



# Gender Disparities in Childhood Poverty and Employment Quality among Young Adult Workers in South Korea

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## Abstract

Numerous studies have indicated that the quality of employment available to young adults when entering the labor market determines their future career paths. In particular, young adults who grew up in poverty are at greater risk, as they tend to be less competitive than their peers in the job market. However, only a few studies have explored the role of the length of poverty exposure and gender difference in this relationship. Thus, this study examines the impact of the duration of childhood poverty (1–14<sup>th</sup> waves) on both employment status (employed vs. unemployed) and type (regular vs. non-regular workers) in the early years of labor market participation among young adults in South Korea. Data from young adults aged 25–34 years ( $N=595$ ) from the Korean Labor and Income Panel Survey (KLIPS, Korean Labor Institute; 22<sup>nd</sup> wave) were analyzed for this study. The results showed a gendered effect on the relationship between the duration of childhood poverty and employment type. The duration of childhood poverty showed no association with the young South Korean's ability to procure jobs. However, it was associated with female participants' employment type. This indicates that women with a longer duration in childhood poverty have more difficulties in obtaining a decent job. Therefore, developing gender-sensitive intervention policies that focus on providing equal education opportunities and facilitating a smooth school-to-work transition may ameliorate the intergenerational transmission of poverty.

**Keywords** Labor market · Young adults · Duration of childhood poverty · Employment status · Employment type · Gender disparities

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## Introduction

The economic crisis in 1997<sup>1</sup> reshaped the socioeconomic structure of South Korea. One of the most noticeable changes resulting from this crisis was the dualization of the labor market. During the economic crisis, several workers lost their jobs (Statistics Korea, 2020a), and the unemployment rate almost tripled in 1998 (1996: 2.0%; 1998: 7.0%) (Statistics Korea, 2020a). Consequently, a significant proportion of regular workers was replaced with non-regular ones<sup>2</sup> to achieve labor market flexibility and reduce labor cost (Han, 2015). Furthermore, the increased number of non-regular workers in the South Korean labor market continued to exist even after the country recovered from the crisis. Thus, currently, South Korea has one of the most dualized labor markets among all member countries of the Organization for Economic Co-operation and Development (OCED) (OECD, 2013; Yang, 2020).

A dualized labor market exhibits significant gaps—concerning income and employment conditions (i.e., social insurance, employment benefits)—between regular and non-regular workers. Regular workers benefit from relatively higher incomes, better working conditions, and long-term employment relationships. In contrast, non-regular workers repeatedly enter and exit the low-wage labor market (Kim & Joun, 2016). Recent studies in South Korea have suggested that the income gap has widened over the decade (Lee & Jee, 2019), and upward transition in the job market has become less likely (Yang, 2020).

Such a dualized labor market intensifies inequality among young adults, among other adverse effects on them. For example, the proportion of non-regular workers has significantly increased among young adults: in 2019, almost one in three young adults in their twenties were non-regular workers, as compared to 22.9% in 2003 (Lee & Jee, 2019). Moreover, young adults who started their careers as non-regular workers were at a higher risk of recurrent unemployment (Do et al., 2019) and experienced difficulties in transitioning to a regular job.

Numerous previous studies have indicated that childhood poverty has long-term effects on adulthood due to the lack of investment in education and other activities that promote intellectual and developmental growth (Gibb et al., 2012; Johnson & Schoeni, 2011; Kim et al., 2013). Consequently, young adults who have grown up with such disadvantages possess fewer assets to survive in the competitive job market (Hill & Sandfort, 1995). Additionally, the longer the duration in which they lived in poverty, the more accumulative the adverse effects (Evans & Cassells, 2014; Moore, 2005; Najman et al., 2009). However, instead of exploring the effect of duration of childhood poverty, most previous studies examining the association between childhood poverty and employment

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<sup>1</sup> The 1997 South Korean Economic Crisis is attributed to the decrease in South Korea's international creditworthiness, which resulted in the suspension of foreign debt extension (Lee, 2000). As the South Korean national economy faced bankruptcy, President Kim, Young-Sam applied for a bailout from the International Monetary Fund (IMF), and the IMF regime began on December 3, 1997 (and lasted until August 23, 2001).

<sup>2</sup> Non-regular workers in the Korean context include contingent workers and day laborers who work for daily wages.

status (i.e., employment vs. unemployment) in Korea tended to focus on only the impact of poverty. Furthermore, few studies have investigated the influence of childhood poverty on *employment type* (i.e., non-regular vs. regular job). Nevertheless, considering the notable gap between regular and non-regular workers in South Korea, employment type might be a more useful indicator than employment status by allowing us to predict the overall economic status of young adulthood and in later developmental stages. Moreover, if a relationship can be established between childhood poverty and employment type, this finding can enrich our understanding of how parents' poverty persists in their children through the mediating role of young adults' employment type. Considering the low transfer rate from non-regular job to a regular job in South Korea (Yang, 2020), non-regular young workers might continue to have less privileged positions in the South Korean labor market. This possible finding might also be applied to other countries with strongly dualized labor markets.

Further, a gender-specific approach is also crucial in analyzing the impact of childhood poverty on the employment of young people. According to Global Gender Gap Index, South Korea ranked 123 out of 156 countries in economic participation and opportunity in 2021 (World Economic Forum, 2021). This gender gap is also reflected in the significant difference in the number of non-regular workers between women and men. In 2020, female non-regular workers were 45.0%, while male non-regular workers were 29.4%. However, the gender effect was prescinded in most studies that examined the relationship between childhood poverty and employment of young people in the south Korean context. Thus, this study aims to analyze the impact of poverty on employment among young adults in South Korea. First, we investigate whether the duration of childhood poverty affects employment status (i.e., employment vs. unemployment), and then explore its impact on employment type (i.e., regular vs. non-regular job). Moreover, we study the role of gender disparities in this relationship.

### **Young Workers in the South Korean Dualized Labor Market**

The current generation of young adults, the most educated generation in Korean history (Statistics Korea, 2021a), has been struggling in this period of unprecedented low economic growth and high youth unemployment. In 2017, the unemployment rate in Korea was 9.5% and 4.1% for those aged 25–29 and 30–34, respectively, which was the second-worst rate after that of the aforementioned 1997 economic crisis in Korea (Statistics Korea, 2021b). Further, the subjective hardship and financial difficulties facing young adults might be greater, considering that this unemployment rate failed to reflect non-regular workers.

Non-regular workers generally include contingent workers and day laborers (Lee & Jee, 2019), with the duration of employment differing between these subgroups. The employment contract for contingent workers is for more than a month but does not exceed a year. Day laborers work on a daily wage basis, with an employment contract of not exceeding a month. Additionally, non-regular workers in South Korea face other challenges such as low job quality and

insecurity, frequently entering and exiting the labor market. Non-regular workers' average wage was 436,000 Korean Won (KW) lower (equivalent to 303.53 USD<sup>3</sup>) than that of all wage workers in 2003, and this gap more than doubled to 914,000 KW (636.31 USD) in 2019. When compared to regular workers, regular workers' wage was 210,000 KW higher (146.20 USD) on average, and this gap widened in 2019 to 522,000 KW (363.41 USD) (Lee & Jee, 2019). Additionally, non-regular workers, having limited access to social protection provisions, are rarely protected by social insurance, whereas enrollment in social insurance is mandatory for regular workers (Baek, 2013). According to the annual report from the Korean Labor Institute (Lee & Jee, 2020), only 37.8% of non-regular workers were enrolled in the national pension program in 2020, compared to an enrolment rate of 88.0% for regular workers. Furthermore, only 45.7% of non-regular workers registered for employment insurance, compared to 79.9% of regular workers. Moreover, the disadvantages of non-regular jobs include lack of employment benefits, such as severance pay, bonuses, and paid leave. The report (Lee & Jee, 2020) further states that less than half of non-regular workers receive severance pay (i.e., 40.4%), compared to 91.9% of regular workers. Despite the relatively precarious working conditions, the number of non-regular workers is high across industries. In 2020, the proportion of non-regular workers was above 30% in every industry, except for manufacturing (17.0%) and telecommunication (16.6%) (Statistics Korea, 2020b). Therefore, the existing evidence suggests that finding regular jobs can be difficult for the Korean youth regardless of the industry.

### Impact of Childhood Poverty on Employment

The extant literature suggests that poverty adversely impacts children's development through both the direct investment in children's education and the mediating influence of other factors, such as family dynamics, emotional support, social relationships, and children's health (Becker, 1981; Chase-Lansdale & Pittman, 2002; Duncan et al., 1998; Holzer et al., 2008; McLoyd et al., 1994). Additionally, numerous studies have focused on the psychological, emotional, and behavioral effects of childhood poverty (Evans, 2016; Evans & Cassells, 2014; Kim et al., 2013). Some researchers have suggested the quality of family relationships as a mechanism that connects poverty and adverse childhood outcomes. They found that better family income may improve parents' psychological well-being and, consequently, their interactions with their children (Chase-Lansdale & Pittman, 2002; McLoyd et al., 1994). Other studies have focused on poverty's effect on children's health (Johnson & Schoeni, 2011; Ziol-Guest et al., 2009, 2012). In particular, economists emphasized the pathways through which poverty may impact children's physical development (Duncan et al., 2010). These studies focused on parents' ability to purchase essential resources for children, such as better childcare settings, safe environments, and

<sup>3</sup> Applied currency: October 25, 2022, 8:23 UTC (Coordinated Universal Time).

nutritious meals (Becker, 1981). Recently, researchers have explored the impact of poverty on labor market participation (Duncan et al., 2012; Lesner, 2018). The human capital theory suggests that education plays a pivotal role in poverty reduction and that investment in education helps develop individuals' personal skills and competencies, thus yielding personal and social returns (Bonaf, 2016). Studies based on the human capital theory (Cunha et al., 2006; Hill & Sandfort, 1995) have shown that familial investment in children's education increase the latter's income in adulthood. Further, the economic resources of a family influences the level of children's education and general skills, which are important determinants of early adulthood achievement and human capital (Hill & Sandfort, 1995). In Lesner's (2018) study, individuals who grew up in poverty were more likely to exhibit lower labor market attachment and were less likely to work in high-paying industries.

Similar results have been found in Korea. Children from poor households faced frequent job shifts, and repeatedly enter and exit the labor market (Noh, 2012). Longitudinal studies (Byun, 2013, 2015) have shown that poverty at the age of 17 affects labor market achievements and decreases wages by 14.4% for young adults (aged 20–26 years). Compared to families in the lowest income class, young adults from families in the highest income class have higher wages and a more extended school-to-work transition period. However, these longitudinal studies could not evaluate the duration of childhood poverty and its effect on the employment of young adults owing to the short length of the panel data. Recently, another study (Lee, 2018) analyzed the impact of duration on income, with the duration of childhood poverty measured from age 8–17 years. The study found that those who experienced long-term poverty in childhood received lower wages in young adulthood than those with relatively short-term poverty and no-poverty.<sup>4</sup> In particular, the long-term poor group showed 13.0% and 11.3% lower wage levels than those of the non-poor and short-term poor groups, respectively. However, there is limited knowledge regarding whether the duration of childhood poverty negatively impacts employment type. Considering the significance of families' economic resources in developing personal skills and competencies in the labor market (Cunha et al., 2006; Hill & Sandfort, 1995; Lesner, 2018), the lack of such resources might have an adverse impact on the quality of young adults' employment.

In addition, we need to extend our investigation to include adults in their early thirties. Most previous studies have focused on young adults in their twenties; however, they have overlooked the recent changes in South Korea. In Korea, labor market participation has been deferred, with a significant proportion of young adults entering the labor market in their late twenties and early thirties (Woo, 2007). To account for this factor, in this study, we focus on the relationship between the duration of childhood poverty and labor market participation among young adults up until their early thirties.

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<sup>4</sup> The duration in poverty was studied in three groups, including the non-poor, short-term poor, and long-term poor groups, based on the household's ratio in poverty in childhood.

## Gender Gap in South Korea

The extant literature shows that the South Korean labor market has a significant gender gap (Statistics Korea, 2021d). Gender division of labor between women and men has been a characteristic of most societies (Rudolf, 2014). Male-breadwinner households are also common in Korean society. According to the Global Gender Gap Index 2021, South Korea ranked 102 out of 156 countries, especially in economic participation and opportunity, South Korea ranked 123 (World Economic Forum, 2021). This large gender gap, as compared to other countries, also reflects the gender gap in non-regular workers, as the proportion of women in non-regular jobs (approximately 40–47%) was higher than that of men (approximately 26–31%) from 2010 to 2021 (Statistics Korea, 2021d). Thus, in analyzing the effect of childhood poverty on employment in South Korea, gender-specific effects need to be considered. Although the extant literature has explored gender disparity in the long-term impact of childhood poverty on adults, such as physical health (Hernandez & Pressler, 2014; Nikulina & Widom, 2014) behavior (Javanbakht et al., 2016), little attention was given to the gender difference in labor market participation. Given gender disparity in the labor market, the effects of childhood poverty on the labor market might not be gender-neutral but gender-specific.

## Potential Covariates

To investigate the impact of the duration of childhood poverty on young adults' employment, other factors that might affect the response variable must be controlled for. Numerous studies have highlighted familial factors during childhood. For example, the resources and opportunities available for children's development might vary depending on the area of residence during childhood (Duncan & Brooks-Gunn, 1997). The number of household minor siblings during childhood could also influence achievement in the labor market by distributing resources within the family. Duncan et al. (1998) suggested that the number of household members could explain the size of family resources that affect children's development by allocating opportunities. Furthermore, King (1987) argued that the size of a family is closely related to the well-being of parents and the development or achievements of children. However, in Korean research, the number of household members and the family's residential location during childhood to be not statistically related to the employment status or income of young adults (Byun, 2013, 2015; Lee, 2018). Moreover, the level of parents' education consistently predicts the employment status of young adults; the higher the level of parents' education, the lower the probability of being unemployed for young adults (Byun, 2013, 2015; Lee, 2018). Furthermore, parents' education level positively affects the development of human capital, such as children's academic achievement (Phang & Kim, 2001). In addition, having children could affect the employment type, especially for women, as studies have shown that having children could hinder women from having regular jobs (Kim & Kwon, 2008; Moon & Jang, 2014). Therefore, it is important to include the current number of children as a control variable when analyzing gender disparity in the labor market.

## Materials and Methods

### Data and Procedures

In this study, we used data obtained from the Korean Labor and Income Panel Survey (KLIPS) of the Korean Labor Institute created in 1998. KLIPS is a panel survey of households and household members residing in all urban areas across the country, except for Jeju Island. Using the Population Census as a reference, data were collected from a proportional sample of households representing the population of South Korea. The survey was designed to collect data on 5,000 households and their members. KLIPS original sample household retention rate was 87.6% in the 2nd wave (1999), 80.9% in the 3rd wave, and 77.3% in the 4th wave. Then, the sample retention rate became stable and decreased by about 1% every year, reaching a retention rate of 65.3% in the 22nd wave (Korean Labor Institute, 2021). This panel dataset, containing the longest survey period amongst Korean panels, has several advantages. First, it allows researchers to identify the respondents' background and childhood information, such as household income and the number of household members. Second, it measures the respondents' labor market participation, including employment status and type.

The study sample included young adults aged 25–34 years in the 22nd wave (the most recent wave at the time of the analysis), whose household income was measured during their childhood (1–14th waves). Young Korean adults are usually in college during their early 20 s. Considering that the average period for young adults before graduating from college<sup>5</sup> is 4.34 years and the average time for getting a job after graduation is 10.1 months (Statistics Korea, 2020a), including young adults in their early 20 s in the study sample might bias the results. Therefore, this age group was excluded from the study sample.

KLIPS offers two types of data that contain information on household members: household and individual data. For this study, all available household data from the 1st to the 14th waves (1998–2011) were used to measure the duration of childhood poverty. Respondents' ages in the first wave ranged from 4–13 years, followed by 5–14 years in the second wave, 6–15 years in the third wave, and so on, up to 17 years in the last wave (14th). This study uses 17 years of age as the upper limit to define childhood. The household data were updated and merged with individual data from the 22nd wave (2019) using unique household numbers.

The number of participants included in the study varied according to the independent and dependent variables. For the exploratory analysis, in which we examined the effect of childhood poverty (i.e., the independent variable), the original sample size was 675 (female: 315, male: 360). After dropping missing cases of the major variables, the sample size was reduced to 635 (female: 295, male: 340). This number represented participants whose household income was measured at least once throughout the 1st to the 14th waves, after dropping economically inactive populations, such as individuals attending school, those with mental or physical disorders. In our primary analysis, which examined the impact of the *duration* of childhood poverty, only cases in which childhood household income was observed three or more times (throughout the 1st to the 14th waves) were

<sup>5</sup> Including college (of three years or less) and university graduates.



included. This is because the duration of childhood poverty was defined as the proportion of time spent in poverty to the total period for which the household income was measured. After dropping individuals whose childhood household income data were measured twice or less, our sample contained 595 young adults (female: 278, male: 317). The number of participants also relied on the dependent variable. For analyses examining the employment status, self-employed young people were also included. On the other hand, unemployed and self-employed individuals were excluded in the analyses examining the impact of duration in childhood poverty on the employment type (non-regular vs. regular job). The study participants totaled 524, 250 females and 274 males for the final analyses.

## Measures

### Employment Status

The employment status was defined as the panel participants' current employment status and measured using data from the 22<sup>nd</sup> wave (year 2019). The employment status was originally coded as employed (1), unemployed according to ILO (International Labor Organization)<sup>6</sup> (2), economically inactive (3). We dropped those economically inactive populations and created a dummy variable in which respondents who were employed including self-employment were assigned 0, and those who were unemployed were assigned 1.

### Employment Type

The employment type was measured using the panel participants' answers to questions about their *main job* in the 22<sup>nd</sup> wave. Regular workers were defined as employees with a job contract period of more than a year or those who continued to work without a fixed contract period. Non-regular workers comprised two types of workers: contingent workers and day laborers. Contingent workers had a job contract period of more than a month but not exceeding a year. Day laborers had an employment contract not exceeding a month or had daily employment. Employment type was coded with dummy variables (0 = regular workers, 1 = non-regular workers).

### Duration of Childhood Poverty

The duration of poverty, defined as the proportion of time in poverty, was calculated by dividing the period of poverty (years) from 1998–2011 by the total period for which household income was measured. The poverty proportion was set as duration because the measurement of years of household income varies depending on the wave in which the panel data included the respondents.

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<sup>6</sup> Definition of unemployed (KLIPS' User's guide):

- A person aged 15 or over, who is out of work, but has been actively seeking a job during the past week and was available to work if offered a job.
- Or is not seeking employment within the past week but has sought a job at some time during the last month and was available to work for the past week if an appropriate job was offered.



Poverty was measured using equivalized median household income.<sup>7</sup> Those living below the 50% threshold of the equivalized median household income were identified as poor. Equivalized median income was weighted by the corresponding weight of each wave (i.e., 1<sup>st</sup>–14<sup>th</sup>). Here, the household income included six types of income: transfer, social security, earned (i.e., wages), financial, immovable property, and other income (Korean Labor Institute, 2021).

Before analyzing the duration of childhood poverty, the impact of childhood poverty was also examined. Childhood poverty was dummy coded as (1) if the participants had ever been poor during the 1<sup>st</sup>–14<sup>th</sup> waves and (0) if the participants had never been poor.

## Covariates

Parental education, the region, and the number of siblings were measured at the age of 15 years for participants, as it was the youngest age possible for 34-year-old participants in the 22<sup>nd</sup> wave. The variables were extracted from the household data from the 1<sup>st</sup>–14<sup>th</sup> waves. If those variables were not observed at the age of 15 years, we used the information at the age of 16 or 17 years. The level of parents' education was measured as a categorical variable using the father's educational level with four response options: junior high (1), high school (2), college (3), and university degree or higher (4). The area where the participants lived when they were 15 years old was included as a categorical variable. It was coded as 1 if they lived in a metropolitan city or Gyeonggi-do,<sup>8</sup> and 0 if they lived in small- or medium-sized regions. The number of minor siblings (i.e., underaged) at the age of 15 years was measured as a continuous variable. In addition, we added the number of household income measurements during childhood as a covariate because this variable differs by the participant, which might affect the result of the analyses.

Along with demographic variables, such as age and gender, the current number of children was selected to control for childhood poverty. These personal factors were extracted from data obtained from the last wave (22<sup>nd</sup>; 2019). The age of the respondents and the current number of children were coded as continuous variables. Gender was coded as 1 if the respondent was a woman and 0 if the respondent was a man. The unemployment rate was assessed using the rate of the year 2018 (a year before the last wave; 2019) according to the participants' residential areas. The unemployment rate in 2018 was used to prevent a high correlation with employment status and type in the 22<sup>nd</sup> wave (2019). The unemployment rates of each region were extracted from the *Economically Active Population Survey* of Statistics Korea.

## Data Analysis

Descriptive analyses were conducted to identify the characteristics of the study sample. A series of logit regression analyses were conducted to examine the impact of childhood poverty on the employment of young adults. First, logit regression was conducted to

<sup>7</sup> 
$$\frac{\text{Household Income}}{\sqrt{\text{Number of household members}}}$$

<sup>8</sup> Gyeonggi-do (province) is the second most populous region after Seoul. Approximately 12 million people live in Gyeonggi-do (Statistics Korea, 2021c).

assess the impact of poverty (poor vs. not poor) on employment status and type. Subsequently, we examined the effect of childhood poverty duration on employment status and type. The analyses examining the poverty duration effect were initially conducted using the full sample and then by gender. We also conducted robustness tests using different poverty thresholds at 40% and 60%. Moreover, we examined whether the results were similar to the original results when household expenditure was used as poverty indicator. All statistical data analyses were performed using STATA MP 17.0

## Results

The descriptive statistics of major variables are displayed in Table 1. For the descriptive statistics, observations for which the household income was measured three or more times in childhood—essential samples in the primary analysis (i.e., duration of childhood poverty)—were included. In the full sample, about 70% of the respondents were regular workers, and almost 8% were unemployed. Additionally, 46% of the participants were relatively poor (i.e., below 50% of equivalized household income) at least once throughout the 1<sup>st</sup>–14<sup>th</sup> waves (i.e., 1998–2011). Regarding the educational level, most parents in the sample were high school graduates. By gender, there were more non-regular workers and unemployed individuals in the male sample. Meanwhile, compared to male participants, female participants had more minor siblings during their childhood and higher current number of children. Approximately 70% of the sample lived in metropolitan areas during their childhood.

As a preliminary analysis before examining the impact of the duration of childhood poverty, the effect of poverty was first investigated. A set of logit regressions analyses on employment status (reference=employed) and type (reference=regular worker) is listed in Table 2, where the standard errors are delta method standard errors of the marginal effects. For the logit regression on odds of being unemployed, the economically inactive population (i.e., those attending school and those with mental and physical disorders) were dropped. In the logit regression on odds of being non-regular workers, only paid workers were included, dropping self-employed young adults along with the economically inactive population. The impact of childhood poverty was not statistically significant on both employment status and type. Among covariates, the number of household income measurements, age, and gender were statistically related to young adults' employment status (i.e., the odds of being unemployed). Moreover, the level of parents' education, residence region in childhood, current number of children, unemployment rate along with age and gender were related to the odds of being non-regular workers.

Table 3 presents the logit regressions results for the relationship between childhood poverty duration and employment status by gender. The duration of childhood poverty was not associated with the employment status of young adults. In the full sample, younger and male respondents were more likely to be unemployed. When the analyses were conducted by gender, the results for female participants were not statistically significant, and the covariates were not related to employment status. Meanwhile, younger male respondents were more likely to be unemployed.

Finally, Table 4 shows the associations between the duration of childhood poverty and employment type. For the analyses, employed young adults and self-employed individuals

**Table 1** Descriptive statistics of the sample

Variable	Full sample (n = 595)	Female (n = 278)	Male (n = 317)
<b>Employment</b>			
Regular workers	69.08%	72.66%	65.93%
Non-regular workers	18.99%	17.27%	20.5%
Self-employed	4.2%	3.96%	4.42%
Unemployed	7.73%	6.12%	9.15%
<b>Childhood poverty</b>			
Never poor	53.45%	54.32%	52.68%
Poor (50% of median income)	46.55%	46.68%	47.32%
Mean duration of childhood poverty (SD)	0.14 (0.22)	0.13 (0.22)	0.14 (0.22)
<b>Parents' education level</b>			
Junior high	23.70%	24.46%	23.03%
High school	45.55%	46.40%	44.79%
College <sup>a</sup>	8.57%	7.91%	9.15%
University degree or higher <sup>b</sup>	22.18%	21.22%	23.03%
Mean number of siblings (SD)	0.87 (0.69)	0.98 (0.76)	0.77 (0.60)
<b>Area of residence in childhood</b>			
Metropolitan	76.30%	78.06%	74.76%
Rural	23.70%	21.94%	25.24%
Mean no. of household income measurements	11.37 (3.97)	11.31 (3.96)	11.42 (3.99)
Mean no. of current children (SD)	0.12 (0.44)	0.16 (0.49)	0.08 (0.39)
Mean current age (SD)	28.86 (2.74)	28.67 (2.73)	29.03 (2.74)
Mean unemployment rate (SD)	3.86 (0.45)	3.89 (0.45)	3.84 (0.46)

Note: Only Observations in which the household income was measured during childhood three or more times were included in the sample. In addition, economically inactive populations (those attending school and those with mental and physical disorders) individuals were dropped

<sup>a</sup>Parents who attended 2 to 3 years of college

<sup>b</sup>Parents who graduated from 4-year university or graduate school

were dropped to examine the likelihood of non-regular workers compared to regular workers. The duration of childhood poverty significantly increased the likelihood of being a non-regular worker ( $OR=3.313$ ,  $p=0.018$ ); the longer the duration of childhood poverty, the higher the likelihood of young adults being non-regular workers. This result was still significant for female participants, and the odds ratio was higher for female participants than male ones ( $OR=5.514$ ,  $p=0.025$ ). Conversely, the duration of childhood poverty was no longer statistically significant for males. These results show that the intergenerational transfer of poverty, specifically that affected by longer durations of poverty only persists in women. Among the covariates, parental education, residence area in childhood, current number of children, age, and the unemployment rate were associated with the likelihood of being a non-regular worker in the full sample. When the analyses were conducted by gender, parental education, current number of children, age, and the unemployment rate were only associated with the odds of being a non-regular worker for female participants. The area where the participants grew up was only statistically significant for male respondents.

**Table 2** Exploratory analyses: logit regression on odds of being unemployed and non-regular workers for young adults (full sample)

	Unemployed		Non-regular workers	
	<i>dy/dx</i>	<i>S.E</i>	<i>O.R</i>	<i>S.E</i>
Childhood Poverty	0.001	0.022	1.008	0.035
Familial Factors <sup>a</sup>				
Childhood poverty (poor = 1)				
Parents' education level				
High school graduates	-0.041	0.030	0.559	0.048
College graduates	0.011	0.050	1.124	0.066
University graduates	-0.039	0.033	0.581	0.053
No. of siblings	0.014	0.017	1.236	0.028
Metropolitan city	-0.008	0.029	0.892	0.042
No. of household income measurements	0.006*	0.003	1.088*	0.004
Current no. of children	0.026	0.026	1.478	0.037
Age <sup>2</sup>	-0.000**	0.000	0.997**	0.000
Gender (female = 1)	-0.038*	0.021	0.552*	0.034
Unemployment Rate	-0.023	0.029	0.705	0.045
Cons	-	-	1.434	-
Nagelkerke R <sup>2</sup>	0.07*			0.09***
Wald $\chi^2$	19.70**			32.07***
Number of obs	635			562

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ 

Note: Economically inactive populations (those attending school and those with mental and physical disorders) were dropped. Observations were also dropped if the household income during childhood was never measured in the 1<sup>st</sup>–14<sup>th</sup> waves. In the logit regression on non-regular workers, the unemployed and self-employed individuals were dropped from the analysis to examine the likelihood of non-regular workers compared to regular ones. Case-wise deletion was used for missing data  $dy/dx$  is the marginal effect

<sup>a</sup> Familial factors, except for the number of household income measurements in childhood, were measured at the age of 15 years for participants. Variables were included as time-constant variables

<sup>b</sup> Personal factors were measured using the 22<sup>nd</sup> wave

**Table 3** Logit regression on odds of being unemployed (Independent variable: duration of childhood poverty)

	Full sample		Female		Male	
	dy/dx	S.E	O.R	dy/dx	S.E	O.R
Childhood Poverty	0.056	0.050	2.250	0.066	0.065	3.294
Familial Factors <sup>a</sup>						
Duration of childhood poverty						
Parents' education level						
High school graduates	-0.037	0.030	0.597	-0.040	0.039	0.535
College graduates	0.032	0.056	1.379	-0.035	0.064	0.594
University graduates	-0.038	0.034	0.589	-0.053	0.046	0.391
No. of siblings	0.016	0.018	1.257	0.012	0.023	1.249
Metropolitan city	-0.006	0.031	0.915	0.019	0.036	1.465
No. of household income measurements	0.006	0.004	1.092	0.005	0.006	1.087
Current no. of children	0.025	0.027	1.429	0.032	0.023	1.785
Age <sup>2</sup>	-0.000*	0.000	0.998*	0.000	0.000	1.001
Gender (female = 1)	-0.038*	0.022	0.571*	-	-	-
Unemployment Rate	-0.020	0.031	0.752	0.000	0.038	1.005
Cons	-	-	0.667	-	-	0.009
Nagelkerke R <sup>2</sup>	0.07*			0.08		0.127*
Wald $\chi^2$	18.91*			9.53		16.39*
Number of obs	595			278		317

\* p < .1, \*\* p < .05, \*\*\* p < .01

Note: Economically inactive populations (those attending school and those with mental and physical disorders were dropped. Observations were also dropped when the household income during childhood was measured less than three times during the 1<sup>st</sup>-14<sup>th</sup> waves. Case-wise deletion was used for missing data. dy/dx is the marginal effect

<sup>a</sup> Familial factors, except for the number of household income measurements in childhood, were measured at the age of 15 years for participants. Variables were included as time-constant variables

<sup>b</sup> Personal factors were measured using the 22<sup>nd</sup> wave

**Table 4** Logit regression on odds of being non-regular worker (Independent variable: duration of childhood poverty)

	Full sample			Female			Male		
	$dy/dx$	S.E	O.R	$dy/dx$	S.E	O.R	$dy/dx$	S.E	O.R
Childhood Poverty	0.187**	0.077	3.313**	0.226**	0.097	5.514**	0.096	0.109	1.774
Familial Factors <sup>a</sup>									
Duration of childhood poverty									
Parental Education									
High school graduates	-0.016	0.046	0.911	-0.073	0.068	0.609	0.061	0.065	1.415
College graduates	-0.126*	0.068	0.393	-0.196**	0.080	0.145	-0.055	0.107	0.689
University graduates	-0.056	0.052	0.701	-0.057	0.077	0.686	-0.044	0.071	0.745
No. of siblings	-0.027	0.027	0.842	-0.003	0.031	0.977	-0.061	0.044	0.694
Metropolitan city	0.102**	0.042	2.054**	0.085	0.058	2.047	0.141**	0.054	2.592**
No. of household income measured	0.004	0.005	1.027	0.006	0.008	1.044	0.001	0.007	1.007
Current no. of children	0.099**	0.040	1.888**	0.151***	0.038	3.124***	-0.010	0.065	0.941
Age <sup>2</sup>	-0.000***	0.000	0.997***	-0.000**	0.000	0.998**	-0.001***	0.000	0.997***
Gender (female = 1)	-0.054	0.035	0.707	-	-	-	-	-	-
Unemployment Rate	-0.096**	0.046	0.542**	-0.141***	0.053	0.343***	-0.036	0.071	0.808
Cons	-	-	16.020*	-	-	35.067*	-	-	5.778
Nagelkerke R <sup>2</sup>	0.11**			0.20***			0.11**		
Wald $\chi^2$	37.72***			28.57***			22.32**		
Number of obs	524			250			274		

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ 

Note. Economically inactive populations (those attending school, with mental and physical disorders) and self-employed individuals were dropped. Observations were also dropped when the household income during childhood was measured less than three times from the 1<sup>st</sup>–14<sup>th</sup> waves. Case-wise deletion was used for missing data  
 $dy/dx$  is the marginal effect

<sup>a</sup> Familial factors, except for the number of household income measurements in childhood, were measured when the participants were 15 years old. Variables were included as time-constant variables

<sup>b</sup> Personal factors were measured using the 22<sup>nd</sup> wave

According to the results shown in Tables 3 and 4, young adults with a history of poverty may find jobs, but the quality of such jobs may not be assured for women. The results confirm that when examining the association between childhood poverty and employment of young adults, we should focus on the accumulative impact of poverty, rather than on analyzing whether young adults belonged to poor households in their childhood. The results also confirm that the effect of poverty is gender-specific.

## Robustness Test

### Different Poverty Thresholds

This section shows evidence of the robustness of the results when the threshold of childhood poverty is changed. This study followed the traditional poverty threshold as 50% of equivalized median household income. However, there is no objective argument as to why the poverty measure should be lower or higher than 50% (Lesner, 2018). Therefore, we conducted the analyses based on poverty thresholds of 40%, and 60%. The results are shown in Appendix Table 5. Overall, the results verify that the impact of childhood poverty is gender-specific. In the case of female participants, through all logit regressions, the duration of childhood poverty was statistically associated with the odds of being a non-regular worker in young adulthood. Meanwhile, in the case of male participants, only the 40% poverty threshold was statistically related to the odds of being a non-regular worker, and the odds ratio ( $OR = 3.735, p < .1$ ) was much smaller than that of females ( $OR = 8.700, p < .05$ ).

### Poverty Based on Household Expenditure

The existing literature shows that poverty is multi-dimensional. This includes the level of expenditure on food and the availability and distribution of access to basic amenities, such as clean water and sanitation, housing, and ability to access education (Rao, 2006). Therefore, household expenditure is a crucial determinant of poverty since it dictates the household purchasing power and its ability to fulfill basic needs (Rao, 2006). Appendix Table 6 shows the results of the association between the duration of childhood poverty and employment type. Poverty was measured using household expenditure. The results were very similar to those of our main analyses. The duration of poverty was related to the odds of being a non-regular worker in the full sample; however, when the analyses were conducted by gender, the duration of poverty was only statistically significant for female participants, whereas the effect disappeared in male samples.

## Discussion and Conclusions

### Discussion

South Korea has one of the most dualized labor markets among OECD countries (OECD, 2013), with substantial wage and job security gaps between regular and non-regular



workers (Ministry of Employment & Labor, 2020). Intensive labor market dualization and competition tend to make upward mobility less achievable in South Korea (Yun & Cho, 2017), as newcomers must have better competences to enter the labor market. Consequently, young adults with less economic resources and preferred skills experience face greater disadvantages in the labor market. One important factor that contributes to labor market achievement among young adults is childhood poverty. The adverse impact of childhood poverty on labor market achievement has been extensively documented (Duncan et al., 2012; Holzer et al., 2008; Johnson & Schoeni, 2011), but research on the accumulative effect of childhood poverty has been scarce in the South Korean context. However, a longer exposure to childhood poverty results in more detrimental effects (Moore, 2005; Najman et al., 2009), as familial economic resources influence the family's investment in childcare, education, and child-parent relationships (Becker, 1981). This study examined the effect of childhood poverty on labor market participation, particularly considering the length of childhood poverty and employment type (i.e., regular vs. non-regular job) among young adults (age 25–34 years) in South Korea.

We find that the duration of childhood poverty does not increase the risk of unemployment. Instead, the likelihood of obtaining a non-regular job significantly increases with an increase in the duration of childhood poverty. These findings indicate that young adults with a history of childhood poverty may be able to find a job; however, their work conditions may remain poor and less favorable (e.g., low wages and fewer social protection provisions and employment benefits). Notably, we also find that childhood poverty may persist in adulthood via employment type affected by the employment conditions and rewards. Considering the low transfer rate from non-regular to regular jobs in South Korea<sup>9</sup> (Yang, 2020), young adults who enter the labor market with less resources might continue to have less privileged positions in it. Thus, they are more likely to experience economic hardship in subsequent life cycles as the gap between regular and non-regular workers expands (Lee & Jee, 2020). That is, if the poor work conditions for non-regular work (e.g., low wages, job insecurity, and low employment benefits) remain unchanged, they might inherit the poverty of childhood.

Further, the findings of this study also suggest that there is a gender-specific effect of long-term childhood poverty on the employment of young workers. Specifically, a longer exposure to childhood poverty elevates women's odds of being non-regular workers in young adulthood. This finding advances the current knowledge by revealing that young women are more vulnerable to longer durations of childhood poverty, resulting in poor employment conditions for them. Moreover, the findings enrich our understanding of how early life poverty experiences act as fundamental correlates of young adults' labor market participation and differentiate the participation between women and men. The knowledge gained through identifying the accumulative results of childhood poverty and its gender-specific effect has the potential to inform evidence-based practice. This finding might be useful for developing other types of gender-sensitive initiatives to ameliorate or prevent the intergenerational transmission of economic disadvantage.

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<sup>9</sup> Only 22.4% of working individuals transitioned from being non-regular workers to regular workers after three years of comparison. In other countries, the rate of transfer for the same period was 61.3% in Denmark, 60% in Germany, 71.4% in Belgium, 45.3% in France, 63.4% in England, 46.0% in Spain, and 24.9% in Japan (Yang, 2020).

Finally, the early extrication of children from poverty is imperative to prevent the vicious circle of intergenerational poverty. The duration of childhood poverty is an important factor adversely affecting achievement in adulthood, such as lower earnings and labor market attachment (Lee, 2018; Lesner, 2018); Further, it prevents individuals from securing a regular job. The detrimental effect of the duration of poverty is derived from the cumulative disadvantages and difficulties pertaining to childhood development (Hill & Sandfort, 1995; Ziol-Guest et al., 2009, 2012) Other services and programs that can offset such disadvantages may diminish the negative influence of poverty exposure.

## Limitations

Our study has the following limitations. First, a significant proportion of the study sample did not benefit from the Dream Start program<sup>10</sup> as the initial childhood data were based on the 1<sup>st</sup>–14<sup>th</sup> waves (1998–2011) of KLIPS, while the Dream Start program (partially) commenced in 2007. In future studies, samples of young adults who participated in this program can be used to understand the effects of non-monetary support on children in poverty and its long-term impact on employment status and type. Second, the continuity of poverty during childhood could not be measured in this study because household income was not measured in each wave. The periods observed during childhood inevitably vary among different participants; hence, continuing, intermittent, and chronic poverty would each have a different effect on employment among young adults. Future studies may obtain deeper insights by measuring the household income in each wave. Finally, another limitation relates to not controlling for school achievements due to the unavailability of data. This might have led to inaccurate reporting of the association between childhood poverty and employment of young Korean people since a high GPA might affect skill formation and employment.

## Conclusions

Currently, there are approximately 582,000 children aged 0–17 years in families living below the 50% median income level in South Korea (Statistics Korea, 2016). These children might become non-regular workers as young adults, and thus remain in poverty throughout their adult life, while being further affected by their undesirable working conditions. The study results highlight the importance of formulating and implementing gender-sensitive intervention policies with a greater focus on equal opportunity in education and smooth school-to-work transition. Such policies should make changes in welfare provisions to perform gender-sensitive screening, assessment, and intervention to mitigate the intergenerational transmission of poverty.

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<sup>10</sup> The Dream Start program was launched in South Korea to reduce the impact of poverty on children's development. Dream Start, operational since 2007, is a benchmark program of Head Start (U.S.) and Sure Start (U.K.) (Lee, 2017). It aims to support children's healthy growth and development by providing customized integrated services to children in poverty and other vulnerable groups of children to ensure that they have fair opportunities as South Korean citizens (Dream Start Website, 2021).

**Appendix**

**Table 5** Logit regression on odds of being a non-regular worker using different poverty threshold

	40%				60%							
	Full		Female		Male		Full		Female		Male	
	O.R	O.R	O.R	O.R	O.R	O.R	O.R	O.R	O.R	O.R	O.R	
Childhood Poverty												
Familial Factors <sup>a</sup>												
Duration of childhood poverty	6.385***	8.700**	3.735*		2.321**				4.130**			1.329
Parents' education level												
High school graduates	0.922	0.626	1.440		0.892				0.604			1.361
College graduates	0.399	0.149	0.720		0.375				0.138			0.642
University graduates	0.692	0.683	0.748		0.699				0.716			0.703
No. of siblings	0.827	0.935	0.701		0.911				0.973			0.881
Metropolitan city	2.050**	1.980	2.601		1.999**				1.975			2.571**
No. of household income measurements	1.030	1.042	1.014		1.026				1.043			0.999
Current no. of children	1.875**	3.070***	0.928		1.883**				3.167***			0.930
Age <sup>2</sup>	0.997***	0.997**	0.997		0.997**				0.998**			0.997***
Gender (female = 1)	0.690	-	-		0.698				-			-
Unemployment Rate	0.543**	0.341***	0.794		0.794				0.354**			0.799
Cons	15.840**	41.902**	5.242		5.242				32.592*			6.105
Wald $\chi^2$	34.35***	27.26***	24.69***		31.41***				29.79***			20.67**
Number of obs	524	250	274		524				250			274

\* p < .1, \*\* p < .05, \*\*\* p < .01

Note. Economically inactive populations (those attending school and those with mental and physical disorders) and self-employed individuals were dropped. Observations were also dropped when the household income during childhood was measured less than three times during the 1<sup>st</sup>–14<sup>th</sup> waves

<sup>a</sup> Familial factors, except for the number of household income measurements in childhood, were measured at the age of 15 years for participants. Variables were included as time-constant variables

<sup>b</sup> Personal factors were measured using the 22<sup>nd</sup> wave

**Table 6** Logit regression on the odds of being a non-regular worker using household expenditure as poverty measure

		Non-regular worker		
		Full	Female	Male
		<i>O.R</i>	<i>O.R</i>	<i>O.R</i>
Childhood Poverty	Duration of childhood poverty	6.228***	13.337*	2.115
Familial Factors <sup>a</sup>	Parents' Education level			
	High school graduates	0.926	0.696	1.362
	College graduates	0.377	0.162	0.635
	University graduates	0.713	0.798	0.714
	No. of siblings	0.844	0.971	0.691
	Metropolitan city	2.078**	2.124	2.580**
	No. of household income measurements	1.028	1.042	1.009
Personal Factors <sup>b</sup>	Current no. of children	1.845**	2.982***	0.940
	Age <sup>2</sup>	0.997***	0.998**	0.997***
	Gender (female = 1)	0.681*	-	-
	Unemployment Rate	0.550**	0.358**	0.811
Cons		16.136**	25.641*	6.240
Wald $\chi^2$		32.69***	27.61***	22.42**
Number of obs		524	250	274

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Note. Economically inactive populations (those attending school and those with mental and physical disorders) and self-employed individuals were dropped. Observations were also dropped when the household income during childhood was measured less than three times during the 1<sup>st</sup>–14<sup>th</sup> waves

<sup>a</sup> Familial factors, except for the number of household income measurements in childhood, were measured at the age of 15 years for participants. Variables were included as time-constant variables

<sup>b</sup> Personal factors were measured using the 22<sup>nd</sup> wave

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## Declarations

**Conflicts of Interest** The authors have no competing interests to declare that are relevant to the content of this article.

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