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# COMUNICATION BETWEEN CAREGIVERS AND CHILDREN REGARDING INTER-FLOOR NOISE IN MULTI-FAMILY HOUSING: A KOREAN STUDY

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## ABSTRACT

Inter-floor noise in multi-family housing has become a significant source of social conflict leading to neighborly conflicts and legal disputes, with children's footsteps and running and resulting noise being major sources. This study examined whether caregivers' communication skills with children could help mitigate inter-floor noise problems caused by children in Korean multi-family housing. An online survey was conducted among 323 caregivers (119 male, 204 female) with minor children, using a 7-point Likert scale across three components: the Highly Sensitive Person Scale (27 items), neighbor communication survey (15 items), and inter-floor noise-related questions (5 items). Results indicated that female caregivers, more sensitive caregivers, and those with better neighbor communication skills were more proactive in conveying noise reduction messages to their children. The findings suggest that sensitive caregivers are more likely to recognize and address inter-floor noise issues with their children, while those with better neighbor communication skills demonstrate improved social consideration. The study concludes that caregivers in multi-family housing should actively engage in communication with their children about inter-floor noise to reduce disturbances through effective parent-child interactions

**Keywords:** *inter-floor noise, multi-family housing, caregiver-child communication, sensitive caregivers*

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## 1. INTRODUCTION

Inter-floor noise remains a significant source of conflict in multi-family housing environments, particularly in dense urban settings [1], with children's footsteps and running and resulting noise being major sources [2]. Despite increasing awareness of this issue, to the best of our knowledge, no research has been found examining the relationship between caregiver communication and children's behavior causing inter-floor noise. This study investigates the communication patterns between caregivers and minor children regarding inter-floor noise, focusing on how caregiver sensitivity, neighbor communication quality, gender, and family composition influence these interactions. Understanding these dynamics is essential for developing effective interventions to reduce noise-related conflicts and improve community relations in residential settings, ultimately enhancing quality of life for families living in multi-unit dwellings.

## 2. METHOD

### 2.1 Participations and procedure

The subjects of this study were 323 primary caregivers (119 male, 204 female) raising minor children aged under eighteen. We developed a questionnaire on communication between primary caregivers and their children regarding noise between floors, distributed it online, and collected responses. This study was conducted after receiving prior approval from the Institutional Review Board (IRB) of Gwangju University.

### 2.2 Research tools

This study aimed to examine the characteristics of communication between caregivers and minor children

regarding inter-floor noise. The survey used in this study consisted of 27 items from the Highly Sensitive Person Scale (HSPS) [3], 15 items on communication between neighbors (NC) [4], and 5 items related to inter-floor noise communication between children and caregivers. After composing the entire survey, we consulted two experts and finalized the questionnaire. Each survey item was structured on a 7-point Likert scale (1 point - "not at all" to 7 points - "very much so"). The five items related to inter-floor noise communication are shown in Table 1.

**Table 1.** Items for the inter-floor noise-related questions

| No | Questionnaire items |
|---|---|
| 1 | I explain to my child in advance about situations that could cause inter-floor noise |
| 2 | I inform my child that their actions causing inter-floor noise can harm our family and neighbors. |
| 3 | I give warnings when my child engages in behavior that causes inter-floor noise. |
| 4 | I stop my child when they engage in behavior that causes inter-floor noise. |
| 5 | I discuss with my child about conflicts with neighbors caused by inter-floor noise. |

### 2.3 Data Collection and Processing

For this study, a questionnaire was created that could be distributed and collected online. It was distributed to general adults in the form of a URL address. The questionnaire specified the purpose of the research and the contact information of the research director, and included notifications about research ethics and consent to participate. Statistical analyses were performed using Minitab 22.1

## 3. RESULTS

Table 1 lists the main effects of the ANOVA. HSPS, NC, gender, no of family and no of age ≤ 18 significantly affected inter-floor noise-related questions scores. In terms of the Highly Sensitive Person Scale (HSPS), there was a significant difference ($F = 3.38$, $p < 0.05$) among the three sensitivity groups, with the high sensitivity group ($M = 5.70$) scoring significantly higher than the low sensitivity group ($M = 5.35$), while the medium sensitivity group ($M = 5.54$) did not differ significantly from either extreme.

Regarding neighbor communication (NC), a highly significant difference was observed ($F = 18.01$, $p < 0.001$) between the high ($M = 5.75$) and low ($M = 5.31$) groups. Similarly, gender showed a significant effect ($F = 5.07$, $p < 0.05$), with females ($M = 5.66$) reporting higher scores than males ($M = 5.40$).

The number of family members also yielded significant differences ($F = 2.50$, $p < 0.05$). Notably, households with five members showed the highest mean score ($M = 6.39$), which was significantly different from single-person households ($M = 3.47$). Families with two to four members and those with six or more members showed intermediate values that did not differ significantly from each other.

Finally, the number of family members under 18 years of age also demonstrated significant differences ($F = 3.24$, $p < 0.05$). Households with one child under 18 reported the highest scores ($M = 5.87$), significantly differing from households with three children under 18 ($M = 5.01$), while households with two children ($M = 5.72$) showed intermediate scores that were significantly different from those with three children but not from those with one child.

**Table 2.** Results of ANOVA (means that do not share a letter are significantly different; A > B > C)

| Factor | | F<br>P | N | Mean | Group |
|---|---|---|---|---|---|
| HSPS | High | 3.38<br><0.05 | 113 | 5.70 | A |
| | Medium | | 132 | 5.54 | AB |
| | Low | | 78 | 5.35 | B |
| NC | High | 18.01<br><0.001 | 136 | 5.75 | A |
| | Low | | 187 | 5.31 | B |
| Gender | F | 5.07<br><0.05 | 204 | 5.66 | A |
| | M | | 119 | 5.40 | B |
| No of family | 1 | 2.50<br><0.05 | 1 | 3.47 | B |
| | 2 | | 1 | 5.65 | AB |
| | 3 | | 107 | 5.63 | AB |
| | 4 | | 174 | 5.78 | AB |
| | 5 | | 31 | 6.39 | A |
| | >6 | | 9 | 6.27 | AB |
| No of age ≤ 18 | 1 | 3.24<br><0.05 | 128 | 5.87 | A |
| | 2 | | 164 | 5.72 | AB |
| | 3 | | 31 | 5.01 | C |

## 4. DISCUSSION AND SUMMARY

This study examined communication patterns between caregivers and children regarding inter-floor noise. Key findings reveal that highly sensitive caregivers, those with better neighbor communication skills, and female caregivers demonstrate more effective noise-related

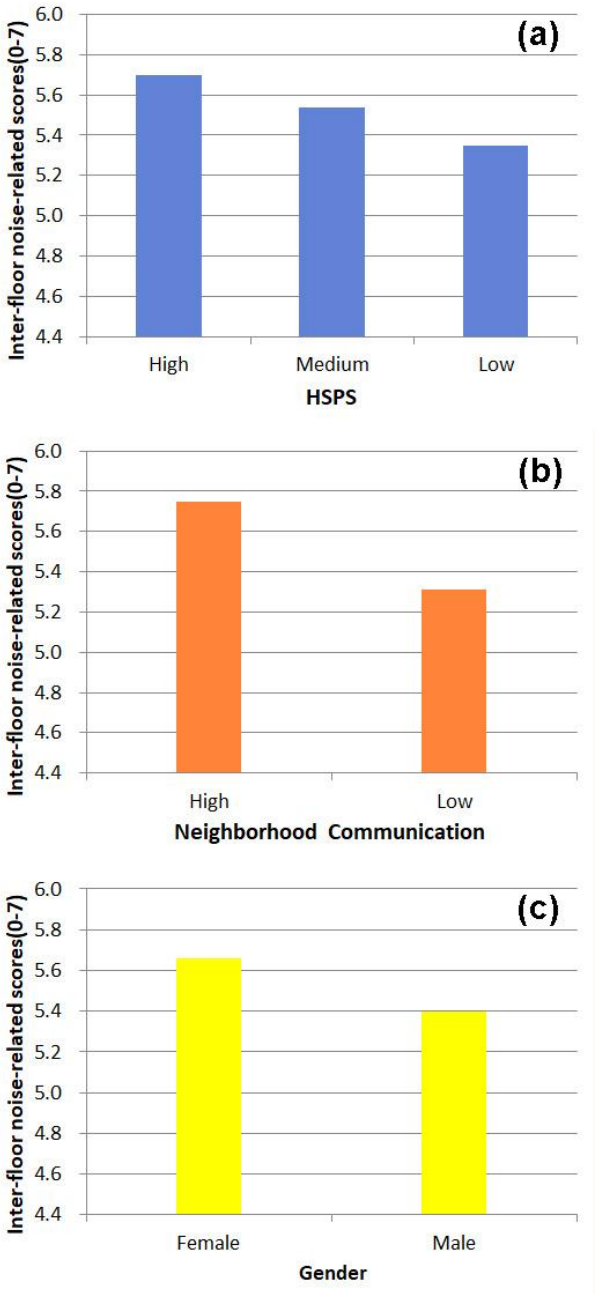


**Figure 1**. Inter-floor noise-related question scores according to HSPS, NC, and gender (a) HSPS, (b) Neighborhood Communication, (c) gender.

communication with children. Family composition significantly impacts communication patterns, with five-member households showing the highest levels of noise awareness communication, while families with fewer children under 18 reported more focused communication. These findings suggest that personal sensitivity, social communication skills, gender dynamics, and family structure all influence how caregivers address noise issues with children. Results highlight the importance of targeted interventions and education programs to improve noise management in multi-family housing environments. Future research should focus on longitudinal studies to assess the sustained impact of these implementation strategies and explore cultural variations in caregiver-child communication regarding environmental behavioral constraints.

## 5. ACKNOWLEDGMENTS

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