Article

Communication skills of head nurses and its relationship to work engagement and psychological distress of staff nurses in the Iranian context: An observational multicenter study

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Abstract

Background: The communication skills of head nurses with staff nurses are critical to supporting the job functions and effectiveness of a staff nurse, which directly impacts quality patient care.
Objectives: This study aimed to investigate the communication skills of head nurses and its relationship to work engagement and psychological distress of nurses.
Methods: This cross-sectional study conducted on 264 nurses. Participants were included in the study using Stratified randomization. Data were collected using a demographic information form, the MayfIeid's Motivational Language Scale, the Schaufelis Work Engagement Scale, and the Kessler Psychological Distress Scale.
Results: The mean (SD) score of head nurses' communication skills is [66.92 (20.69) out of 120]. Work engagement scores were [30.17 (12.04) out of 54] and psychological distress of nurses in the moderate levels [25.15 (8.77) out of 50], respectively. The relationship between head nurse's communication skills with work engagement of nurses was positive ($r=0.34$, $p<0.001$) and negative with nurses' psychological distress ($r= -0.26$, $p<0.001$). There was also a significant and inverse relationship between work engagement and nurses' psychological distress ($r = -0.43$, $p< 0.001$). Regression analysis showed that head nurses' communication skills predicted 11.7% of nurses' work engagement and 6.7% of nurses' psychological distress.
Conclusion: The communication skills of head nurses were moderate from the nurse's perspective. However, these skills are associated with high levels of nurses' work engagement and less psychological distress. Therefore, it is necessary to plan to implement programs to increase head nurses' communication skills and thus improve the quality of nursing care in the study population.

Implications of this paper in nursing and midwifery preventive care:

- Strong communication skills in head nurses improve nurses' motivation and work engagement for preventive care by creating a positive and supportive work environment.
- Head nurses with good communication skills help reduce psychological distress among nurses. Nurses with good mental health are more motivated and provide better quality preventive care.

Introduction

Nurses are the largest group of healthcare team staff and play an essential role in the quality of healthcare delivery [1]. Nurse managers play a large role in promoting nurses by applying the principles of leadership and management. Among management skills and influential factors, leadership style is one of the most important [2]. Using the appropriate leadership style to motivate employees leads to improving their job satisfaction, job retention, reducing unfortunate events, improving the quality of nursing care, improving patient recovery, and ultimately affects the attainment of individual and organizational goals [2,3].

One of the basic competencies of leadership is the manager's skill in communicating effectively with their subordinates. All the nurse manager roles, such as planning, organizing, and directing, are performed through communication. The effectiveness of the communication skills of the nurse manager is an essential factor in directing, guiding, and evaluating nurses and plays a key role in knowledge transfer in evidence-based clinical practice [4,5]. Occasionally, head nurses will need to coordinate nursing staff with physicians and the staff of other nursing units. For

this task, communication skills are also one of the most critical competencies a nurse manager should have [6]. Understanding the impact of communication styles of head nurses upon staff nurses is critical to supporting the job functions and effectiveness of a staff nurse, which directly impacts quality patient care [7].

The results of some previous studies show that the relationship between nurses and nurse managers predicts their job satisfaction [8]. Nurse managers need to create an environment where nurses can trust them and easily communicate [9]. The nurse manager's effective and motivational communication can increase the self-efficacy and confidence of nurses [10]. In reviewing the existing literature, contradictory results have been reported regarding the communication skills of nursing managers in developed and developing countries [11-13]. Information on the relationship between nurse managers and nurses in developing countries is minimal, and its characteristics need further exploration.

In addition to the quality of communication between nurse managers and staff nurses, job engagement is one of the most critical phenomena in employee performance. Work engagement is, by definition, a concept that is a positive attitude of employees towards their profession and is the opposite of job burnout [14]. Job engagement is a personal and professional commitment to one's job and organization and has three components: a) high levels of mental flexibility and energy with a desire to seek and complete a task, known as vigor, b) dedication, which is related to the interaction and full involvement of the person with the job in a way motivated by the feeling their performance plays a vital role in the organization and demonstrates emotions of enthusiasm, pride, and honor, and c) complete focus on one's job in which one becomes so focused on one's career that one does not notice the passage of time, known as absorption [14,15].

Work engagement is associated with employee job satisfaction, productivity, organizational commitment, and unwillingness to leave the profession [16,17]. There is evidence that nurse managers and head nurses play an essential role in work engagement [2]. However, according to past studies in Iran, nurses' work engagement is rated as low [18,19]. It seems that among the different variables related to the nurse manager in nurses' work engagement, the way nurse managers communicate with nurses has a more distinct role which has not been explored in previous studies.

Another important factor related to nurses' performance and satisfaction is job-related psychological distress [20]. The nursing profession is considered one job with high psychological distress due to increased workload and exposure to various physical and psychological stressors [21]. In an Iranian study conducted by Salehi et al., the results showed that the psychological distress of Iranian nurses is higher than the global average [22].

Therefore, the communication skills of nurse managers, psychological distress, and work engagement are among the essential factors that impact job performance, the quality of nursing care, and job satisfaction for nurses. Few studies have been conducted globally on the relationship of these factors, especially in developing countries. Therefore, this study aimed to examine nurse managers' communication skills, their relationship with work engagement, and the psychological distress of nurses.

Methods

The present study was a cross-sectional study conducted over six months, from February to July 2021. We used STROBE criteria and guidelines in the report.

This study was performed on 264 nurses working in four hospitals in Zanjan, Iran. The sample size was estimated using the correlation coefficient formula and the values of $\alpha = 0.05$, $\beta = 0.2$, $Z\alpha = 1.96$, $Z\beta = 0.84$, Power = 0.8, and Confidence Interval (CI) = 95%. A pilot study was conducted on 30 nurses to calculate the" r" coefficient. The correlation value between the two variables of nurses 'communication skills and nurses' psychological distress was less than the relationship between communication skills and work engagement (-0.18 versus 0.21). Therefore, the correlation value (r) of 0.18 was considered to calculate the larger sample size. The required sample size was estimated at almost 240 nurses. However, 275 questionnaires were produced and distributed among the selected nurses. Eleven nurses were excluded from the study due to the incompleteness of their survey.

The sampling method in this study was stratified randomly based on hospitals. In other words, it was considered each hospital was a stratum and calculated the required sample size for each hospital to the total sample size. A code was selected for each hospital nurse and written as a number in the process. Finally, we chose the numbers randomly without replacement based on the table of random numbers until the portion of each hospital was completed. Nurses with at least a bachelor's degree in nursing and one year of work experience were included in the study. The incompleteness of the questionnaires was the only exclusion criterion. The demographic and occupational form, Motivational Language Scale (MLS), Work Engagement Scale (WES), and Kessler Psychological Distress Scale (K-10) were used to collect data.

The demographic and occupational form included variables such as age, gender, marital status, level of education, employment status, workplace ward, hospital, shift of work, and job experience.

Motivational Language Scale (MLS) was used to measure the communication skills of head nurses from the perspective of staff nurses. This scale is a standard scale developed in 1998 by Mayfield et al [23]. The MLS has 24 items scored on a Likert scale: 1 (very low), 2 (low), 3 (sometimes), 4 (high), and 5 (very high). This tool includes three subscales: Direction-giving language (10 items; range 10-50), empathetic language (6 items; range 6-30), and meaning-making language (8 items; range 8-40). The total score range of the tool is 24-120. Higher scores indicate the head nurse's better communication skills with staff nurses in the unit. To confirm the validity of this tool, the forward and backward translation procedure was used by a panel of language experts. Permission from Professor Mayfield was given to use it via email in the translation process. Three experts who were fluent in Persian and English translated it into Persian. Finally, the content validity of the finalized Persian format was confirmed by 10 nursing, mental health, and psychology specialists. To assess reliability, the internal consistency method and Cronbach's alpha were used (a= 0.84).

The work Engagement Scale (WES) was developed by Schaufeli et al. in 2006 in the form of three components of vigor, dedication, and absorption, each of which comprises three items. Each item has 7 parts on a Likert scale (never = 0, almost never = 1, rarely = 2, sometimes = 3, often = 4, very often = 5, and always = 6). The range of scores in each subscale is 0 to 18 and the total possible is 54. A higher score indicates a high work engagement. The validity and reliability of this questionnaire have been completed by its manufacturer [14]. In a previous study, the validity and reliability of the Persian form of the WES have been confirmed [24]. In this study, the reliability of this questionnaire was calculated using Cronbach's alpha coefficient for the vigor subscale of 0.72, dedication 0.84, absorption 0.77, and a total of 0.90.

Kessler Psychological Distress Scale (K-10) was developed in 2003. It has ten questions on a five-point Likert scale: 1= never, 2= very low, 3= low, 4= frequent, and 5= always with the range between 10 to 50. A low score indicates a low level of psychological distress, and a high score indicates an unfavorable situation causing much psychological distress. A score of 10-19 indicates that the person is probably doing well. A score of 20-24 indicates mild distress, 25-29 indicates moderate distress, and 30-50 indicates severe distress. The validity and reliability of this tool have been evaluated and confirmed by its developers [25]. Ataei et al. tested and demonstrated the validity and reliability of the Persian form of K-10 for Iranian society [26]. In the present study, reliability was assessed and confirmed using the internal consistency method and calculating Cronbach's alpha coefficient (a= 0.89).

K.A. first extracted the characteristics of the selected nurses from the sampling framework based on randomly chosen codes. He emailed this information to F.H. who multiplied the questionnaires and referred to the wards of the selected nurses in three shifts: morning, evening, and night. After introducing the study's objectives and observing other ethical considerations, the questionnaires were distributed to the nurses with a return date to collect completed surveys.

Descriptive statistics (frequency, mean percentage, and standard deviation) were used to evaluate the demographic and occupational characteristics of nurses. The Kolmogorov-Smirnov test was used to assess the distribution of data. Because data had a normal distribution, the Pearson test and linear regression were used to

examine the relationship between communication skills scores, psychological distress, and work engagement. The software used for data analysis was SPSS, IBM, Armonk, NY, USA version 22 for Windows. The statistical significance level was considered less than 0.05.

Results

The study participants included 264 nurses in Zanjan, Iran. The majority of nurses participating in the present study were female (76.5%), married (66.3%), and had a bachelor's degree (93.2%). The demographic and occupational characteristics of the participants are summarized in Table 1.

Table 1: Demographic and occupational characteristics of participating nurses (n=264)

Qualitative variable		n (%)
Gender	Female	202 (76.5)
	Male	62 (23.5)
Marital Status	Single	89 (33.7)
	Married	175 (66.3)
Level of Education	Bachelor's Degree	246 (93.2)
	Master's Degree	18 (6.8)
Employment Status	Definitive Official (Permanent)	85 (32.3)
	Official Trial	5 (1.9)
	Contract (5-Year Contract)	51 (19.3)
	Contract (1-Year Contract)	14 (5.3)
	Corporate	24 (9.1)
	85-Day Contract	85 (32.3)
Shift of Work	Permanent	18 (6.8)
	Rotating	246 (93.2)
Unit Type	Special	77 (29.2)
	Emergency	59 (22.3)
	Non-Special	128 (48.5)
Quantitative variable	**Mean (SD)**	
Age (years)	31.75 (6.7)	
Job Experience (years)	7.96 (6.5)	

Abbreviations: N, number of participants; SD, standard deviation.

The results showed that the mean (SD) score of communication skills of head nurses was scored as moderate by the nursing staff [66.92 (20.69) out of 120]. The mean (SD) work engagement scores were [30.17 (12.04) out of 54]. Psychological distress of staff nurses was self-reported as moderate [25.15 (8.77) out of 50].

There was a statistically significant positive correlation between the communication skills of head nurses and staff nurses' work engagement ($r= 0.34$, $p<0.001$). There was a statistically significant negative relationship between head nurses' communication skills and staff nurses' psychological distress ($r = -0.26$, $p< 0.001$). There was a statistically significant positive relationship between different subscales of nurses' communication skills with work engagement and the psychological distress of nurses (Table 2).

There was a statistically significant negative relationship between work engagement and the psychological distress of nurses ($r=-0.43$, $p<0.001$).

Table 2: Correlation results of Pearson correlation test in the field of correlation between nurses' communication skills and its dimensions with job engagement and psychological distress of nurses

Head Nurses 'Communication Skills	Nurses' Psychological Distress	Nurses' Work Engagement
Total Score of Motivating Language	r = - 0.25* < 0.001	r = 0.34* < 0.001
Subscales of Direction-Giving Language	r = - 0.26* < 0.001	r = 0.32* < 0.001
Subscales of Empathetic Language	r = - 0.26* < 0.001	r = 0.33* < 0.001
Subscales of Meaning-Making Language	r = -0.17* < 0.001	r = 0.27* < 0.001

***p <0.05 is considered statistically significant**
Abbreviations: r, multiple correlation coefficient; p, statistical significance/p-value.

Linear regression test shows that 11.7% of nurses' work engagement and 6.7% of nurses' psychological distress is correlated to the head nurses' communication skills (Table 3).

Table 3: Results of linear regression test in the relationship between work engagement and psychological distress of nurses with head nurses' communication skills

Independent Variable	The Dependent Variables	t	β	R^2	p
Head Nurses' Communication Skills	Nurses' Work Engagement	5.88	0.34	0.117	p < 0.001*
	Nurses' Psychological Distress	-4.34	-0.26	0.067	p < 0.010*

***p <0.05 is considered statistically significant**
Abbreviations: R^2, multiple correlation coefficient squared; β, standardized regression coefficient; t, student t-test; Sig, statistical significance/p-value.

Discussion

This study aimed to investigate the communication skills of head nurses and their relationship with their staff nurses' work engagement and psychological distress. The results showed that the mean score of communication skills of head nurses was at a moderate level. In line with the present study, the results of studies in different cities of Iran showed that the communication skills of head nurses are at a moderate level [11,27]. It seems necessary to hold specialized training courses to improve the communication skills of head nurses. Improving the communication skills of head nurses can help improve the quality of care and increase nurses' job satisfaction [28].

The results of the present study showed that the work engagement score of the nurses surveyed in Iran was moderate. Evidence shows that in developed countries such as Japan, the mean score of work engagement of nurses is higher than moderate [13]. Nurses in these countries are in a favorable position in terms of work engagement. The results of Jenaro et al. in Spain also showed that the level of work engagement of the nurses is favorable [29]. In Iran, according to the results of studies conducted by Alipour Birgani and Akharbin et al., nurses' work engagement is not at a favorable level [18,19]. Another Iranian study conducted by Vaghar Seyyedin and Salmani Mud, in line with this present study, showed that the level of work engagement of nurses is moderate [30]. Other studies, such as the study of Mason et al. in the United States, showed that the mean score of nurses' work engagement is at a low level [31]. Based on the different results of studies conducted in the past, it implies that the variable of work engagement is greatly influenced by cultural, social, and work environment factors in different research communities.

This study showed that the rate of psychological distress of nurses was moderate. The results of previous studies show that the psychological distress of nurses in different societies, including Iran, China, and Nigeria, is moderate and most nurses suffer from moderate psychological

distress [32-34], which is consistent with the results of this study. Psychological distress among the studied nurses was predictable because multiple factors in nurses' work environments can lead to their psychological distress, such as the quality of the working relationships with other nurses and health team staff, communication with the patient and family members, the high level of knowledge and skills required for nursing work, the high workload, the need for a quick response to patient conditions and decision making in urgent situations, and the heavy responsibilities of patient care [22,35].

The results of this study showed that there is a positive and statistically significant relationship between the communication skills of head nurses and the staff nurses' work engagement. This finding confirms Kanter's theory, which states negative behaviors of managers in the workplace will lead to negative attitudes of employees toward their jobs, and these negative behaviors are likely to lead to reduced job satisfaction [36]. Previous studies confirm this finding [13,19]. For example, the results of Kunie et al.'s study showed that the scores related to managers' communication were statistically significantly and positively correlated with employee work engagement [13]. Othman and Nasurdin's study in Malaysia showed that behaviors associated with the perceived support of a head nurse's support of nursing staff are positively correlated with nurses' work engagement. The study concluded that support for nurses is a statistically significant predictor of work engagement [37]. These studies posit that the communication skills of nursing managers can increase a nurse's desire to work [2] and create job satisfaction [38].

The results showed a statistically significant inverse relationship between head nurses 'communication skills and nurses' psychological distress. The higher the communication skills of head nurses, the less psychological distress nurses will have. Based on past evidence, autonomy, job duties, and social support in the workplace are essential psychosocial factors affecting psychological distress [39]. Evidence confirms that a manager's motivational language can reduce or enhance job satisfaction [40] and increase employee control over the work [41], thus reducing stress [40].

Workplace support and organizational justice can play a role in the psychological distress of subordinates. However, the results of the study by Kunie et al. in Japan showed that managers' communication skills did not have a statistically significant relationship with nurses' psychological distress [13]. Further studies are needed to clarify the reason for this difference among various studies.

This study showed that the three dimensions of nurses 'communication skills (direction-giving language, meaning-making language, and empathetic language) have a statistically significant relationship with nurses' work engagement and psychological distress. In other words, clarifying goals and tasks, articulating cultural norms, rules, and values, and encouraging and rewarding caregivers can increase work engagement and reduce the psychological distress of nurses. No previous studies compared the relationships of these three factors of communication skills, work engagement, and psychological distress.

This study showed a statistically significant inverse relationship between work engagement and the psychological distress of nurses. According to Bakker et al., employees who are more passionate about their jobs have the following characteristics: they experience more joy, enjoyment, and excitement from their work, enjoy good physical and mental health, have better job performance, utilize career and personal resources and transfer enthusiasm to others [42]. Consistent with this study, the results of Mason et al. in the United States also showed that high work engagement is related to increased satisfaction and reduced job burnout [31]. In Japan, a study by Kawakami et al. also showed that organizational justice is inversely related to employee psychological distress by increasing work engagement [43].

This study recognizes some limitations. First, the information obtained from the questionnaire was obtained in the form of a self-report survey, which is limited by the psychological factors of the participants. Second, results are limited by cultural and social contexts so the study results cannot be highly generalizable. It is suggested that this study be repeated in other communities and cultures. It is recommended the observation method be used in future studies to assess the

communication skills of head nurses. Additionally, relationships among these variables could be explored between the age of the head nurse and the age of staff nurses, and an interventional study comparing the communication skills and strategies before and after training on these factors of job satisfaction, work engagement, and psychological distress of staff nurses.

Conclusion

Based on the results of this study, it can be said that the communication skills of Iranian head nurses, like other developing countries, are at a moderate level. To reduce the psychological distress of nurses and increase their work engagement and, as a result, increase the quality of care, plans should be made to conduct studies and measures on ways to improve the communication skills of head nurses. The findings of this study can guide future research as a basis for research in promoting job satisfaction, work engagement, and improved psychological state of staff nurses.

Ethical Consideration

This study was approved by the Ethics Committee of Zanjan University of Medical Sciences (with the code No. IR.ZUMS.REC.1397.367). Written consent was obtained from the participants to participate in the study. Participants were assured that their information was confidential. The principle of anonymity of the participants was respected during the study. Nurses completed the surveys voluntarily and without compensation. Their job position was not affected by participation or non-participation in the study. No patients were directly impacted by the study and survey. Permission to use study tools (Head Nurses' Motivational Language Scale, Work Engagement Questionnaire, and Nurses' Psychological Distress) received from their developers via email.

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Conflict of interest

The second author (FGH) and the corresponding author (KA) of this article are the executive manager and a member of the editorial board of the PCNM journal, respectively. The review process is conducted like other articles. The final decision regarding this article was made by the editor-in-chief and the editorial board of the journal.

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Authors' contributions

All authors contributed to the present study: Conception and design: KA; Acquisition of data: FH; SF Drafting the manuscript and revising it: KA

Analysis and interpretation of data: KA, FH, and FGh; Drafting the manuscript and revising it: KA, FH, and FGh.

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