INTRODUCTION

Child maltreatment is a serious public problem that threatens a child’s life. It entails any act of commission or omission by a parent or another caregiver that results in harm, potential of harm, or threat of harm to a child [1]. The World Health Organization estimates that a staggering one billion children, constituting one in every two aged 2~17 globally, encounter some form of violence annually [1]. In South Korea, the number of reported cases of child maltreatment has increased since 2000, with prevalence estimates ranging from 43 to 59%[2]. According to a report by the Ministry of Health and Welfare and the National Center for the Rights of the Child [3], South Korea recorded 29,671 cases of child maltreatment in 2016, marking a substantial 54.5% increase from the figures reported in 2012. Furthermore, the instances of re-abuse, which stood at 20 in 2001, surged to 3,095 by 2016 [3]. These statistics indicate that many children are experiencing child maltreatment and show the recurring nature of child maltreatment.

The family environment plays a crucial role in shaping a child’s lifelong development, with its effects extending into adulthood and aiding the child’s transition into an in-
dependent individual. Child maltreatment carries various consequences and may affect children throughout their developmental stages, leading to behavioral, mental, and physical health issues [4]. Several factors, including socioeconomic vulnerability, strained family dynamics, and parental dysfunction, contribute to the prevalence of maltreatment within families, thereby influencing the developmental trajectories of the children involved [5]. Furthermore, Bandura’s Social Learning Theory suggests that direct or indirect exposures to violence during child within the families can lead to subsequent intimate partner violence (IPV), either perpetration or victimization [6]. Consequently, child maltreatment emerges as a significant concern due to its potential links to subsequent adverse experiences such as dating violence, marital discord, and the mistreatment of one’s own offspring [7].

Previous studies have reported that experiencing of child maltreatment is not only linked to IPV perpetration but also to IPV victimization. About half of adults who undergo child maltreatment encounter IPV in their marital relationships and are more likely to exhibit aggressive tendencies in their adult interpersonal relationships, with variations observed between different gender groups [8]. National surveys in South Korea indicate that men with low socio-demographic characteristics tend to display higher levels of violence, a trend not necessarily mirrored in women [9]. Additionally, there is a notable age-related difference, with younger women exhibiting higher levels of violence than their older counterparts. This underscores the pivotal role of child maltreatment experiences in shaping IPV victimization and/or perpetration in adult relationships [10], potentially contributing to the intergenerational transmission of violence. However, a recent review examining this relationship found that effect sizes varied across studies [5], suggesting that the connection between child maltreatment experiences and IPV perpetration or victimization is intricate and not conclusively explainable. Therefore, it becomes imperative to identify the factors that render individuals, who have experienced child maltreatment, vulnerable to victims or perpetrators of IPV.

Korean society tends to regard family violence as a private matter, rendering it a sensitive topic for families [11]. According to the 2016 Domestic Violence Survey, 22.5% of victims perceived their abuse as a mild family problem, and 29.6% refrained from reporting it to the police due to shame about their situation becoming known to others [12]. Despite various findings on this subject, establishing a universally applicable link between child maltreatment and IPV in adulthood and identifying moderators remains challenging. Certain differences in sample sizes or data collection procedures existed during the surveys, which could not compare all the surveys [13].

Therefore, conducting a secondary analysis of nationally representative data from the Ministry of Gender Equality and Family (MOGEF) could prove beneficial for investigating child maltreatment and IPV in South Korea. In addition, since there has been little previous research on the relationship between child maltreatment experiences and IPV, we will confirm this connection using 2016 data. Through this, we hope to raise interest in this ongoing relationship in future data. The primary focus of this study is to investigate the association between child maltreatment and IPV (victimization versus perpetration) in adulthood, potentially moderated by gender, age, and household income level.

METHODS

1. Study Design

The study adopted a cross-sectional and correlational design involving a secondary data analysis of the 2016 Domestic Violence Survey [12], in compliance with the MOGEF’s regulation for the disclosure and utilization of data for research purposes.

2. Data and Sample

The 2016 Domestic Violence Survey is conducted triennially by the MOGEF in compliance with Article 4-2 of the Act on the Prevention of Domestic Violence and Prevention of Victims [12]. Raw data for the survey were collected in accordance with the Personal Information Protection Act between September 22 and December 8, 2016.

The target population comprised Korean individuals aged 19 or older. The sample was selected through multistage stratified systematic sampling, using the list of enumeration districts from the 2010 Population and Housing Census as the sampling framework. Seoul, the capital of South Korea, was initially divided into four regions, each further subdivided into ten strata. Including Sejong in the Chungcheong province, Gyeonggi province was divided into three regions, each subdivided into eleven strata. Sampling was conducted using a probability proportional to size.

In the second stratification, the regions were further divided into small areas, and different residential types were considered for systematic sampling. A woman-to-man ratio of 2:1 was then applied, surveying only one adult member (aged ≥19) per household using the dis-
Association between Child Maltreatment and Intimate Partner Violence

This process resulted in a sample of 6,000 individuals for the survey. Thus, the respondents for the 2016 Domestic Violence Survey comprised 6,000 Korean individuals aged 19 or older (4,000 women and 2,000 men).

Out of the initial 6,000 survey participants, 1,766 remained after excluding 4,234 participants who omitted data on major variables. Additionally, one participant was excluded due to living separately from their spouse during the survey process. Thus, the final sample size for the analysis in this study was 1,765 participants (Figure 1).

3. Instruments

The 2016 Domestic Violence Survey includes the following areas: individual and regional features, relationships with spouses, children, and other family members, perception of domestic violence, and general information. The questionnaire’s items and indices were developed based on domestic and foreign data, and the Korea Women’s Developmental Institute wrote the survey draft after reviewing the 2013 Domestic Violence Survey questionnaire and statistical quality report [12]. The draft was then reviewed by MOGEF, evaluated in a pilot test, and scrutinized by Statistics Korea. The key variables considered in our study’s analysis are detailed below.

1) Child maltreatment

Child maltreatment is defined as one’s experience of abuse by parents before the age of 18, in accordance with the domestic violence law in South Korea [14]. The law primarily focuses on parents as perpetrators of child maltreatment, aiming to prevent domestic violence. This study included only direct experiences of child maltreatment by parents and excluded witnessing of abuse. Child maltreatment, a latent variable, as indicated by three types of maltreatment experiences before the age of 18, was assessed and analyzed using six items from the Parent-Child Conflict Tactics Scales [15] and the Revised Conflict Tactics Scale [16]. The three types of maltreatment are emotional abuse (one item), physical abuse (three items), and neglect (two items). Each question was answered as either “yes” or “no” (see Appendix S1). Cronbach’s α coefficients for the total score were 0.80 in Straus and colleagues study [15].

2) Intimate partner violence

IPV was measured as a latent variable using conflict tactics scales (CTS2) [16] for each experience of victimization and perpetration by a partner. Four types of IPV were assessed: emotional (three items), economic (three items), physical (seven items), and sexual (two items) violence during the marriage. Fifteen items were used, with each question answered as “yes” or “no.” Respondents self-reported whether they had engaged in certain violent behaviors (perpetration) and whether the same behaviors had been used against them (victimization). Items in each type of IPV were summed to analyze the respective IPV types. If the overall score for each type exceeded 1 point, the respondent was considered to have experienced that

Figure 1. Flow diagram for participant selection.
3) Moderators

The moderator variables were gender, age, and household income level. The 2016 Domestic Violence Survey recruited participants with a woman-to-man ratio of 2:1 (4,000 women and 2,000 men). Regarding age, the survey included those below 65, and age categories were divided into below 40 and 40 or older because 40 was identified as the age at which the frequency of violence against a victim changes in previous study [17]. For household monthly income, a low-income level was identified as below < 3 million Korean won (KRW) per month per household, based on statistics from the Korean Statistical Information Service [18].

4. Data Analysis

Statistical analyses were performed using Stata 16. The interrelationship among the variables in the study was examined using structural equation modeling (SEM) based on the Spearman rank-order correlation coefficient matrix. The SEM measured latent variables because concepts like child maltreatment and IPV cannot be directly observed or measured. The selection of moderators between child maltreatment and IPV victimization and perpetration was based on Bandura’s social learning theory [19], which posits that child maltreatment may contribute to aggressive behaviors influenced by gender, age, and household income level.

In the initial stage, the main effects of child maltreatment and IPV were examined. In the subsequent stage, IPV was categorized into victimization and perpetration based on relevant studies [20]. The structural model was then evaluated to test the hypothesized relationships between the constructs. The hypothesized model was specified to include pathways between the independent variables and the dependent variables, with the moderator variables included to test for interaction effects. The measurement model was evaluated to ensure that the constructs were reliably measured by their respective indicators. Confirmatory factor analysis (CFA) was conducted to assess the validity and reliability of the measurement instruments. The structural model was then evaluated to test the hypothesized relationships between the constructs. Interaction terms for the moderator variables (gender, age, and household income) were created and included in the model to assess their moderating effects. The model parameters were estimated using maximum likelihood estimation. Goodness-of-fit indices such as the \( \chi^2 \) statistic, the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA) were used to evaluate model fit.

In this study, the following \( p \)-value criteria were applied: Paths or interaction terms with \( p \)-values less than 0.05 were interpreted as indicating significant relationships or moderating effects. Conversely, those with \( p \)-values equal to or greater than 0.05 were considered non-significant.

5. Ethical Approval

The secondary analysis was approved by the Y University Health System, Institutional Review Board (approval no. Y-2020-0033).

RESULTS

1. Sample Characteristics

The demographics of our study participants were as follows: 29.3% were men and 70.7% were women. The largest age group was 40~49 years (n=861, 48.8%), followed by 30~39 years (n=693, 39.3%), 50~64 years (n=161, 9.1%), and 19~29 years (n=50, 2.8%). Concerning household income levels, 17.5% had an income level of less than 3 million KRW/month, whereas 82.5% had an income level of 3 million KRW/month or higher. Notably, 58.1% reported experiencing child maltreatment, while 41.9% did not; furthermore, among the 1,765 participants in the domestic violence survey, 292 individuals (16.5%) reported being perpetrators and 1,473 individuals (83.5%) reported not being perpetrators, while 319 individuals (18.1%) reported being victims and 1,446 individuals (81.9%) reported not being victims. Table 1 provides an overview of the prevalence of child maltreatment experiences and IPV perpetration and victimization, stratified by gender, age, and household income level.

2. Main Relationship between Child Maltreatment and IPV

Table 2 presents the results of the correlation analysis between child maltreatment and IPV-measured variables. There was a statistically significant positive correlation between all variables of child maltreatment and IPV (\( p < .01 \)). Especially, the variables most highly correlated with physical abuse were sexual abuse (\( r = .40, p < .01 \)) and emotional abuse (\( r = .49, p < .01 \)) of intimate partner violence, as well
as emotional abuse ($r=.45, p<.01$) of child maltreatment. While physical abuse in IPV and neglect in child maltreatment were lowest correlated ($r=.12, p<.01$).

Figure 2 showed that the physical abuse showed a higher influence on IPV victims ($\beta=.90, p<.001$) and IPV perpetrators ($\beta=.83, p<.001$). The path from child maltreatment to IPV perpetration was statistically significant ($\beta=.22, p<.001$) with the following fit indices: CFI=.963, TLI=.940, RMSEA=.070, AIC=9385.2, and BIC=9,505.7. Similarly, the path from child maltreatment to IPV victimization was statistically significant ($\beta=.22, p<.001$), with the corresponding fit indices: CFI=.955, TLI=.928, RMSEA=.079, AIC=10,989.0, and BIC=11,109.4 (Figure 2).

3. Moderating Effects of Gender, Age, and Household Income Level

Table 3 showed that the man showed a higher influence on path from ‘child maltreatment to IPV perpetrator’ ($\beta=.33, p<.001$), while, low-income group showed a higher influence on path from ‘child maltreatment to IPV victimization’ ($\beta=.34, p<.001$).

Regarding the moderating effects of gender, the path from child maltreatment to IPV perpetration showed statistical significance in the group of men ($\beta=.33, p<.001$) with fit indices of CFI=.983, TLI=.973, RMSEA=.038, AIC=3,280.2, and BIC=3,373.7. However, the path from child maltreatment to IPV victimization was not significant in the same model.

In the group of women, the paths from child maltreatment to both IPV perpetration ($\beta=.18, p<.001$) and IPV victimization ($\beta=.31, p<.001$) were statistically significant. The fit indices for the perpetration model were CFI=.948, TLI=.916, RMSEA=.099, AIC=5,246.6, and BIC=5,359.4, while for the victimization model, they were CFI=.946, TLI=.928, RMSEA=.087, AIC=8,456.6, and BIC=8,569.4 (Table 3).

Regarding the moderating effects of age, the paths for the below-40 group and 40-or-older group were statistically significant. In the below-40 group, the paths from child maltreatment to both IPV perpetration ($\beta=.18, p<.001$) and IPV victimization ($\beta=.31, p<.001$) were statistically significant. In the 40-or-older group, the paths from child maltreatment to both IPV perpetration ($\beta=.18, p<.001$) and IPV victimization ($\beta=.31, p<.001$) were statistically significant.
cally significant, with fit indices of CFI=.953, TLI=.924, RMSEA=.089, AIC=4,103.9, and BIC=4,208.3 for the perpetration model and CFI=.943, TLI=.908, RMSEA=.094, AIC=5,303.8, and BIC=5,408.2 for the victimization model. In the 40- or older group, the paths from child maltreatment to both IPV perpetration ($\beta=.24, p<.001$) and IPV victimization ($\beta=.13, p<.002$) were statistically significant, with fit indices of CFI=.965, TLI=.943, RMSEA=.063, AIC=4,897.1, and BIC=5,003.1 for the perpetration model and CFI=.959, TLI=.934, RMSEA=.074, AIC=5,459.1, and BIC=5,655.1 for the victimization model (Table 3).

Regarding the moderating effects of household income level, all paths for both household income levels were statistically significant. However, the strengths of the associations between child maltreatment and each type of IPV perpetration and victimization differed in the low- versus high-income group. In the low-income group, the paths from child maltreatment to both IPV perpetration ($\beta=.27, p<.001$) and IPV victimization ($\beta=.34, p<.001$) were statistically significant, with fit indices of CFI=.977, TLI=.964, RMSEA=.073, AIC=2,194.4, and BIC=2,276.4 for the perpetration model and CFI=.914, TLI=.861, RMSEA=.129, AIC=2,275.5, and BIC=2,357.5 for the victimization model. In the high-income group, the paths from child maltreatment to both IPV perpetration ($\beta=.21, p<.001$) and IPV victimization ($\beta=.18, p<.001$) were statistically significant, with fit indices were CFI=.950, TLI=.919, RMSEA=.070, AIC=6,812.0, and BIC=6,928.2 for the perpetration model and CFI=.951, TLI=.922, RMSEA=.079, AIC=8,626.5, and BIC=8,742.8 for the victimization model (Table 3).

Figure 2. Main effects of child maltreatment and intimate partner violence.

Table 3. Comparison of Moderating Effects

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Child maltreatment → IPV (perpetrator)</th>
<th>Path coefficient</th>
<th>p</th>
<th>Child maltreatment → IPV (victim)</th>
<th>Path coefficient</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Man</td>
<td>.33</td>
<td>&lt;.001</td>
<td></td>
<td>.03</td>
<td>.592</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Woman</td>
<td>.18</td>
<td>&lt;.001</td>
<td></td>
<td>.31</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>Age (year)</td>
<td>&lt; 40</td>
<td>.18</td>
<td>&lt;.001</td>
<td></td>
<td>.31</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 40</td>
<td>.24</td>
<td>&lt;.001</td>
<td></td>
<td>.13</td>
<td>.002</td>
<td></td>
</tr>
<tr>
<td>Household income (10,000 KRW/month)</td>
<td>&lt; 300</td>
<td>.27</td>
<td>&lt;.001</td>
<td></td>
<td>.34</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 300</td>
<td>.21</td>
<td>&lt;.001</td>
<td></td>
<td>.18</td>
<td>&lt;.001</td>
<td></td>
</tr>
</tbody>
</table>

IPV=intimate partner violence; KRW=Korean won.
DISCUSSION

Our study utilized nationally representative data to substantiate the detrimental impact of child maltreatment on IPV in adulthood. Additionally, we observed varying degrees of association with IPV victimization and perpetration across gender, age, and income subgroups. The implications derived from our findings are discussed below.

First, a notable and significant association between child maltreatment and IPV was identified. This aligns with previous research that has positioned child maltreatment as a predictor of IPV [19]. Linder and Collins [21] reported that individuals exposed to child maltreatment faced a heightened risk of experiencing dating violence. Consistent with a meta-analysis indicating the influence of growing up in an abusive environment on marital violence [22], our findings underscore the importance of preventing abuse during childhood to curb IPV. Currently, diverse programs aimed at preventing child maltreatment are in place. Cheng and colleagues [23] highlight differences in the perceived effectiveness of such programs, emphasizing the legal perspective rather than the survivors’ viewpoint [23]. They identify the efficacy of batterer intervention programs in reducing domestic violence recidivism through a meta-analysis. In South Korea, child protection agencies offer an array of programs encompassing psychological treatment, family support and temporary protection facilities, separate protection, and learning support. These programs aim to mitigate the aftermath of child maltreatment, forestall recurring abuse, and fortify family functions for victimized children [24]. However, these programs are limited as they are typically implemented after abuse. Additionally, the accessibility of counseling, program content, information on the counselor’s expertise, and the oversight of supervision and management remain unclear. Therefore, there is a pressing need to develop educational interventions for abuse prevention and programs to identify and support those vulnerable to abuse.

Second, we explored the moderating influence of gender on the association between child maltreatment and IPV. The theoretical frameworks and empirical studies suggest that individuals who experience violence in childhood may internalize these behaviors as normative, and this internalization process may differ between genders due to differing socialization experiences [6,20]. For women, child maltreatment significantly predicted both perpetration and victimization of IPV. Previous studies suggested that the impact of child maltreatment on IPV perpetration is more substantial for men than women [25], often due to traditional gender roles where men hold greater strength and authority, while women have had fewer opportunities for societal participation [26]. However, our results highlighted the impact of child maltreatment on IPV perpetration among women, not solely victimization. In the context of South Korea, numerous studies corroborate these findings, emphasizing the role of gender inequality and conflicts in patriarchal cultures in relationships [25,26]. Consequently, addressing IPV related to women requires improvements in women’s education levels, changes in gender-role attitudes through economic development, and the implementation of gender-neutral education to prevent child maltreatment. Additionally, safe and healthy relationship skills programs targeting for men should be developed to prevent IPV after experiencing child maltreatment [20].

Third, we analyzed the moderating effect of age on the connection between child maltreatment and IPV, revealing a notable association between age, specifically around 40, and IPV among Korean participants. This analysis significantly predicted that child maltreatment was linked to both perpetration and victimization of IPV at the age of 40, serving as a critical threshold. Notably, child maltreatment suggested that individuals under the age of 40 were more likely to be IPV victims, while those aged 40 or older were more likely to be IPV perpetrators. This observation can be contextualized by the increasing caregiving responsibilities for older parents, coupled with the care burden for unmarried children aged over 40 [27]. Consequently, strengthening household financial security and work-family support can play an important role in preventing IPV among those who have experienced child maltreatment.

Finally, the impact of child maltreatment on IPV was found to be significantly moderated by household income levels. In particular, individuals with an income level of less than 3 million KRW demonstrated a higher likelihood of both perpetrating and falling victim to IPV as a result of child maltreatment. These findings align with the conclusions drawn by [28], indicating that a lower income level elevates the risk of marital violence for both husbands and wives. Several studies have consistently shown a relationship between low-income levels, experiences of child maltreatment, and IPV [5,29]. Therefore, it is crucial to focus on monitoring and addressing the incidence of child maltreatment within low-income families. Implementing relevant interventions through the public health system can effectively prevent IPV. In South Korea, welfare policies, such as income security, medical support, housing assistance, and care services, should be more active to aid
low-income families [30]. Moreover, there is a need for policies that provide multidimensional services, including education targeting newlyweds, prospective parents, and those navigating complex family relations.

A notable strength of this study lies in its diverse and differentiated approach to addressing IPV prevention and resolution. This was achieved by examining the moderating effects of gender, age, and household income level on the relationship between child maltreatment victimization and IPV, using representative national data. Our findings also provide essential insights that can contribute to the development of relevant policies and social services. Nevertheless, this study has some limitations. First, while this study may offer preliminary evidence for domestic violence in the Korean population and valuable guidance for investigating IPV victims, its findings on the moderating effects of gender, age, and household income level in the relationship between child maltreatment and IPV are specific to the Korean context. As such, it is advisable to exercise caution when extrapolating these results to other cultures or countries. We recommend replicating this type of study using nationally collected data from diverse countries to further substantiate and refine our understanding. Finally, the generalizability of these findings may be limited due to the exclusive focus on married participants in analyzing the relationship between IPV and direct experiences of child maltreatment. Additionally, the data sample did not distinguish between individuals who reported both perpetrating and experiencing IPV.

CONCLUSION

This study investigated the relationship between child maltreatment experiences and IPV while examining the moderating effects of gender, age, and household income level. Utilizing data from the 2016 Domestic Violence Survey conducted with the Korean population, our investigation revealed that child maltreatment, being a pervasive experience, may have enduring effects throughout an individual’s lifetime, increasing the likelihood of engaging in IPV. The significance of our research lies in its scrutiny of how gender, age, and household income level moderate the impact of child maltreatment on the likelihood of being an IPV perpetrator or victim. This approach provides a comprehensive understanding of IPV and facilitates the exploration of tailored solutions for each moderator. Our findings advocate for the development of multidimensional interventions targeting specific families, promoting heightened social awareness regarding IPV and the formulation of effective prevention and intervention policies.

CONFLICTS OF INTEREST

Heejung Kim has been an editorial board member since 2018, but had no role in the decision to publish this article. Except for that, no potential conflict of interest relevant to this article was reported.

AUTHOR CONTRIBUTIONS

Conceptualization or/and Methodology: Kwon, OY, Kim, H, & Hong, S
Data curation or/and Analysis: Kwon, OY & Hong, S
Project administration or/and Supervision: Kim, H
Resources or/and Software: Han, YR & Hong, S
Visualization: Kwon, OY & Hong, S
Writing: original draft or/and review & editing: Kwon, OY, Kim, H, & Hong, S

ORCID

Kwon, Oh Young https://orcid.org/0000-0003-3878-9994
Kim, Heejung https://orcid.org/0000-0003-3719-0111
Han, Young Ran https://orcid.org/0000-0002-0539-0496
Hong, Soyun https://orcid.org/0000-0003-4847-3619

REFERENCES


**Appendix 1. Items of the Types of Child Maltreatment and Intimate Partner Violence**

1. Types of child maltreatment experienced by parents.

- **Emotional child maltreatment**
  - Was harsh things, such as abusive language and ignoring words

- **Physical child maltreatment**
  - Was hit my palm or calf with a whip
  - Was hit with hands or kicked
  - Beaten or hurt with a belt, stick, or something else that was hard

- **Neglect**
  - Wasn’t served a meal or wasn’t taken me to the hospital when I was sick.
  - Was left alone even though I had to be with an adult

2. Types of intimate partner violence.

- **Emotional violence**
  - Was insulted or cursed
  - Was threaten to hit
  - Was broken my stuff

- **Economic violence**
  - Didn’t give me any money for household expenditures
  - Disposed of family property at random without my consent
  - Monopolized income and expenditure

- **Physical violence**
  - Was something thrown at me that could hurt me
  - Pushed or grabbed my shoulders or neck tightly
  - Slapped my cheek or body
  - Strangled or intentionally burned
  - Threatened or injured with a knife or other weapon
  - Was hit with a fist or something else that could hurt me
  - Was beaten up mercilessly

- **Sexual violence**
  - Was forced sex even though I didn’t want to
  - Was forced a form of sex that I didn’t want.