived discrimination towards SPFs and depressive symptoms was noted in both single mothers and fathers. Consequently, our study suggests the need for policy interventions to reduce discrimination toward SPFs in Korean society and protect their mental health.

**Acknowledgement**

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**Funding**

None to declare.

**Declaration of Competing Interest**

None to declare.

**Clinical trial number**

Not applicable.

**Ethics declaration**

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2000. The protocol of this study was approved by the Institutional Review Board of Yonsei Health System (reference number: 4-2024-1607)

**Data Availability Statement**

The raw data of the Single-Parent Family Survey, 2023 were anonymized by the researchers at the Korean Women’s Development Institute. The raw data are publicly available at the homepage of the Microdata Integrated Service of Statistics Korea (https://mdis.kostat.go.kr/index.do).

**CRediT authorship contribution statement**

Seong-Uk Baek: conceptualization, methodology, software, formal analysis, investigation, resources, data curation, writing-original draft preparation, project administration; Jin-Ha Yoon: validation, supervision, writing - review & editing


**Figure 1** Associations between domains of perceived discrimination and depressive symptoms among single parents. The odds of depressive symptoms were estimated for a five-point increase in discrimination toward oneself and a three-point increase in discrimination toward one's children.

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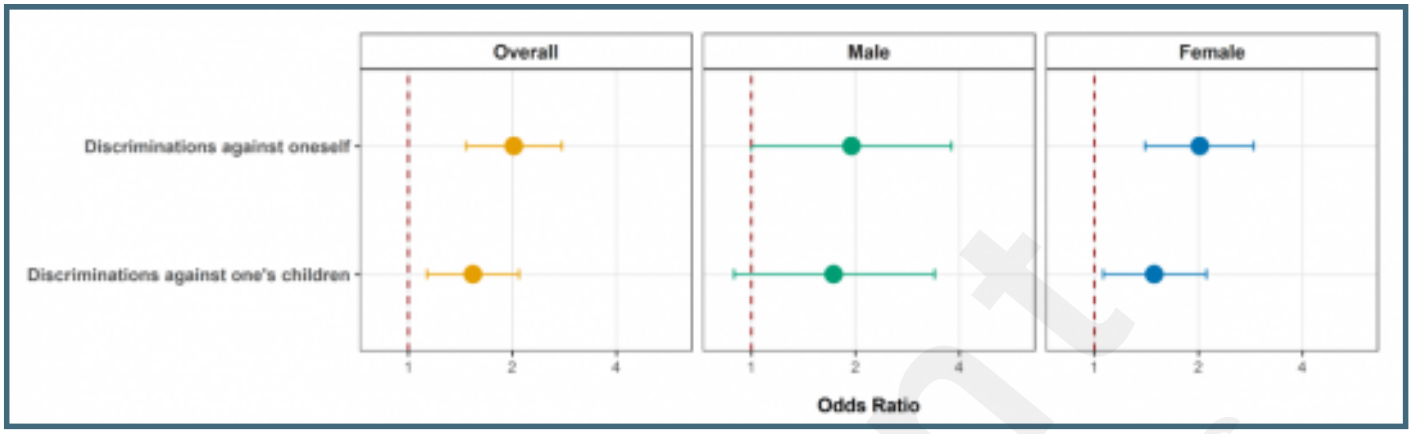
# Supplementary Files

# Figures

Associations between domains of perceived discrimination and depressive symptoms among single parents. The odds of depressive symptoms were estimated for a five-point increase in discrimination toward oneself and a three-point increase in discrimination toward one’s children.



# Multimedia Appendixes

Supplementary materials.
URL: http://asset.jmir.pub/assets/d57d09f316d57eb7cf54d6f33becac0a.docx