Factors Influencing Turnover Intention Among Operating Room Nurses in South Korea

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ABSTRACT

Background: Operating room nurses experience verbal abuse, high levels of job stress, and burnout that may increase turnover intention.

Purpose: This study was designed to investigate and identify factors influencing turnover intention among operating room nurses in South Korea.

Methods: This study used a cross-sectional descriptive design. The sample included 193 nurses, all of whom had over 3 months of work experience at operating rooms in hospitals in Seoul, South Korea. Measures used included the Verbal Abuse Experience Scale, Job Stress Scale, Burnout Scale, and Turnover Intention Scale.

Results: Burnout was found to have the greatest influence on turnover intention (β = .34, p < .001), followed by verbal abuse (β = -.23, p = .004), job stress (β = .22, p = .001), age (β = -.20, p = .032), and job satisfaction (β = -.14, p = .020).

Conclusions/Implications for Practice: The findings support burnout and verbal abuse, respectively, as the most significant and second most significant predictors of turnover intention among operating room nurses in South Korea. These factors should be proactively and effectively addressed to reduce turnover intention in this important group of healthcare professionals.

KEY WORDS: nurse, turnover intention, burnout, verbal abuse, job stress.

Introduction

Nurses are typically the most important and largest contingent of workers in hospital organizations. As of 2019, the number of nurses in South Korea was 215,293, representing 32.9% (excluding nursing assistants) of the total hospital personnel in the country (653,504; Korean Statistical Information Service, 2019). According to an Organization for Economic Cooperation and Development (OECD) report in 2018, South Korea has 12.4 hospital beds per 1,000 population, which is 2.8 times more than the OECD mean number of hospital beds (4.5 beds; Hospital Nurses Association, 2019). The number of nurses per 1,000 population in South Korea is 4.15, which is significantly below the OECD average of 7.5 (Hospital Nurses Association, 2019). The nurse shortage phenomenon in South Korea is attributed to the high number of nurses with active licenses who do not currently work as professional nurses. Thus, encouraging actively licensed nurses to work as nurses is a key strategy to ameliorating and eventually resolving the nursing shortage (Hospital Nurses Association, 2019; Wen et al., 2018).

In hospital organizations, conflicts between medical staff and nurses occur for a variety of reasons, one of which may be the use of inappropriate language used during procedures in the operating room (Choi & Lee, 2017; Gan et al., 2018). Operating room nurses are more likely be exposed to direct verbal abuse than nurses working in other departments of the hospital (Choi & Lee, 2017). The operating environment is very tightly controlled to prevent infections and to minimize factors that interfere with the operation (Choi & Lee, 2017; Gan et al., 2018). Most of the instructions from the surgeons in a surgery team are given unidirectionally and executed immediately, creating a very tense environment (Gan et al., 2018). Most of the perpetrators of verbal abuse are doctors and senior nurses (Roh & Yoo, 2012). The recipients of this abuse experience high levels of job stress, which manifests in symptoms such as decreased self-esteem, psychological disengagement, anger, disappointment, and anxiety (Costello et al., 2011; Lu et al., 2017). Operating room nurses experience high levels of job stress during the preparation process of surgical procedures, management of malfunctions of surgical instruments, disinfection and sterilized equipment management, guidelines for coping with emergencies, and handling and managing cutting-edge medical apparatus (Costello et al., 2011; Lu et al., 2017). Because careless mistakes in the operating room are directly associated with adverse effects, operating room nurses receive rigorous education and training in the clinical practice field (Costello et al., 2011; Shin & Cho, 2013). Moreover, the dynamics and tensions associated with the rigid organizational culture of the operating room during
this process may cause high-intensity stress and lead to burnout in nurses (Shin & Cho, 2013; Vowels et al., 2012).

Burnout reduces the productivity and job performance of operating room nurses, increasing their job stress, thereby resulting in negative situations that lead to turnover intention (Oh & Kim, 2019; Zaheer et al., 2019). Turnover intention differs by department in the operating room that requires a unique expertise (Sasso et al., 2019). Thus, specific attention is needed to reduce turnover intention in operating room nurses.

Turnover intention decreases the quality of surgical nursing care for patients, deteriorates the quality of medical services provided, and hinders the ability of nurses to cope effectively with emergency situations (Vowels et al., 2012; Wen et al., 2018). Thus, strategies are necessary to reduce turnover intention and burnout in operating room nurses (Sasso et al., 2019; Shi et al., 2018). However, studies must first be conducted to determine the factors affecting turnover intention in this group of professional nurses.

Previous studies on turnover intention in nurses have focused mainly on emotional labor, job satisfaction, job stress, and burnout (Fontes et al., 2019; Hatamizadeh et al., 2019; Labrague et al., 2018). Furthermore, studies conducted on operating room nurses have investigated experiences of violence, job stress, and turnover intention (Roh & Yoo, 2012; Vowels et al., 2012); the associations between verbal abuse experience and mental health (B. Y. Park & Lee, 2012; Zhou & Gong, 2015); and operating room organizational culture (Dahl et al., 2017; Huang et al., 2019). Little research has been conducted to date on the predictive relationship among verbal abuse, job stress, burnout, and turnover intention in operating room nurses.

The incidence of verbal abuse among medical staff is increasing in hospitals worldwide (Dahl et al., 2017; Labrague et al., 2018). It is expected that this study on the verbal abuse experience of nurses in the operating room will help raise the overall understanding of verbal abuse in hospitals. In addition, the findings of this study may provide valuable insights to help prevent verbal abuse, ultimately, to improve the quality of healthcare and nursing practice.

The purpose of this study was to investigate factors influencing turnover intention among operating room nurses in South Korea. The aims were to (a) identify the general characteristics of operating room nurses and work-related characteristics, (b) determine the degree of turnover intention and related factors, (c) determine the correlation between the turnover intention and related factors, and (d) examine factors influencing turnover intention.

Methods

Participants

A cross-sectional descriptive design was used in this study. The participants included 193 nurses currently working in operating rooms in hospitals in Seoul, South Korea. All of the participants had worked in operating rooms for at least 3 months and were recruited using convenience sampling. Eligibility criteria included age over 20 years, a nurse to participate in this study, understanding of the purpose of this study, and ability to communicate in Korean. Those who were scheduled to take work in other, nonoperating room departments or to take childcare leave were excluded. Of the 200 questionnaires distributed, 193 (97.5%) were answered. After excluding two questionnaires for incomplete data, data from 193 participants were included in the final data set.

Sample size adequacy ($N = 187$) was estimated using G*Power 3 analysis software based on an alpha level $= .05$, conventional medium effect size $= 0.15$, and power $= 0.80$ (Faul et al., 2007). The sample size was assessed as adequate.

Measures

The 17-item general demographic and work-related characteristics survey created by the researchers gathered information on participants’ gender, age, marital status, religion, educational level, total clinical experience, operating room experience, annual income, position, work, working background, working style, job satisfaction, turnover experience, annual verbal abuse experience, experience of considering moving departments because of verbal abuse, and experience of considering turnover because of verbal abuse.

The Turnover Intention Scale used in this study was created by Lawler (1983) and revised by Kim and Park (1995) into a validated Korean version and was designed to measure turnover intention in operating room nurses. This scale consists of seven questions that are scored using a 5-point Likert scale, with a total possible score range of 7–35 points and higher scores indicating higher turnover intention. The reliability of the scale in this study was Cronbach’s $\alpha = .89$.

The Verbal Abuse Experience Scale was developed by Nam et al. (2005) to measure degree of verbal abuse experience. This scale consists of 26 questions that are scored using a 5-point Likert scale, with a total possible score range of 26–130 points. This scale includes two subcategories, by physician area (13 items) and by nurse area (13 items). Higher scale scores indicate higher degrees of verbal abuse experience. The reliability of the scale in this study was Cronbach’s $\alpha = .94$.

The Job Stress Scale was developed by Gu and Kim (1985) to measure degree of job stress. This scale consists of 43 questions that are scored using a 5-point Likert scale, with a total possible score range of 43–215 points. This scale includes nine subcategories, including nursing duty (six items), role conflict (five items), expert knowledge (four items), conflict with doctor (three items), psychological burden (three items), interpersonal relationship (six items), treatment for nurses (five items), work schedule (seven items), and caregivers (family) and patients (four items). Higher scale scores indicate higher degrees of job stress. The reliability of the scale in this study was Cronbach’s $\alpha = .86$.

The Burnout Scale was developed by Pines and Maslach (1978) and revised by Hong (1985) into a validated Korean
version to measure burnout. This scale consists of 21 questions that are scored using a 4-point Likert scale, with a total possible score range of 21–84 points and higher scores indicating greater burnout. The reliability of the scale in this study was Cronbach’s α = .89.

Data Collection
Data were collected from September to December 2017. Hospitals with operating rooms were visited to obtain permission to conduct this study. Researchers contacted prospective study participants to discuss the study purpose and provide details about participation and the study questionnaire. Questionnaires were distributed only to qualified nurses who provided informed consent to participate. The survey consisted of the self-reported questionnaire managed by researchers. The average time needed to complete the questionnaire was 20–25 minutes.

Data Analysis
IBM SPSS Statistics 23.0 (IBM Inc., Armonk, NY, USA) software was used to analyze the collected data. The general characteristics of the participants and job-related characteristics were analyzed using descriptive statistics. Pearson’s correlation coefficient was used to analyze the correlations among study variables related to turnover intention. Multiple regression analysis was used to investigate factors influencing turnover intention. A p value of less than .05 was considered statistically significant.

Ethical Considerations
The institutional review board of a hospital in Seoul, Korea, approved this study (IRB No. S2017-1501-0002). Participants were informed that participation was voluntary and that they could withdraw at any time if desired. The researchers obtained completed written consent forms from eligible nurses before participation.

Results

General Characteristics of the Participants and Work-Related Characteristics
Most of the participants were women (women: 176, 91.2%; male: 17, 8.8%). Their average age was 30.78 years; 129 (66.8%) were single, and 64 (33.2%) were married; 103 nurses (53.4%) had 5 or fewer years of operating room experience; and most served as general nurses (180, 93.3%). In terms of working background, 140 nurses (72.5%) were working in the operating room by personal hope. Eighty-seven participants (45.1%) self-reported as having a moderate level of job satisfaction, and 78 (40.4%) self-reported as having a good level of job satisfaction. Most (171, 88.6%) of the participants had no prior turnover experience. The largest verbal abuse experience group was 1–5 (times/year) with 76 nurses (39.4%). Sixty-nine (35.8%) self-reported as having experienced considering turnover because of verbal abuse, and 82 (42.5%) self-reported as having experienced considering turnover because of verbal abuse (see Table 1).

Levels of Verbal Abuse Experience, Job Stress, Burnout, and Turnover Intention
Mean score for turnover intention was 22.02, indicating a slightly high turnover intention compared with the median (21). Mean score for verbal abuse experience was 62.67, indicating a low verbal abuse experience compared with the median (78), with verbal abuse incidents from doctors significantly higher than verbal abuse incidents from other nurses. The mean score for job stress was 154.49, indicating a significantly higher level of job stress than the median (129), and in terms of job stress subcategories, scores for nursing duty (mean: 4.02) and conflict with doctors (mean: 3.93) were higher than other subcategory scores. The mean score for burnout was 52.78, indicating a slightly higher level of burnout compared with the median (52; see Table 2).

Correlations Among Verbal Abuse Experience, Job Stress, Burnout, and Turnover Intention
The correlation analyses for verbal abuse experience (r = .425, p < .001), job stress (r = .440, p < .001), and burnout (r = .595, p < .001) in relation to the degree of turnover intention all showed significantly positive correlations, with higher verbal abuse experience, job stress, and burnout scores associated with higher turnover intention (see Table 3).

Factors of Influence on Turnover Intention
The assumptions of the regression model were tested to determine the suitability of study data for regression analysis. Homoscedasticity was confirmed by examining the residual plot. The autocorrelation of the error was tested using Durbin–Watson to verify the independence of the residuals, obtaining a statistic of 1.657, which was between 1.594 and 1.762 and thus satisfied the assumptions of regression equation without autocorrelation. In addition, the tolerance of multicollinearity was .292–.752, which was more than .100, and the variance inflation factor was 1.329–3.430, which did not exceed 10, showing that the variables were not affected by multicollinearity.

Multiple regression analyses of the verbal abuse experience, job stress, and burnout of the participants were performed to identify the major factors influencing turnover intention among operating room nurses. The analyses presented that the prediction model of turnover intention among operating room nurses was statistically significant (F = 15.511, p < .001). The adjusted value of R² was .514, which corresponds to an explanatory power of 51.4%. Burnout was the factor shown to most significantly influence turnover intention (β = .34, p < .001), followed by verbal abuse (β = -.23, p = .004), job stress
In terms of verbal abuse experience, the verbal abuse experience score was higher for physician–nurse than nurse–nurse. This finding differs from many previous studies of general ward nurses, which found the highest score for verbal abuse experience to be with patients and caregivers, followed by physician–nurse and nurse–nurse, respectively (Gan et al., 2018; M. S. Im et al., 2017). Patient and caregiver-origin verbal abuse rarely happens in the operating room (E. K. Park & Na, 2015). This is likely attributable to the significantly different natures of the working environments in operating rooms and general wards (Gan et al., 2018; E. K. Park & Na, 2015).

The level of job stress experienced by the participants in this study was similar to the findings of Roh and Yoo (2012) and B. Y. Park and Lee (2012). Among the subdomains of job stress, the highest score was earned by “nursing duty,” followed by “conflict with doctor,” “work schedule,” and “role conflict.” The job stress perceived by operating room nurses may relate to the specific situation of each operating room, where the nurses must directly and immediately deal with human life and perform duties in cooperation with other medical staff. In addition, as the operation methods of all departments become increasingly varied, subdivided, and complex (B. Y. Park & Lee, 2012), the stress perceived by nurses is likely to

Table 1
General Demographic and Work-Related Characteristics (N = 193), Continued

| Characteristic | n   | %   |
|----------------|-----|-----|
| Second shift   | 9   | 4.7 |
| Third shift    | 135 | 69.9|
| Job satisfaction |    |     |
| Bad            | 28  | 14.5|
| Moderate       | 87  | 45.1|
| Good           | 78  | 40.4|
| Turnover experience |    |     |
| Yes            | 22  | 11.4|
| No             | 171 | 88.6|
| Number of verbal abuse experiences (times/year) |    |     |
| 0              | 55  | 28.5|
| 1–5            | 76  | 39.4|
| 6–10           | 27  | 14.0|
| 11–50          | 12  | 6.2 |
| ≥ 51           | 23  | 11.9|
| Experience of considering moving departments because of verbal abuse |    |     |
| Yes            | 69  | 35.8|
| No             | 124 | 64.2|
| Experience of considering turnover because of verbal abuse |    |     |
| Yes            | 82  | 42.5|
| No             | 111 | 57.5|

(β = .22, p = .001), age (β = −.20, p = .032), and job satisfaction (β = −.14, p = .020; Table 4).

Discussion

In terms of verbal abuse experience, the verbal abuse experience score was higher for physician–nurse than nurse–nurse. This finding differs from many previous studies of general ward nurses, which found the highest score for verbal abuse experience to be with patients and caregivers, followed by physician–nurse and nurse–nurse, respectively (Gan et al., 2018; M. S. Im et al., 2017). Patient and caregiver-origin verbal abuse rarely happens in the operating room (E. K. Park & Na, 2015). This is likely attributable to the significantly different natures of the working environments in operating rooms and general wards (Gan et al., 2018; E. K. Park & Na, 2015).

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increase, as they are expected to perform consistently, correctly, and quickly (Roh & Yoo, 2012; Shi et al., 2018). The average self-reported burnout level in this study differed from the levels reported in E. K. Park and Na (2015), M. S. Im et al. (2017), and S. B. Im et al. (2013). This suggests that the burnout level is higher among emergency room and intensive care unit nurses but relatively lower in operating room and general ward nurses. In this study, the burnout level was somewhat higher than in these previous studies. An additional study on burnout in operating room nurses will be necessary to clarify this issue further.

The level of turnover intention among the participants in this study was high, which echoed the findings of Shin and Cho (2013) and Eo et al. (2015). Turnover intention is likely highly associated with the nature of the department. Operating rooms place a high demand on nurses, including a high degree of concentration and promptness, expert knowledge and skills related to surgical procedures, and patient safety management related to surgery. As a result, work intensity in operating rooms is very high, which increases turnover intention.

In this study, the experiences of verbal abuse, job stress, and burnout were shown to relate positively with turnover intention, thus supporting the findings of Lee and Kim (2017) and Shin and Cho (2013). On the basis of these results, having experiences of verbal abuse, job stress, and burnout increased turnover intention. Therefore, it may be assumed that turnover intention in operating room nurses may be reduced by assessing these experiences and resolving the related problems.

Finally, the factors influencing turnover intention of the operating room nurses included burnout and the experience of considering turnover because of (ranked by importance) verbal abuse, job stress, age, and job satisfaction. Burnout was the factor found to most significantly impact turnover intention. Operating room nurses feel stressed because they often work in stressful situations and must respond promptly to different case needs (Choi & Lee, 2017; Vowels et al., 2012; Yanchus et al., 2017). They must pace their work to meet situational needs beyond their control, which increases their mental, physical, and neurosensory fatigue (Duan et al., 2019; Shi et al., 2018; Zhao et al., 2018). Unresolved and regularly repeated stress experiences lead eventually to burnout (Choi & Lee, 2017; Duan et al., 2019; Shi et al., 2018). A study (Lee & Kim, 2017) of clinical nurses analyzed burnout in the outpatient clinic, ward, emergency room, intensive care unit, operating room, and other departments. It was found that

### Table 2
Levels of Verbal Abuse Experience, Job Stress, Burnout, and Turnover Intention (N = 193)

| Variable                          | Range (Point) | M    | SD   | Grade Point Average |
|-----------------------------------|---------------|------|------|---------------------|
|                                   |               |      |      | M                  | SD     |
| Verbal abuse experience (score)   |               |      |      |                     |        |
| By doctor                         | 13–65         | 32.18| 8.97 | 2.48                | 0.69   |
| By nurse                          | 13–65         | 30.49| 10.42| 2.35                | 0.80   |
| Total                             | 26–130        | 62.67| 17.57| 2.41                | 0.68   |
| Job stress (score)                |               |      |      |                     |        |
| Nursing duty                      | 6–30          | 24.14| 3.68 | 4.02                | 0.61   |
| Role conflict                     | 5–25          | 17.66| 3.75 | 3.53                | 0.75   |
| Expert knowledge                  | 4–20          | 13.25| 2.81 | 3.31                | 0.70   |
| Conflict with doctor              | 3–15          | 11.79| 2.36 | 3.93                | 0.79   |
| Psychological burden              | 3–15          | 10.53| 2.36 | 3.51                | 0.79   |
| Interpersonal relationship        | 6–30          | 20.69| 4.22 | 3.45                | 0.70   |
| Treatment for nurses              | 5–25          | 15.82| 3.93 | 3.16                | 0.79   |
| Work schedule                     | 7–35          | 26.59| 6.41 | 3.79                | 0.92   |
| Caregivers (family) and patients  | 4–20          | 14.01| 3.81 | 3.50                | 0.95   |
| Total                             | 43–215        | 154.49| 24.88| 3.59                | 0.58   |
| Burnout (score)                   | 21–84         | 52.78| 10.25| 2.51                | 0.49   |
| Turnover intention (score)        | 7–35          | 22.02| 6.05 | 3.15                | 0.86   |

### Table 3
Correlations Among Verbal Abuse Experience, Job Stress, Burnout, and Turnover Intention (N = 193)

| Variable                          | Verbal Abuse Experience | Job Stress | Burnout | Turnover Intention |
|-----------------------------------|-------------------------|------------|---------|--------------------|
| Verbal abuse experience           | 1                       |            |         |                    |
| Job stress                        | .463***                 | 1          |         |                    |
| Burnout                           | .377***                 | .386***    | 1       |                    |
| Turnover intention                | .425***                 | .440***    | .595*** | 1                  |

**p < .001.
operating room nurses experienced the highest level of burnout. The experience of repeated burnout decreases job satisfaction in nurses, thereby making them apathetic toward patients and colleagues (Hatamizadeh et al., 2019; Lee & Kim, 2017; Lu et al., 2017). Nurses treat them as clerical, and they may eventually quit the nursing profession (Labrague et al., 2018; Lee & Kim, 2017; Lu et al., 2017). However, only a few studies have specifically investigated the issue of burnout in operating room nurses. Future related studies are needed to accurately determine the burnout experienced by operating room nurses and establish preventive measures.

In this study, considering turnover because of verbal abuse was a factor found to affect turnover in operating nurses. This is different from experiencing verbal abuse and either ignoring it or considering it unavoidable. This implies that if a nurse has an experience of considering the turnover, the turnover intention is continuously high, and the experience of verbal abuse becomes a psychological trauma that is painful for the individual. Once a nurse is exposed to violence, more than 1 day is required for that nurse to resume normal performance of professional duties. This result is also consistent with the finding that a long period is required for psychological recovery, as it takes more than several weeks to several months to overcome violence-related pain (Gan et al., 2018; Lee & Kim, 2017; Luo et al., 2018). In other words, attention must be paid to the fact that the experience of verbal abuse is not only related to the situation that the person is exposed to but also to the subsequent life of the victim, as it is an irreversible experience that necessitates preventing recurrence and effectively changing the organizational culture.

### Limitations

This study was affected by several limitations. First, generalization of the results is limited by the convenience approach used to collect the study data. Only a small number of the nurses working in operating rooms in Seoul, South Korea, were investigated. The experience and characteristics of operating room nurses may differ significantly among different geographic areas and socioeconomic situations. In addition, only a limited set of potential factors influencing turnover intention was examined in this study.

### Conclusions

On the basis of the findings, factors that significantly influence turnover intention in operating nurses should be incorporated by nursing management into measures to prevent turnover. To prevent verbal abuse toward operating room nurses, it is necessary to supplement the regulations and policies in the operating room and to implement specific, evidence-based measures suitable for the operating room situation in the hospital. Furthermore, it is necessary to implement improvement measures in the hospital to reduce the job stress perceived by operating room nurses and to help them better cope with stressful situations. To lower turnover intention among operating room nurses, various issues related to education, insufficient manpower, improvement of the instruments and environment in the process of preparing and performing surgery, and systematic and efficient system construction should be addressed and rectified.

To provide basic data for stable and efficient nursing manpower management and to effectively reduce turnover among

### Table 4

| Variable                              | B     | SE   | β     | t     | p    |
|---------------------------------------|-------|------|-------|-------|------|
| Constant                              | 12.77 | 4.79 | 2.67  | .008  |      |
| Verbal abuse experience               | 0.02  | 0.02 | .05   | 0.71  | .770 |
| Job stress                            | 0.05  | 0.02 | .22   | 3.29  | .001*|
| Burnout                               | 0.20  | 0.04 | .34   | 5.18  | < .001*** |
| Gender                                | -1.21 | 1.47 | -0.06 | -0.82 | .110 |
| Age                                   | -0.87 | 0.40 | -0.20 | -2.16 | .032*|
| Marital status                        | -0.02 | 0.89 | -0.01 | -0.03 | .980 |
| Annual income (10,000 won)            | -1.94 | 0.00 | -0.01 | -0.05 | .960 |
| Position                              | 1.17  | 1.66 | 0.05  | 0.71  | .481 |
| Work                                  | 0.44  | 0.63 | 0.05  | 0.70  | .486 |
| Work format                           | 0.79  | 0.44 | 0.11  | 1.77  | .079 |
| Job satisfaction                      | -1.18 | 0.50 | -0.14 | -2.35 | .020*|
| Number of verbal abuse experiences (times/year) | -0.12 | 0.28 | -0.03 | -0.43 | .670 |
| Experience of considering moving departments because of verbal abuse | -0.71 | 0.93 | -0.06 | -0.76 | .449 |
| Experience of considering turnover because of verbal abuse | -2.74 | 0.95 | -2.33 | -2.88 | .004** |

Note. Adjusted $R^2 = .514$, $F = 15.511$, and $p < .001$.

*p < .05. **p < .01. ***p < .001.
Factors Influencing Turnover Intention

Operating room nurses, further studies should be conducted to analyze burnout-related turnover intention and the experience of considering turnover because of verbal abuse, job stress, age, and job satisfaction. In addition, in-depth studies using quantitative and qualitative research methods are needed on the cause, situation, environment, and personal characteristics of burnout among operating room nurses. Factors that influence turnover intention in operating room nurses should be expanded and studied to develop verbal-abuse-related prevention and intervention programs. Furthermore, experimental studies to verify the effects of job stress and burnout of operating room nurses must be conducted in the future.

In conclusion, the study results showed that the turnover intention among operating room nurses was correlated with burnout and the experience of considering turnover because of verbal abuse, job stress, age, and job satisfaction. In particular, burnout, experience of considering turnover because of verbal abuse, and job stress were identified as the most influential factors. This study may help lay the groundwork for specific nursing care programs to reduce turnover intention among operating room nurses working in South Korea. In addition, it is hoped that this study adds to overall scholarly knowledge on this issue.

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Study conception and design: All authors
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Data analysis and interpretation: MG, SRS
Drafting of the article: All authors
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