



## Original Article

# Factors Influencing Nurses' Job Performance in Korea and Mongolia: A Cross-Sectional Study

Bayarsaikhan, Zolzaya<sup>1)</sup> · Shin, YunHee<sup>2)</sup>

1) Graduate Student, Wonju College of Nursing, The Graduate School Yonsei University, Wonju, Korea

2) Professor, Wonju College of Nursing, Yonsei University, Wonju, Korea

**Purpose:** This study aimed to identify the factors influencing job performance among Korean and Mongolian nurses.

**Methods:** This descriptive cross-sectional study was conducted to identify the factors affecting job performance among Korean and Mongolian nurses. In Korea, data collected using paper questionnaires from 129 nurses in wards caring for cancer patients were analyzed. In Mongolia, data from 131 individuals collected through an online questionnaire were analyzed. Descriptive statistics, the independent t-test, one-way analysis of variance, Pearson's correlation coefficients, and multiple regression analysis with SPSS/WIN 25.0 were utilized for data analysis. **Results:** Multiple regression analysis revealed that based on the Korean data, grit ( $\beta=.35$ ,  $p<.001$ ) and social support ( $\beta=.29$ ,  $p=.001$ ) were the main variables explaining job performance. The explanatory power of the model was approximately 41%. Meanwhile, multiple regression analysis of the Mongolian data revealed grit ( $\beta=.37$ ,  $p=.001$ ) and age ( $\beta=-.19$ ,  $p=.027$ ) as the main variables explaining job performance. The explanatory power of the model was approximately 8%. **Conclusion:** Grit strongly affected the job performance of nurses in both countries. Their grit may be improved by developing educational programs that help nurses clearly set self-development goals and ultimately improve their job performance. As social support also significantly affected the job performance of Korean nurses, this factor may be considered in improving the job performance of nurses in Mongolia.

**Key Words:** Burnout; Grit; Job performance; Nurse; Social support

*\*This article is a condensed form the first author's master's thesis from Yonsei University.*

---

Received Jun 22, 2023 Revised Aug 6, 2023 Accepted Aug 18, 2023  
Corresponding author: Shin, YunHee <https://orcid.org/0000-0003-3286-1633>  
Wonju College of Nursing, Yonsei University  
20 Ilsan-ro, Wonju 26426, Korea  
Tel: +82-33-741-0387, Fax: +82-33-741-0378, E-mail: [yhshin@yonsei.ac.kr](mailto:yhshin@yonsei.ac.kr)

## INTRODUCTION

Nurses typically serve as the first point of contact for patients. Consequently, improving the effectiveness of nursing work is directly related to hospital work efficacy and is an important part of nursing job performance [1]. Improving nursing performance is a top priority because exceptional performance in nursing is positively correlated with various favorable outcomes for patients and organizations [2].

Nursing job performance is affected by various internal and external factors; it is sensitive to various work-related conditions [3]. Several studies have examined the influence of work-related conditions on nurses' job performance, including workload [4], coworker caring behaviors [5], burnout [6], and occupational stress [2,4]. Nurses' stress, dissatisfaction, burnout, poor performance, and intention to leave can affect hospitals and patient care.

In Mongolia, 32.5~45.4% of nurses attempt to leave the profession, and they identify burnout as the main factor influencing their intention to leave [7]. Thus, understanding the factors that contribute to social support through peer caring behaviors and burnout may help nurses maintain their work fulfillment and contribute to patient satisfaction. Meanwhile, grit is an important characteristic of nurses. It can significantly affect the job performance of nurses who experience physical and psychological burnout [8]. This study is the first to assess the effect of grit—a positive psychological factor—on the job performance of nurses in Mongolia. In identifying the factors affecting nursing performance, the degree of influence of each factor on nursing performance must be examined while considering burnout, grit, and social support collectively.

Burnout is a syndrome of feelings that results in depersonalization, reduced personal accomplishment, and emotional exhaustion and is experienced by individuals in their workplaces [9]. Burnout among nurses could lead to several negative outcomes for healthcare organizations, such as reduced quality of nursing care, increased intention to leave, and compromised patient safety [10]. Meanwhile, strong social support among peers has been associated with many positive outcomes, such as decrease in the intensity of job stressors and reduced consequences, improvement in job satisfaction, and attainment of high commitment to the organization and nursing as a profession [5,11]. As for grit, people who possess this characteristic aim to realize their planned goals and exert effort to improve their abilities instead of seeking intrinsic rewards or pleasure [12]. The grit of new nurses greatly influences their clinical performance. In addition, prior studies have

proved that grit is necessary for nursing organizations and that it is a variable that affects nursing job performance [13]. However, studies on the relationship between grit and nursing job performance are scarce. Based on previous studies that nurses' grit and social support among peers improve nurses' job performance and that burnout can lead to negative results, this study aims to validate the influence of these variables affect job performance.

Healthcare differs between developed and developing nations and mostly depends on the nation's economic and political stability. For example, South Korea's economy is highly developed and mixed, whereas Mongolia, being one of the world's last-remaining nomadic countries, has an economy that has traditionally been based on agriculture and livestock [14]. South Korea is one of many countries that provide universal and high-quality healthcare for its citizens. At present, it has 8.8 nurses per 1,000 people [15]. By contrast, the Mongolian healthcare system is still developing and provides equitable quality healthcare to all citizens. It currently has 13,000 registered nurses [16] and 4.2 nurses per 1,000 people [17].

Although the socioeconomic situation and medical conditions of the two countries are different, nurses' grit, support through peers, and burnout could hold significance worldwide. Considering this context, the authors hope that the level of nursing care in Mongolia will eventually align with that observed in developed nations. Currently, few studies have simultaneously investigated nursing job performance in developed and developing countries. Therefore, this study aims to discern the elements influencing nurses' job performance in both Korea, globally ranked 6th in terms of power [18], and Mongolia, a developing nation, with each being characterized by unique healthcare conditions. The study seeks to investigate social support, grit, burnout, and job performance in both Mongolia and Korea, while also assessing difference in job performance according to general characteristics and identifying correlations among these variables. Furthermore, this research endeavors to enhance nursing conditions in Mongolia by pinpointing the factors that impact nursing job performance in both countries. These identified factors are intended to serve as benchmarks for fostering qualitative advancements in the nursing profession in Mongolia in the forthcoming years.

## METHODS

### 1. Research Design

This work is a descriptive cross-sectional study aimed

at identifying the factors affecting job performance among Korean and Mongolian nurses.

## 2. Participants

Nurses with a work experience of over six months in tertiary general hospitals situated in Wonju-city, Korea, and Ulaanbaatar, Mongolia, were selected. This timeframe was chosen as it is generally after six months that nurses can function autonomously and fully adapt to their roles [19]. To conduct the multiple regression analysis, the G\*Power 3.1.9.4 program was employed. For the specified parameters—a significance level ( $\alpha$ ) of .05, a test power ( $1-\beta$ ) of .80, an effect size ( $f^2$ ) of 0.15, and 10 predictors (social support, grit, burnout, and seven general characteristics)—a sample size of 118 was deemed necessary. A median effect size of 0.15 was selected in the absence of similar previous studies [20]. Considering a dropout rate of 10.0%, this study finally selected 131 participants.

## 3. Measurements

In Mongolia, the instruments were utilized in their Korean version, following a process of translation and reverse-translation by a bilingual individual proficient in both Korean and Mongolian languages.

### 1) General characteristics

It consists of seven questions on age, gender, marital status, education, position, clinical experience, and department.

### 2) Job performance

The Job Performance Scale developed by Ko et al. [1] was used after obtaining permission from the developer. This scale consists of four factors (i.e., competency, attitude, willingness to improve, and application of the nursing process) and 19 items. Each question is rated on a 4-point Likert scale; the higher the score, the higher the nursing job performance. The Cronbach's  $\alpha$  in the study by Ko et al. [1] was .92. In the current study, Cronbach's  $\alpha$  is .92.

### 3) Social support

The perceived social support scale developed by Park [21] was used after obtaining permission from the developer. This instrument is divided into four subdomains and consists of 23 items, including 9 emotional support items, 7 informational support items, 2 material support items, and 5 evaluation support items. The scores range from 23

to 115, with higher scores indicating higher social support. In Park's study [21], Cronbach's  $\alpha$  was .97. In the present study, Cronbach's  $\alpha$  is .96.

### 4) Burnout

The Korean version of the Maslach Burnout Inventory (MBI) developed by Maslach and Jackson [22] was provided by the developer after approval and payment of the tool use fee. At the time of tool development, Cronbach's  $\alpha$  for all items was .76. As a subdomain of the MBI, the scale consists of 22 items: 9 items on emotional exhaustion, 6 items on dehumanization, and 8 items on lowering of self-fulfillment. The scores range from 22 to 132, with "none" receiving a score of 0 and "daily" receiving a score of 6 points. Positive questions were processed by reverse conversion. Higher scores indicate higher burnout. In this study, Cronbach's  $\alpha$  is .85.

### 5) Grit

Clinical nurses' grit was measured using the Clinical Nurses Grit Scale developed by Park et al. [23] after obtaining permission from the developer. This tool consists of 14 items in three categories: 5 items on persistence to achieve long-term goals, 5 items on passion to become a nursing professional, and 4 items on patient-oriented intrinsic motivation. The scores range from 14 to 56, with higher scores indicating higher grit. The Cronbach's  $\alpha$  in the study by Park et al. [23] was .90. In the current study, Cronbach's  $\alpha$  is .89.

## 4. Ethical Consideration

Data collection was conducted at the Wonju Severance Christian Hospital in Korea from March 8 to March 15 2023 and at the National Cancer Center of Mongolia in Mongolia from March 3 to March 27 2023 after Institutional Review Board approval (CR322151) from the research review committee of the Wonju Severance Christian Hospital.

To protect the ethical well-being of the research participants, a consent form was administered, providing comprehensive information about the study's purpose, methods, risks, and benefits, data privacy and confidentiality, as well as the option to withdraw from the study if desired. The participants were provided with the contact information of the researcher and research review committee should they have inquiries. The completed questionnaires were placed in envelopes and then sealed to ensure the confidentiality of the data. All collected data were kept confidential and coded to prevent information exposure. The collected data were safely stored in a locked place, en-

rypted and computerized, and a security password was set up and managed on the researcher's computer to restrict access by others. They will remain stored for three years, which is the statutory mandatory storage period.

## 5. Data Collection

In Korea, following the authorization for data collection, the administrative team of the Nursing Bureau assisted in determining the number of nurses who had worked for more than 6 months in proportion to the number of nurses in each ward. Following this, the researcher visited each ward and distributed 131 copies of the questionnaire. A total of 129 copies (98.5%) were recovered and analyzed, except for two instances that lacked signatures on the consent form. In Mongolia, a total of 131 copies (100%) were collected through a web-based survey. With the help of the chief of nursing of the National Cancer Center of Mongolia, one fellow nurse was selected as a research assistant, who delivered the study explanation and consent form to the participants, and then received an e-mail to send the survey link to the participants who agreed to participate in the study. The questionnaire was designed for automatic online submission upon completion by the participants.

## 6. Data Analysis

The collected data were analyzed by country using IBM SPSS Statistics 25.0. The general participant characteristics were analyzed using percentage, frequency, mean, and standard deviation. The participants' social support, burnout, grit, and job performance were analyzed using mean and standard deviation. Pearson's correlation coefficient, independent t-test, and one-way analysis of variance were performed to understand the differences in job performance according to the general characteristics of the participants. Pearson's correlation coefficient was used to understand the correlation between social support, burnout, grit, and job performance of the study participants. Multiple regression analysis using the enter method was used to verify the effects of the social support, burnout, and grit of the study participants on job performance.

# RESULTS

## 1. Demographic Characteristics of South Korean and Mongolian Participants

The average age of the Korean participants was 30.40

$\pm 7.34$  years. Moreover, 119 (92.2%) participants were females, 87 (67.4%) were unmarried, 109 (84.5%) graduated from university, 126 (97.7%) were staff nurses, and 63 (48.8%) were in the medical ward. A total of 59 participants (45.7%) possessed clinical experience exceeding 5 years. Among the Mongolian participants, the average age was  $31.29 \pm 6.87$  years. Moreover, 126 were females (96.2%), 49 (37.4%) were unmarried, 105 (80.2%) graduated from university, 127 (97.9%) were staff nurses, and 62 (47.3%) worked in the surgical ward. Of the participants, 85 (64.9%) had accumulated clinical experience exceeding 5 years (Table 1).

## 2. Social Support, Burnout, Grit, and Job Performance among Korean and Mongolian Nurses

Social support was scored at  $3.66 \pm 0.56$  and  $3.27 \pm 0.67$  out of 5 points in Korea and Mongolia, respectively. Out of 6 points, burnout was scored at  $3.03 \pm 0.72$  and  $3.16 \pm 0.77$  in Korea and Mongolia, respectively. Meanwhile, grit was scored at  $2.89 \pm 0.38$  and  $3.06 \pm 0.43$  out of 4 points in Korea and Mongolia, respectively. Finally, job performance was scored at  $3.12 \pm 0.31$  and  $3.43 \pm 0.30$  out of 4 points in Korea and Mongolia, respectively (Table 2).

## 3. Differences in Job Performance according to Demographic Characteristics

In the Korean context, only age exhibited a significant correlation with job performance ( $r = .23, p = .009$ ), indicating that as age increases, job performance tends to be higher. No significant differences in job performance were noted in relation to the other characteristics (Table 3).

## 4. Correlation between Social Support, Burnout, Grit, and Job Performance

In the Korean data, job performance was significantly correlated with social support ( $r = .54, p < .001$ ), burnout ( $r = -.37, p < .001$ ), and grit ( $r = .58, p < .001$ ). That is, the higher the social support and grit, the higher the job performance. In Mongolia, job performance and grit were significantly correlated ( $r = .25, p = .003$ ). That is, the higher the grit, the higher the job performance (Table 4).

## 5. Factors affecting Job Performance among Korean and Mongolian Participants

A multiple regression analysis was conducted to examine the relationship of the major independent variables of

**Table 1.** Demographic Characteristics of Participants in South Korea and Mongolia

Characteristics	Categories	South Korea (n=129)	Mongolia (n=131)
		n (%) or M±SD	n (%) or M±SD
Age (year)		30.40±7.34	31.29±6.87
Gender	Men	10 (7.8)	5 (3.8)
	Women	119 (92.2)	126 (96.2)
Marital status	Unmarried	87 (67.4)	49 (37.4)
	Married	42 (32.6)	82 (62.6)
Education	College	11 (8.5)	16 (12.2)
	University	109 (84.5)	105 (80.2)
	Graduate school	9 (7.0)	10 (7.6)
Position	Staff nurse	126 (97.7)	127 (97.9)
	≥ Unit manager	3 (2.3)	4 (3.1)
Clinical experience (year)	< 1	14 (10.9)	10 (7.6)
	1~<3	28 (21.7)	17 (13.0)
	3~<5	28 (21.7)	19 (14.5)
	≥5	59 (45.7)	85 (64.9)
Department	Medical ward	63 (48.8)	12 (9.2)
	Surgical ward	26 (20.2)	62 (47.3)
	ER	1 (0.8)	11 (8.4)
	ICU	19 (14.7)	14 (10.7)
	Other †	20 (15.5)	32 (24.4)

ER=emergency room; ICU=intensive care unit; M=mean; SD=standard deviation; † Supporting departments such as radiology.

**Table 2.** Social Support, Burnout, Grit, and Job Performance in Korea and Mongolia

Variables	n	South Korea (n=129)		Mongolia (n=131)	
		M±SD	Range	M±SD	Range
Overall social support	23	3.66±0.56	2.0~5.0	3.27±0.67	1.3~5.0
Emotional support	9	3.63±0.71	1.6~5.0	3.25±1.02	1.2~5.0
Information support	7	3.72±0.71	1.7~5.0	3.28±0.99	1~5
Material support	2	3.58±0.82	1~5	3.21±1.10	1~5
Evaluation support	5	3.63±0.76	1.6~5.0	3.32±1.01	1~5
Overall burnout	22	3.03±0.72	0.9~6.0	3.16±0.77	0~6
Emotional exhaustion	9	3.20±1.30	0~6	3.27±1.61	0~6
Dehumanization	5	3.21±1.60	0~6	3.39±1.70	0~6
Low self-fulfillment	8	2.73±1.40	0.3~6.0	2.89±1.82	0~6
Overall grit	14	2.89±0.38	2~4	3.06±0.43	2.1~4.0
Persistence to achieve long-term goals	5	2.64±0.65	1~4	3.00±0.74	1~4
The passion to become a nursing professional	5	3.04±0.47	1.6~4.0	3.14±0.65	1.2~4.0
Patient-oriented intrinsic motivation	4	3.02±0.61	1~4	3.06±0.70	1.2~4.0
Overall Job performance	19	3.12±0.31	2.5~4.0	3.43±0.30	2.5~4.0
Competency	7	3.15±0.46	2.1~4.0	3.46±0.55	2~4
Attitude	4	3.08±0.51	1.7~4.0	3.42±0.57	1.7~4.0
Willingness to improve	3	3.03±0.54	2~4	3.38±0.60	1.6~4.0
Application of nursing processes	5	3.18±0.46	2~4	3.45±0.57	1.6~4.0

M=mean; SD=standard deviation.

social support, burnout, grit, and age with nursing job performance in Korea (Table 5).

According to the collinearity statistics of the regression

model for the Korean data, the tolerance of social support, burnout, grit, and age was over 0.10, ranging from 0.59 to 0.89. Meanwhile, the variance inflation factor (VIF) was

**Table 3.** Difference in Job Performance according to Demographic Characteristics

Characteristics	Categories	South Korea Job performance			Mongolia Job performance		
		n	M±SD	t or F or r (p)	n	M±SD	t or F or r (p)
Age (year)		129	3.12±0.31	.23 (.009)	131	3.43±0.30	-.12 (.162)
Gender	Men	10	3.12±0.33	-0.06 (.949)	5	3.28±0.31	-1.17 (.244)
	Women	119	3.12±0.31		126	3.44±0.30	
Marital	Unmarried	87	3.11±0.29	-0.50 (.613)	49	3.47±0.27	1.07 (.283)
	Married	42	3.14±0.37		82	3.41±0.31	
Education	College	11	3.00±0.17	1.45 (.240)	16	3.46±0.33	2.63 (.076)
	University	109	3.13±0.32		105	3.41±0.29	
	Graduate school	9	3.23±0.41		10	3.64±0.24	
Position	Staff nurse	126	3.12±0.31	0.55 (.459)	127	3.43±0.30	0.24 (.626)
	≥ Unit manager	3	3.26±0.50		4	3.51±0.26	
Clinical experience (year)	<1	14	2.96±0.28	1.88 (.136)	10	3.53±0.30	0.37 (.774)
	1~<3	28	3.09±0.30		17	3.44±0.31	
	3~<5	28	3.12±0.28		19	3.41±0.33	
	≥5	59	3.17±0.34		85	3.43±0.29	
Department	Medical ward	63	3.04±0.27	2.26 (.066)	12	3.39±0.26	1.02 (.399)
	Surgical ward	26	3.18±0.32		62	3.48±0.27	
	ER	1	3.05		11	3.48±0.40	
	ICU	19	3.20±0.33		14	3.40±0.39	
	Other <sup>†</sup>	20	3.23±0.38		32	3.36±0.27	

ER=emergency room; ICU=intensive care unit; M=mean; SD=standard deviation; <sup>†</sup>Supporting departments such as radiology.

**Table 4.** Correlation between Social Support, Burnout, Grit, and Job Performance

Variables	South Korea (n=129)			Mongolia (n=131)		
	Social support	Burnout	Grit	Social support	Burnout	Grit
	r (p)	r (p)	r (p)	r (p)	r (p)	r (p)
Burnout	-.36 (<.001)			-.48 (<.001)		
Grit	.58 (<.001)	-.42 (<.001)		.38 (<.001)	-.57 (<.001)	
Job performance	.54 (<.001)	-.37 (<.001)	.58 (<.001)	.08 (.355)	-.06 (.468)	.25 (.003)

**Table 5.** Factors Affecting Job Performance in Korean and Mongolian Participants

Country	Variables	B	SE	β	t	p	Tolerance	VIF
South Korea	Age	0.04	.02	.10	1.50	.134	0.89	1.12
	Social support	0.16	.04	.29	3.46	.001	0.63	1.58
	Burnout	-0.04	.03	-.09	-1.20	.231	0.76	1.31
	Grit	0.28	.07	.35	3.96	<.001	0.59	1.69
R <sup>2</sup> =.43, Adjust R <sup>2</sup> =.41, F=23.01, p<.001, Durbin-Watson=2.18								
Mongolia	Age	-0.07	.03	-.19	-2.24	.027	0.93	1.08
	Social support	-0.00	.04	-.16	-.163	.871	0.72	1.38
	Burnout	-0.06	.05	.13	1.19	.234	0.58	1.72
	Grit	0.26	.07	.37	3.52	.001	0.62	1.08
R <sup>2</sup> =.11, Adjust R <sup>2</sup> =.08, F=3.93, p<.001, Durbin-Watson=1.76								

SE=standard error; VIF=variance inflation factor.

less than 10, ranging from 1.12 to 1.69. Therefore, multicollinearity was not a problem between the independent variables. The autocorrelation of the errors based on the Durbin-Watson test was measured as 2.18, which is close to 2, thereby confirming the absence of any autocorrelation. Analysis of the P-P plot and scatter plot of the standardized residuals revealed a pattern where the points on the P-P plot aligned closely with a 45-degree straight line. Simultaneously, the scatter plot displayed no noticeable pattern. This collective observation indicates the absence of any correlation between the standardized residuals and standardized predicted values. The multiple regression analysis revealed that grit ( $\beta = .35, p < .001$ ) and social support ( $\beta = .29, p = .001$ ) explained job performance. The explanatory power of the model was approximately 41.0%, which was statistically significant ( $F = 23.01, p < .001$ ).

As for the collinearity statistics of the regression model for the Mongolian data, the tolerance of grit and age was over 0.10, ranging from 0.58 to 0.93. Meanwhile, the VIF was less than 10, ranging from 1.08 to 1.72. Therefore, multicollinearity was not a problem between the independent variables. As for the independence of the residuals, the Durbin-Watson value was 1.76, which is close to 2, thus confirming the absence of autocorrelation. Analysis of the P-P plot and scatter plot of the standardized residuals revealed a pattern where the points on the P-P plot aligned closely with a 45-degree straight line. Simultaneously, the scatter plot displayed no noticeable pattern. This collective observation indicates the absence of any correlation between the standardized residuals and standardized predicted values. The multiple regression analysis demonstrated that grit ( $\beta = .37, p = .001$ ) and age ( $\beta = -.19, p = .027$ ) explained job performance. The explanatory power of the model was approximately 8.0%, which was statistically significant ( $F = 3.93, p < .001$ ).

## DISCUSSION

This study was conducted to provide basic data that can improve the quality of nursing care in South Korea and Mongolia based on their current situations. This was done by the identification of the variables that affect the job performance of nurses in the two countries.

In terms of job performance according to the general characteristics of the participants, the nurses in Korea demonstrated a significant difference only in terms of age. The higher the age, the higher the job performance, as found in many existing studies [24,25]. A study that targeted general hospital nurses also confirmed that the higher the age, the greater the clinical experience; and the high-

er the position, the higher the degree of nurses' job performance through owing to a greater variety of clinical experiences [24]. Meanwhile, the present study did not find statistically significant differences in job performance in terms of clinical experience and position. Although the mean values of the job performance of nurses with high-level positions were high in Korea and Mongolia, they were not statistically significant. In Korea, the greater the clinical experience, the higher the job performance [24]. In Mongolia, the average values did not indicate such a pattern. The average job performance score among Mongolian nurses was 3.43, surpassing that of Korean nurses at 3.12. Remarkably, despite having less than 1 year of clinical experience, Mongolian nurses achieved the highest job performance score of 3.53, which signifies their positive perception of job performance. Further investigations are required to understand the positive and negative implications of this result in the future.

The correlation between the dependent variable of job performance and the independent variables of social support, burnout, and grit, was determined. The Korean nurses' social support and grit demonstrated statistically significant positive correlations with job performance, whereas burnout indicated a statistically significant negative correlation with the same. By contrast, Mongolian nurses' grit was the only variable that demonstrated a significant positive correlation with job performance. Previous studies have supported the correlation between social support [24] and grit [26] and their positive correlation with job performance. These findings are supported by the result, which indicates that burnout reduces job performance [27]. According to Maslach's conceptualization, burnout is characterized by feelings of emotional exhaustion and a lack of emotional resources in response to excessive stress at work. It is attributed to a decrease in personal achievement owing to a decrease in one's sense of competence and performance at work [9].

The average social support scores for Korean nurses (3.66) were notably higher than those for Mongolian nurses (3.27), while the average burnout scores for Korean nurses (3.03) were marginally lower than those for Mongolian nurses (3.16). These disparities suggest a comparatively elevated perception of social support among Korean nurses and a slightly diminished perception of burnout in the same group. Meanwhile, the Mongolian nurses scored higher in terms of grit and job performance, which indicates that they perceived grit more positively. As the study was conducted at one hospital in each country, the interpretation of the score of each variable was not considered important. However, while many previous studies have

illustrated that social support is positively correlated with job performance [25], continuous research is needed to understand the absence of a significant correlation in the Mongolian data.

The multiple regression analysis revealed that social support and grit were significant factors that influenced Korean nurses' job performance, with the explanatory power of the entire model being significant at approximately 41.0%. As for the Mongolian sample, grit and age were significant factors that influenced nursing job performance, with the explanatory power of the entire model being significant at approximately 8.0%. The comparison of the explanatory powers of the variables affecting nursing job performance demonstrated that they were significantly lower among Mongolian nurses than among Korean nurses. Nevertheless, due to the scarcity of prior research on nursing job performance in Mongolia, further investigation is warranted to delve into the factors that impact the job performance of nurses in that context.

Positive emotions positively affected job performance directly or indirectly. Grit is defined as perseverance and passion for long-term goals and is an important part of goal achievement as it becomes a driving force to overcome failure, adversity, and setbacks in achieving long-term goals [8]. Therefore, grit is an important trait that affects factors such as nursing performance because it enables nurses to move toward long-term goals without giving up even in difficult situations [28]. Grit has a significant effect on work performance [29]. In the present study, the grit of nurses in both countries was a variable that enhanced job performance. This result indicated that nurses with high grit maintained an interest in their goals. Mentally and physically healthy and motivated employees may make a real difference and exert a positive impact on the sustainable growth of organizations in developing countries [30]. However, comparative studies are limited, and limitations exist in the application of the research results of non-nursing participants to nursing performance. Hence, further comparisons of grit and nursing performance targeting nurses must be conducted.

Social support had a significant influence on the job performance of Korean nurses, but the same was not true among Mongolian nurses. As nurses interact closely with fellow nurses and other medical institution workers, the relationship between nursing managers and their colleagues is closely related to nursing performance [5]. As such, social support, as a variable that can be adjusted within an organization, positively affects organizational productivity and psychological stability, consequently influencing nursing performance [31]. In particular, nursing perform-

ance is improved by the interactions between environmental and personal factors. Coworker support plays an intrinsic motivational role because it helps employees grow, learn, and achieve their work goals [32].

The reason social support did not have a significant influence on the job performance of Mongolian nurses should be considered in terms of the nation's sociocultural characteristics. Nomadism is a key cultural and social identity in Mongolia [33]. It plays an important role in cultural values, identity, behavior, and modern-day lifestyle. Nomads need the ability to cope with various difficulties encountered while moving autonomously away from settlements for good pastures, and they adapt to the changing environment by sharing experiences and knowledge during this process [34]. However, despite the prevailing unfavorable working conditions in Mongolia, characterized by inadequate physical environments, limited social support, demanding workloads, insufficient education, and low remuneration, it is noteworthy that numerous social organizations within Mongolia have yet to initiate strategic interventions informed by research to address and ameliorate this situation [35]. Given these social and cultural conditions, social support does not affect the job performance of nurses in Mongolian hospitals, and they perceive their job performance to be high regardless of the support of organizational members. Therefore, additional research on the influence of social support on Mongolian nurses' job performance is necessary.

One notable limitation of this study is the utilization of a convenience sample comprising nurses in a hospital each in South Korea and Mongolia. The assessment of the impacts on nurses' job performance was undertaken through different survey methods. Consequently, a careful interpretation of the study results is required. In addition, it is important to acknowledge that the subjects comprised nurses working at tertiary general hospitals in both countries. However, given the variations in hospital sizes and conditions between the two nations, caution is needed when drawing conclusions from the study outcomes.

Based on this study's results, the following suggestions are made: First, strategies to improve nurses' grit must be developed, given the positive influence of this factor on nursing job performance in both countries. Second, it's advisable to undertake further research into the causes, considering that burnout was established to exert negligible influence on nursing job performance. Third, social support in the context of Mongolia should be studied further as the results indicated its great influence on nursing job performance in Korea and the lack of such effect in the Mongolian context.



## CONCLUSION

In conclusion, grit is a factor that greatly affects nursing job performance in both South Korea and Mongolia. Improving the grit of nurses requires the development of an educational program that helps nurses clearly set self-development goals and thereby improve their job performance. As social support greatly affects the job performance of Korean nurses, it should be considered as a factor for improvement to boost the job performance of nurses in Mongolia.

## CONFLICTS OF INTEREST

The authors declared no conflict of interest.

## AUTHORSHIP

Study conception and design acquisition - Bayarsaikhan Z & Shin YH; Data collection - Bayarsaikhan Z; Data analysis & Interpretation - Bayarsaikhan Z & Shin YH; Drafting & Revision of the manuscript - Bayarsaikhan Z & Shin YH.

## DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## REFERENCES

- Ko YK, Lee TW, Lim JY. Development of a performance measurement scale for hospital nurses. *Journal of Korean Academy of Nursing*. 2007;37(3):286-294. <https://doi.org/10.4040/jkan.2007.37.3.286>
- Rasool SF, Wang M, Zhang Y, Samma M. Sustainable work performance: the roles of workplace violence and occupational stress. *International Journal of Environmental Research and Public Health*. 2020;17(3):912. <https://doi.org/10.3390/ijerph17030912>
- Kim MS, Sohn SK. Emotional intelligence, problem solving ability, self efficacy, and clinical performance among nursing students: a structural equation model. *Korean Journal of Adult Nursing*. 2019;31(4):380-388. <https://doi.org/10.7475/kjan.2019.31.4.380>
- Merkusi S, Aini Q. Research on job stress and nurse performance. *Jurnal Medicoeticolegal dan Manajemen Rumah Sakit*. 2020;9:154-160. <https://doi.org/10.18196/jmmr.92126>
- Shin NY, Yu S, Kang SS, Lee SS, Park MJ, Lee D, et al. Influence of nurse manager and peer group caring behaviors as perceived by nurses on organizational socialization and nursing performance. *Journal of Korean Academy of Nursing Administration*. 2020;26(2):110-119. <https://doi.org/10.11111/jkana.2020.26.2.110>
- Kumar MYS, Bhalla P. Stress among nursing staff in hospitals and its relation with job satisfaction, job performance and quality of nursing care: a literature review. *Journal of Nursing and Care*. 2019;8(3):492.
- Bagaajav A, Myagmarjav S, Nanjid K, Otgon S, Chae YM. Burn-out and job stress among Mongolian doctors and nurses. *Industrial Health*. 2011;49(5):582-588. <https://doi.org/10.2486/indhealth.MS1256>
- Duckworth AL, Peterson C, Matthews MD, Kelly DR. Grit: perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*. 2007;92(6):1087-1101. <https://doi.org/10.1037/0022-3514.92.6.1087>
- Maslach C, Jackson SE, Leiter MP. *Maslach burnout inventory manual*. 3rd ed. New York, NY: John Wiley & Sons; 1996.
- Baier N, Roth K, Felgner S, Henschke C. Burnout and safety outcomes - a cross-sectional nationwide survey of EMS-workers in Germany. *BMC Emergency Medicine*. 2018;18(1):24. <https://doi.org/10.1186/s12873-018-0177-2>
- Toyama H, Mauno S. Associations of trait emotional intelligence with social support, work engagement, and creativity in Japanese eldercare nurses. *Japanese Psychological Research*. 2017;59(1):14-25. <https://doi.org/10.1111/jpr.12139>
- Duckworth AL, Kirby TA, Tsukayama E, Berstein H, Ericsson KA. Deliberate practice spells success: why grittier competitors triumph at the National Spelling Bee. *Social Psychological and Personality Science*. 2011;2(2):174-181. <https://doi.org/10.1177/1948550610385872>
- Ko JH, Gu MO. Convergence study of the mediating effect of clinical competence on the relationship between grit and retention intention of new graduate nurses. *Journal of the Korea Convergence Society*. 2020;11(4):369-380. <https://doi.org/10.15207/JKCS.2020.11.4.369>
- World Bank. *World development report 2017: Governance and the law*. Washington, DC: International Bank for Reconstruction and Development / The World Bank; 2017.
- OECD, Food and Agricultural Organization (FAO). *OECD-FAO agricultural outlook 2022-2031* [Internet]. Paris: OECD Publishing; 2022. [cited 2023 April 1]. Available from: <https://doi.org/10.1787/f1b0b29c-en>
- Ministry of Health (Mongolia). *Nursing care service guide*. Ulaanbaatar: Ministry of Health (Mongolia); 2020.
- Global Health Observatory, World Health Organization. *Health worker density Data by country* [Internet]. Geneva: World Health Organization; 2018 [cited 2023 April 1]. Available from <https://apps.who.int/gho/data/view.main.UHCHRHv>.
- Americas and Europe Cooperation Team. *Korea's international status as seen through statistics* [Internet]. The Federation of Korean Industries Report; 2023 [cited 2023 July 28]. Available from: [https://www.fki.or.kr/main/news/statement\\_detail.do?bbs](https://www.fki.or.kr/main/news/statement_detail.do?bbs)

- \_id=00035000&category=ST
19. Kwak MH, Kwon SB. Professional self-concept and organizational socialization of new nurse. *Journal of the Korean Society for Wellness*. 2017;12(4):469-478.  
<https://doi.org/10.21097/ksw.2017.11.12.4.469>
  20. Kim MS. *Nursing research methodology*. 2nd ed. Seoul, Korea: Hakjisa Medical; 2018. p. 159-160.
  21. Park JW. A study to develop a scale of social support [dissertation]. Seoul: Yonsei University; 1985. p. 127.
  22. Maslach C, Jackson SE. The measurement of experienced burnout. *Journal of Organizational Behavior*. 1981;2(2):99-113.  
<https://doi.org/10.1002/job.4030020205>
  23. Park H, Lee K, Shin N. Development and validation of the clinical nurses grit scale (CN-GRIT). *Journal of Korean Academy of Nursing Administration*. 2020;26(1):55-64.  
<https://doi.org/10.1111/jkana.2020.26.1.55>
  24. Lee HS, Yom YH. Role of self-leadership and social support in the relationship between job embeddedness and job performance among general hospital nurses. *Journal of Korean Academy of Nursing Administration*. 2015;21(4):375-385.  
<https://doi.org/10.1111/jkana.2015.21.4.375>
  25. Park HS, Yoo YG. The moderating effect of social support on the relationship between emotional labor and nursing performance in general hospital. *Journal of Korean Academy of Nursing Administration*. 2019;25(2):136-145.  
<https://doi.org/10.1111/jkana.2019.25.2.136>
  26. Choi YK. The relationship among grit, emotional intelligence, outcome of nursing practice, and turnover intention of nurses [master's thesis]. Seoul: Korean Bible University; 2020. p. 94.
  27. Dall'Ora C, Ball J, Reinius M, Griffiths P. Burnout in nursing: a theoretical review. *Human Resources for Health*. 2020;18(1):41.  
<https://doi.org/10.1186/s12960-020-00469-9>
  28. Cho HK, Kim B. Effect of nurses' grit on nursing job performance and the double mediating effect of job satisfaction and organizational commitment. *Healthcare*. 2022;10(2):396.  
<https://doi.org/10.3390/healthcare10020396>
  29. Dugan R, Hochstein B, Rouziou M, Britton B. Gritting their teeth to close the sale: the positive effect of salesperson grit on job satisfaction and performance. *Journal of Personal Selling & Sales Management*. 2019;39(1):81-101.  
<https://doi.org/10.1080/08853134.2018.1489726>
  30. Suifan TS, Diab H, Abdallah AB. Does organizational justice affect turnover-intention in a developing country? the mediating role of job satisfaction and organizational commitment. *Journal of Management Development*. 2017;36(9):1137-1148.  
<https://doi.org/10.1108/JMD-02-2017-0048>
  31. Koh MS, Lee HZ, Kim MJ. Convergence research on emotional labor, professionalism, social support, and performance of nurses in clinical field. *Journal of the Korea Convergence Society*. 2018;9(8):343-353.  
<https://doi.org/10.15207/JKCS.2018.9.8.343>
  32. Schaufeli WB, Taris TW. A critical review of the job demands-resources model: implications for improving work and health. In: Bauer GF, Hämmig O, editors. *Bridging occupational, organizational and public health: a transdisciplinary approach*. Dordrecht: Springer Netherlands; 2014. p. 43-68.
  33. Sneath D, Kaplonski C. *The History of Mongolia*. Folkestone, UK: Global Oriental Ltd; 2010.
  34. Murphy DJ. Going on otor: Disaster, mobility, and the political ecology of vulnerability in Uguumur, Mongolia [dissertation]. Lexington, KY: University of Kentucky; 2011. p. 585.
  35. Shatz HJ, Constant L, Arce FP, Robinson E, Beckman RL, Huang H, et al. *Improving the Mongolian labor market and enhancing opportunities for youth*. Santa Monica, CA: Rand Corporation; 2015.