Nurse Supervisors' Communicative Behaviors and Subordinates' Communication Satisfaction, Job Satisfaction and Willingness to Collaborate

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Abstract:

Background: Effective communication is essential to the interpersonal relationship between supervisors and subordinates in the workplace. In order for supervisors to be perceived as competent communicators, they must share and respond to information in a timely manner, and communicate clearly and concisely to subordinates and clarify work tasks which may contribute to communication satisfaction. Additionally, when employees experience more positive communication relationships, they also experience more positive job satisfaction. **Aim of the study:** To assess the relationship between nurse supervisors' communicative behaviors and subordinates' communication satisfaction, job satisfaction and willingness to collaborate. **Subjects and Methods**: **Research design:** A descriptive correlational study design was used. **Setting**: This study was conducted at Zagazig University Hospitals. **Subjects**: Stratified random sample of 366 nurses working at Zagazig University Hospitals. **Tools of data collection:** Five tools were used in data collection namely: Communicator competence instrument, nonverbal immediacy scale, interpersonal communication satisfaction inventory, abridged job in general scale, and decision making collaboration scale. **Results**: Findings revealed that the highest mean percent score was for supervisors' nonverbal immediacy while the lowest was for supervisors' communication competence .There was a significant correlation between supervisors' communicative behaviors and nurses' communication satisfaction. However, there was no significant correlation between supervisors' communicative behaviors and nurses' job satisfaction. As well, there was a statistically significant positive correlation between supervisors' communication competence and nurses' willingness to collaborate in decision making. **Conclusion**: Nurse supervisors' communication competence and nonverbal immediacy were good predictors of nurses' communication satisfaction, while they weren't as regards nurses' job satisfaction. Additionally, nurse supervisors' communication competence was a strong predictor of nurses' willingness to collaborate in decision making, while nurses supervisors' nonverbal immediacy wasn't. **Recommendations:** Hospitals' administrators should develop training programs for nurse supervisors to enhance their communication competence. Additionally, nurse supervisors should encourage nurses to participate in the decision making process.

Key words: Communication competence, nonverbal immediacy, communication satisfaction, job satisfaction, willingness to collaborate

Introduction:

Communication is an essential element in the success of any organization; whereas, to perceive itself as an effective organization; it must have a thorough understanding and in-depth knowledge of its communication system. Hospitals also, function as organizations and therefore, need to assess their communication systems from time to time in order to assess the effectiveness of these systems and to change existing communication structures.[1] Communication is the exchange of thoughts, messages, or information, by speech, signals, writing, or behavior and it can occur on at least two levels: verbal and nonverbal.[2]

Communication competence is the combination of both one's

knowledge of appropriate communication practices as well as effectiveness at adapting to the surroundings in a communication situation.[3] Competent individuals must not only achieve their goals (be effective) but also do so appropriately. In order for nurse supervisors to be perceived as competent communicators, they must share and respond to information in a timely manner, actively listen to other points of view, communicate clearly and succinctly to all levels of the organization, and utilize differing communication channels. They should possess the ability to display competencies in areas such as cueing, negotiating and employing communicative resources such as language, gestures, and voice effectively in the pursuit of social goals.[4]

Effective communication is essential to the interpersonal relationship between supervisors and subordinates in the workplace. Nonverbal communication behaviors similar to communicator competence are a fundamental aspect of this relationship. The theory of immediacy refers to the ability of nonverbal communication to increase the perceptions of physiological or psychological closeness between individuals. Many nonverbal behaviors that can result in feelings of immediacy include smiling, making eye contact in a non-threatening manner, leaning toward or sitting near an individual, and touching an individual. When supervisors engage in one of these behaviors, they are silently communicating to the personnel around them that they are socially accessible, available or being attentive to their conversational partner.[5] Additionally, supervisors' communication competence and nonverbal immediacy have shown links to important organizational outcomes, including; subordinate self-esteem, communication and job satisfaction.[6]

Communication satisfaction refers to the sum of a person's satisfaction, which is saturated from relations and information flow variables. Thus, it involves all areas of social interactions, keeps people together, and helps to perfect organizational communication. Communication satisfaction results from effective communication which is a major part of supervisors' strategy for success and facilitates supervisors to share data and information with subordinates in smooth and trust relationship. Likewise, communication satisfaction enables supervisors to facilitate strong and mutual relationship with subordinates effectively. Generally communication satisfaction builds and improves confidence between them as well as strengthens trust and stewardship. As well, subordinates' communication satisfaction reinforces understanding of the role of communication practices and the relation to the overall satisfaction.[7]

Communication satisfaction is a useful concept in analyzing the relationship between communication and job satisfaction.[8] Job satisfaction is a positive or pleasing emotional state from the appraisal of one's job or experience. This definition suggests that subordinates form their attitude towards their jobs by taking into account their feelings, beliefs and behaviors. If they find their job fulfilling and rewarding, they tend to be more satisfied with their jobs. Subordinates' job satisfaction is generally regarded as an important ingredient for organizational success, while poor job satisfaction can cripple an organization. Job satisfaction consists of overall or general job satisfaction, as well as a variety of satisfaction facets. It is influenced by various factors such as supervisors' displays of nonverbal immediacy, humor, communication satisfaction, and supervisors' communication competence.[9]

Nursing personnel spend, on average, approximately forty hours per week at work, where they are required to communicate effectively on an on-going basis. These nurses want to experience a high level of communication satisfaction, which could enhance their job satisfaction and guide them in making collaborative decisions.[1] It is indisputable that all supervisors call for effective communication to ensure subordinates participation in decision making, by means of providing essential information. Additionally, subordinates' efficiency of decision-making is improved based on healthy communication.[7] In today's health care environment, great demands are placed on each health care professional to provide the best quality of care efficiently, safely, and cost-effectively to optimize patient care outcomes. Many administrators and nurse supervisors recognize that effective interprofessional communication and collaboration through teamwork is needed to create a safe patient care environment. Collaboration and teamwork among nursing personnel and other disciplines in the health care setting is so critical to optimizing patient care safety and outcomes.[10]

Significance of the study:

Despite of the popularity of the communication topic, there appears to be limited research on nurse supervisor communicative behaviors as predictors of subordinates' communication and job satisfaction and their willingness to collaborate internationally in general, and there's not any study done about these variables together on nursing personnel in Egypt, at Zagazig University Hospitals in particular. Results of this study will help fill in the gaps in understanding what contributes communication satisfaction, job satisfaction and willingness to collaborate in decision making among nursing personnel. This would help in developing a better

communication process in hospitals and may indirectly contribute to helping organizations function more effectively.

Aim of the study:

The aim of this study was to assess the relationship between nurse supervisors' communicative behaviors and subordinates' communication satisfaction, job satisfaction and willingness to collaborate.

Research questions:

1. What is the relationship between nurse supervisors' communication competence, nonverbal immediacy and subordinates' communication satisfaction?

2. What is the relationship between nurse supervisors' communication competence, nonverbal immediacy and subordinates' job satisfaction?

3. What is the relationship between nurse supervisors' communication competence, nonverbal immediacy and subordinates' willingness to collaborate in decision making?

4. What indicators predict subordinates' communication satisfaction?

5. What indicators predict subordinates' job satisfaction?

6. What indicators predict subordinates' willingness to collaborate in decision making?

Subjects and methods:

Research design:

A descriptive correlational design was used to achieve the aim of this study.

Setting:

This study was conducted at all Zagazig University Hospitals (Academic hospital), Egypt, which includes two sectors involving eight teaching hospitals. The emergency sector included four hospitals; New Surgery Hospital (600 beds), Emergency Hospital (185 beds), Delivery and Premature Hospital (57 beds) and General Medicine Hospital

(322 beds). The second sector is El-Salam included four hospitals three of them provide free treatment, these were: Cardio Thoracic Hospital (212 beds), Pediatric Hospital (220 beds), and El- Salam Hospital (254 beds) and the last one provides economic treatment, it is the Economic Treatment Hospital (104 beds). With total bed capacity 1954 beds. The two sectors provide inpatient and outpatient services with total number of 2446 nurses.

Subject :

A stratified random sample was used. The required number of nurses from each hospital was calculated with the following formula (number of nurses in each hospital × required sample size / total number of nurses in all hospitals). Accordingly 366 nurses were chosen as follows; New-Surgical Hospital (81 nurses), Internal-Medicine Hospital (70 nurses), Emergency Hospital (33 nurses), Delivery and Premature Hospital (18 nurses), Cardiac and Chest Hospital (62 nurses), El-Salam Hospital (47 nurses), El-Sadat Hospital (11 nurses), and Pediatric Hospital (44 nurses).

Sample size:

The ideal sample size was estimated at confidence interval 95%, margin of errors 5.0%, a total population size of 2446 nurses, and by using the following formula [X² NP (1− P) / d² (N −1) + X² P (1− P)] [11]; the ideal sample size was 333 nurses. After adjustment of a non response rate of 10%; the required sample size was 366 nurses having the following inclusion criteria: At least one year of experience and accept to participate in the study

Tools of data collection:

Five tools were used for data collection:

Tool (1): Communicator competence instrument developed by Monge et al.[12], it was used to measure nurse supervisors' communication

competence, and it consisted of 12 questions.

Tool (2): Nonverbal immediacy scale developed by **Richmond et al.**[13], it was used to assess nurse supervisors' nonverbal immediacy. It included 26 questions categorized under two dimensions, these were: Nonverbal immediacy between groups (16 items), and nonverbal immediacy within groups (10 items).

Tool (3): Interpersonal communication satisfaction inventory developed by **Hecht**[14] in order to assess nurses' interpersonal communication satisfaction. This tool consisted of 19 items.

Tool (4): Abridged job in general scale (AJIG) developed by Russell et al.[15] to measure the overall nurses' job satisfaction. This scale included 8 items.

Tool (5): Decision making collaboration scale developed by Anderson et al.[16] to measure nurses' willingness to collaborate in decision making. This scale contained 13 items.

Scoring system:

All items were answered on a 5-point Likert-type scale ranged from strongly agree (5) to strongly disagree (1).

Content validity and Reliability:

Data were collected using a self-administered questionnaire, after the translation of the instruments to Arabic.The content and face validity were established by a jury of experts (5 professors & assistant professors) from academic nursing staff, Zagazig and Ain-Shams Universities. According to their opinions all necessary modifications were done.

The reliability of the five tools was tested using the internal consistency method. Cronbach's alpha coefficients were 0.83, 0.83, 0.85, 0.75 and 0.81 for nurse supervisors' communication competence, nurse supervisors' nonverbal immediacy, nurses' interpersonal communication satisfaction, overall nurses' job

satisfaction, and nurses' willingness to collaborate in decision making, respectively.

Field work:

Data collection took five months from beginning of September, 2014 till the end of January, 2015 during morning and afternoon shifts. The preparatory phase was done by explaining orally the purpose of the study briefly to the nurses. The time consumed to answer each questionnaire sheet ranged from 25 to 40 minutes.

Pilot study:

A pilot study was carried out on 36 nurses (10% of the study sample) to check for the clarity of the tools and to identify the time needed to fill in the questionnaire sheets by each participant. Required modifications were done and the subjects who participated in the pilot study were excluded from the main study sample.

Administrative and ethical considerations:

Approval to conduct the study was obtained from the medical and nursing directors of the hospitals and the head nurses of the units after explaining the aim of the study. The participants were informed that their participation in the study is completely voluntary and the cover letter introducing the study addressed the confidentiality of the participants. Consent was established with the completion of the questionnaires.

Statistical analysis:

Data entry and statistical analysis were done using the Statistical Package for Social Science (SPSS), version 17.0. Cleaning of data was done to be sure that there was no missing or abnormal data. Data were presented using descriptive statistics in the form of frequencies and percentages for categorical variables, and means and standard deviations for continuous variables. Pearson correlation analysis was used for assessment of the inter-

relationships between total scale scores. Multiple regression analysis was used to identify the predictors of nurse communication and job satisfaction and their willingness to collaborate in decision making. Statistical significance was considered at p-value < 0.05.

Results:

Table (1): Presents the personal characteristics of the studied nurses. As shown in this table; 47.8% of studied nurses aged more than 36 years. Concerning years of experience, 63.4% of them worked for more than 10 years while 16.1% of them had less than 5 years of experience. Additionally, 47.0% of nurses had nursing diploma.

Table (2): Shows the distribution of different study variables' mean percent scores as reported by studied nurses; as indicated from this table the highest mean percent scores were for supervisors' nonverbal immediacy (61.91%), followed by nurses' job satisfaction (58.71%), while the lowest mean percent score was for supervisors' communication competence (45.96%).

Table (3): Clarifies the correlation between different study variables among studied nurses; as revealed from this table there were statistically significant positive correlations between both supervisors' communication competence and their nonverbal immediacy regarding to nurses' communication satisfaction (P<0.05), (in response to research question 1). Additionally, there were no statistically significant correlations between both supervisors' communication competence and their nonverbal immediacy as regards studied nurses' job satisfaction (P>0.05), (in response to research question 2). Also, there was statistically significant positive correlation between supervisors' communication competence and nurses' willingness to collaborate in decision making (P<0.01), while there

was no statistically significant negative correlation between supervisors' nonverbal immediacy and nurses' willingness to collaborate in decision making (P>0.05), (in response to research question 3). Likewise, there was statistically significant negative correlation between supervisors' communication competence and their nonverbal immediacy (P<0.05); while, there was statistically significant positive correlation between nurses' communication satisfaction and their willingness to collaborate in decision making (P<0.01).

Table (4): Indicates the regression analysis to study independent factors affecting nurses' communication satisfaction, and it shows that after adjustment of all factors, results revealed that supervisors' communication competence and nonverbal immediacy are independent factors affecting and predicting nurses' communication satisfaction score; as increase in supervisors' communication competence and nonverbal immediacy scores are associated with an increase in nurses' communication satisfaction score (regression coefficient = 0.280, P < 0.01 and regression coefficient = 0.101, P < 0.01 respectively), (in response to research question 4).

Table (5): Demonstrates the regression analysis to study independent factors affecting nurses' job satisfaction, and it reveals that after adjustment of all factors, results showed that there were no statistically significant relations between both supervisors' communication competence and their nonverbal immediacy regarding to nurses' job satisfaction score; as an increase in supervisors' communication competence and nonverbal immediacy scores is associated with increase in nurses' job satisfaction score, where P > 0.05, (in response to research question 5).

Table (6): Reveals the regression analysis to study independent factors affecting nurses'

willingness to collaborate, and it displays that after adjustment of all factors, results revealed that supervisors' communication competence is an independent factor affecting and predicting nurses' willingness to collaborate in decision making score; as increase in supervisors' communication competence score is associated with increase in nurses' willingness to collaborate score (regression coefficient = 0.091, P < 0.05). On the other hand, there was no statistically significant negative relation between supervisors' nonverbal immediacy and nurses' willingness to collaborate score; as increase in supervisors' nonverbal immediacy score is associated with decrease in nurses' willingness to collaborate score (regression coefficient = - 0.028, P > 0.05), (in response to research question 6).

Table (7): Clarifies the relation between personal characteristics of the studied nurses and different study variables; results indicated that there were statistically significant relations between nurses' age and years of experience regarding to different study variables (P<0.05). In addition, there were statistically significant relations between educational level of nurses as regards supervisors' nonverbal immediacy, nurses' communication satisfaction and their willingness to collaborate in decision making (P<0.05).

Discussion:

Supervisors and subordinates worldwide engage in nonverbally immediate or non-immediate behaviors while communicating with each other. When organizations train their nurse supervisors to become more competent communicators; this could lead to increased communication and job satisfaction, as well as willingness to collaborate among their nurses.[5]

The aim of this study was to assess the relationship between nurse

supervisors' communicative behaviors and subordinates' communication satisfaction, job satisfaction, and willingness to collaborate.

Concerning the distribution of the different study variables' mean percent scores, as reported by staff nurses the current study findings showed that the highest mean percent scores were for nurse supervisors' nonverbal immediacy, followed by nurses' job satisfaction, while the lowest mean percent score was for nurse supervisors' communication competence. This might be due to that nurse supervisors did not possess skills such as listening, giving feedback, and instructing; all are needed to be competent communicators. As well, nurse supervisors did not have the abilities to employ their communicative resources such as body language, gestures, and voice effectively when interacting with staff nurses.

This finding is in disagreement with that of Madlock[17], who conducted a study to examine the relationship between communicative behaviors displayed by supervisors, in relationship to their subordinates' communication and job satisfaction, including subordinates' willingness to collaborate, in USA, and found that the highest mean percent scores were for supervisors' communication competence, followed by subordinates' job satisfaction, while the lowest mean percent score was for subordinates' communication satisfaction.

The present study findings showed that there were statistically significant positive correlations between both nurse supervisors' communication competence and nonverbal immediacy as regards nurses' communication satisfaction. This matches regression analysis where nurse supervisors' communication competence and nonverbal immediacy were found to be good predictors of nurses' communication satisfaction. This might be due to when that nurse supervisors

share and respond to information in a timely manner, use clear language of communication, actively listen to nurses' points of view, communicate clearly and concisely to all different categories of staff nurses in the organization; this could make nurses satisfied with communication within the organization.

This finding is matching with that of Simmons and Sharbrough[18], who conducted a study in USA to explore leader and subordinate perception of motivating language and found that the relation between supervisor's communication competence and subordinates' communication satisfaction was positive and significant. As well, in a study was carried out to examine the influence of supervisor communicator competence and nonverbal immediacy as they relate to their subordinates' communication and job satisfaction, in USA by Madlock[19], supervisors' communication competence appeared to be a greater predictor of their subordinates' communication satisfaction. Likewise, previously Madlock[17] clarified that there was statistically significant positive correlation between supervisors' nonverbal immediacy and subordinates' communication satisfaction.

Additionally, the findings of the current study revealed that there were no statistically significant positive correlations between both nurse supervisors' communication competence and their nonverbal immediacy regarding to nurses' job satisfaction. This goes in line with regression analysis where nurse supervisors' communication competence and nonverbal immediacy were not found to be significant predictors of nurses' job satisfaction. This might be due to that job satisfaction is multidimensional issue and there are different factors that could affect it such as; working condition, salary and promotion. This explanation was supported by Robert

and Savic[20], who clarified that predictors of nurses' job satisfaction tend to be relatively similar, and include working condition, relationships with coworkers and nurse supervisors, pay, promotion, security of employment, responsibility, and working hours

However these findings are inconsistent with those of Steele and Plenty[3], who conducted a study that examined the relation among supervisor–subordinate communication competence and communication and job satisfaction, in Trinidad and Tobago and found that, there was a statistically significant relation between supervisor's communication competence and subordinates' job satisfaction. Likewise, the previous study finding contradicted with that of Madlock[19], who found that supervisors' communication competence appeared to be a strong predictor of their subordinates' job satisfaction. As well, Madlock[17] clarified that there was statistically significant positive correlation between supervisors' nonverbal immediacy and subordinates' job satisfaction

The findings of the present study reveal that there was a significant positive correlation between nurse supervisors' communication competence and nurses' willingness to collaborate. This goes with regression analysis, where nurse supervisors' communication competence was a stronger predictor of nurses' willingness to collaborate in decision making. This might be due to that when nurse supervisors used their communicative resources such as; speaking with clear language, using suitable tone of voice and good listening to nurses' suggestions and opinions, this could encourage nurses to work together and collaboratively, share the accountability and joint decision making characterized by mutual respect and trust. This finding is supported by Madlock[17], who found that there was statistically significant

positive correlation between supervisor's communication competence and subordinates' willingness to collaborate in decision making.

Moreover, the findings of present study showed that there was no statistically significant negative correlation between nurse supervisors' nonverbal immediacy and nurses' willingness to collaborate. This might be due to that a supervisor who aims to demonstrate increased quantity of nonverbal behavior was unknowingly perceived as demonstrating dominance or superiority by their nurses, which results in decreasing their willingness to collaborate. This finding is congruent with regression analysis, where nurse supervisors' nonverbal immediacy wasn't found to be a predictor of nurses' willingness to collaborate in decision making. This finding is incongruent with that of Madlock[17], who found that there was a statistically significant positive correlation between supervisor's nonverbal immediacy and subordinates' willingness to collaborate.

The current study results revealed that there was a statistically significant negative correlation between supervisors' communication competence and their nonverbal immediacy. This finding means that subordinates will perceive their supervisors as more competent communicators when they decrease the quantity of nonverbally immediate behaviors in their communications. The explanation of this finding may be due to that nurse supervisors couldn't employ their communication skills within a balanced manner between verbal and nonverbal communication. This finding is contradicting with that of Witos[5], who conducted a study in USA, to explore the relationships between nonverbal immediacy, biological sex, job satisfaction, credibility and liking and found that nonverbal immediacy and

communication competence had a significant positive relationship.

Furthermore, the present study indicated that there was a statistically significant positive correlation between nurses' willingness to collaborate in decision making and their communication satisfaction. This might be related to that collaborative decision making style is both high in assertiveness and cooperation and results in a better decision making that looks to attain full satisfaction for all group members. This finding is in agreement with that of Madlock[17], who reported a similar finding.

According to the relationship between different study variables and personal characteristics of the study nurses, the current study findings showed that there were statistically significant relations between nurses' age and years of experience regarding to different study variables. In addition, there were statistically significant relations between nurses' educational level as regards nurse supervisors' nonverbal immediacy, nurses' communication satisfaction and willingness to collaborate in decision making; while, there were no statistically significant relations between nurses' educational level as regards their job satisfaction and nurse supervisors' communication competence. This might be due to that when nurses become older and had more experience and education they acquire more knowledge and skills that enable them to understand the communicative behaviors used by their nurse supervisors.

The previous study findings go well together with that of El-sayed[21], who conducted a study in Egypt to determine the effect of nursing care delivery systems on nurses' job satisfaction and found that there were statistically significant relations between nurses' job satisfaction regarding to their age and years of experience. Likewise, these results were consistent with that of Sharma[22], who recently carried out a study in

USA to explore the organizational communication and examine the perceptions of staff members' level of communication and job satisfaction and found that there was a statistically significant relation between subordinates' educational level and their communication satisfaction. As well, in a study conducted in Slovenia by Robert and Savic[20], to determine the level of job satisfaction of nursing professionals in Slovenian hospitals and factors influencing job satisfaction in nursing; job satisfaction of nurses was significantly related to their age and years of experience.

On the other hand, these findings contradicted with that of Sharma[22], who asserted that subordinates' communication satisfaction wasn't influenced by their years of experience. Likewise, El-sayed[21] and Robert and Savic[20] found that there was statistically significant relation between nurses' job satisfaction and their level of education.

Conclusion:

In the light of the main study findings, it can be concluded that, nurse supervisors' communication competence and nonverbal immediacy were good predictors of nurses' communication satisfaction, while they weren't as regards nurses' job satisfaction. Additionally, nurse supervisors' communication competence was a strong predictor of nurses' willingness to collaborate in decision making, while nurses supervisors' nonverbal immediacy wasn't. Moreover, the highest mean percent score was for supervisors' nonverbal immediacy, while the lowest was for supervisors' communication competence. Likewise, there were statistically significant relations between nurses' age and years of experience regarding to different study variables. In addition, there was statistically significant relation between nurses' educational level as regards nurse supervisors' nonverbal immediacy, nurses' communication

satisfaction and willingness to collaborate in decision making

Recommendations

Based on the results of the present study, the following recommendations are suggested:

A. Hospitals' administrators should:

1. Train and encourage nurse supervisors to use more effective and supportive communication strategies.

2. Develop training courses for nurse supervisors (particularly new managers) to engage in positive immediate nonverbal communication behaviors and to enhance their communication competence.

3. Develop a training program that focuses on enhancing a collaborative working environment.

B. Nurse supervisors should:

1. Encourage nurses to attend in-service programs and workshops especially those with a focus on team work and communication.

2. Encourage nurses to participate in the decision making process and listen attentively to their suggestions and opinions.

C. Further study proposed to:

1. Involve an examination of supervisors' perceptions of their own communicative behaviors compared to those of their subordinates

2. Identify the relation between nurse supervisors' communicative behaviors and nurses' performance.

Table (1):   Personal characteristics of the studied nurses (n=366).

Personal Data	Frequency	%
Age:		
• < 26 years	77	21.1
• 26 – 36 years	114	31.1
• > 36 years	175	47.8
Years of experience:		
• < 5 years	59	16.1
• 5 –10 years	75	20.5
• > 10 years	232	63.4
Educational level:		
• Nursing diploma	172	47.1
• Nursing diploma + specialty	92	25.1
• Technical health institution	3	0.8
• Bachelor of nursing	96	26.2
• Master degree in nursing	3	0.8

Table (2): Distribution of different study variables' mean percent scores as reported by studied nurses (n=366)

Study Variables	% of mean score	Mean	± SD	Range
Nurse supervisors' communication competence	45.96	27.58	6.96	12 - 50
Nurse supervisors' nonverbal immediacy	61.91	80.49	13.58	45 – 119
Nurses' communication satisfaction	53.94	51.25	8.91	32 – 73
Nurses' job satisfaction	58.71	14.09	2.77	12 - 18
Nurses' willingness to collaborate in decision making	51.89	33.73	5.45	21 – 50

Table (3):   Correlation between different study variables among studied nurses (n=366)

Study Variables	Nurse supervisors' communication competence		Nurse supervisors' nonverbal immediacy		Nurses' communication satisfaction		Nurses' job satisfaction	
	r	p	r	p	r	p	r	p
Nurse supervisors' nonverbal immediacy	- 0.121(*)	0.02						
Nurses' communication satisfaction	0.326(**)	0.000	0.110(*)	0.03				
Nurses' job satisfaction	0.044	0.43	0.034	0.52	0.009	0.86		
Nurses' willingness to collaborate in decision making	0.185(**)	0.000	- 0.015	0.20	0.096	0.06	0.418(**)	0.000

** Correlation is significant at the 0.01 level (2-tailed).
 * Correlation is significant at the 0.05 level (2-tailed).

Table (4): Regression analysis to study independent factors affecting nurses' communication satisfaction (n=366)

Independent Factors			Regression Coefficients	P value	Sig.	95% CI for Regression Coefficients	
Nurse	supervisors'	communication	0.280	0.0001*	HS	0.164	0.397
Nurse supervisors' nonverbal immediacy			0.101	0.001*	HS	0.041	0.161

*Significant at p < 0.05

Table (5): Regression analysis to study independent factors affecting nurses' job satisfaction (n=366)

Independent Factors			Regression Coefficients	P value	Sig.	95% CI for Regression Coefficients	
Nurse	supervisors'	communication	0.043	0.053	NS	0.085	1.02
Nurse supervisors' nonverbal immediacy			0.003	0.751	NS	- 0.018	0.024

*Significant at p < 0.05

Table (6): Regression analysis to study independent factors affecting nurses' willingness to collaborate in decision making (n=366)

Independent Factors			Regression Coefficients	P value	Sig.	95% CI for Regression Coefficients	
Nurse	supervisors'	communication	0.091	0.02*	S	0.010	0.171
Nurse supervisors' nonverbal immediacy			- 0.028	0.18	NS	- 0.070	0.014

*Significant at p < 0.05

Table (7):   Relation between personal characteristics of the studied nurses and different study variables (n=366).

Variables	Nurse supervisors' communication competence			Nurse supervisors' nonverbal immediacy			Nurses' communication satisfaction			Nurses' job satisfaction			Nurses' willingness to collaborate in decision making		
	Mean	±	SD	Mean	±	SD	Mean	±	SD	Mean	±	SD	Mean	±	SD
Age in years															
< 26 years	30.09	±	6.55	74.35	±	12.88	56.29	±	7.65	13.19	±	2.32	35.38	±	3.78
26 – 36 years	28.89	±	7.70	81.13	±	12.55	53.85	±	8.53	13.96	±	2.74	34.29	±	4.58
> 36 years	25.62	±	6.05	82.77	±	13.78	47.35	±	7.91	14.57	±	2.88	32.63	±	6.30
F test-----P-value	15.01—0.000**			11.03—0.000**			41.51—0.000**			6.98 – 0.001**			7.96—0.000**		
Years of experience															
< 5 years	29.47	±	6.46	75.81	±	10.69	53.39	±	9.21	13.19	±	2.26	34.80	±	4.01
5 –10 years	30.32	±	7.54	79.87	±	14.01	56.25	±	7.75	14.05	±	2.83	35.19	±	3.82
> 10 years	26.21	±	6.53	81.87	±	13.86	49.09	±	8.42	14.34	±	2.84	32.98	±	6.05
F test-----P-value	13.33—0.000**			4.89—0.008**			22.76 —0.000**			4.12—0.01*			6.17—0.002**		
Educational level															
Nursing diploma	28.02	±	6.75	77.86	±	14.02	52.04	±	7.61	14.09	±	2.79	34.53	±	4.77
Nursing diploma + specialty	26.47	±	7.51	85.00	±	12.95	49.57	±	9.21	14.04	±	2.75	32.12	±	6.71
Technical health institution	27.67	±	4.04	71.00	±	17.32	49.67	±	6.81	14.00	±	3.46	36.00	±	4.58
Bachelor of nursing	28.09	±	6.78	80.71	±	12.08	50.90	±	10.10	14.21	±	2.81	33.78	±	5.06
Master degree in nursing	20.00	±	0.00	95.00	±	0.00	71.00	±	0.00	12.00	±	0.00	33.00	±	0.00
F test-----P-value	1.79—0.129			5.66—0.000**			5.14—0.000**			0.47—0.755			3.16—0.01*		

*Significant at p < 0.05   ****Significant at p < 0.01**

References:

1. Wagner JD, Bezuidenhout MC & ROOS JH. Communication satisfaction of professional nurses working in public hospitals. *Journal of Nursing Management.* 2015; 23: 974 – 982.

2. Marquis BL, & Huston CJ. *Leadership Roles and Management Functions in Nursing: Theory and Application.* (7th ed). Ch.19. China: Wolters Kluwer Health/ Lippincott Williams & Wilkins. 2012; 21.

3. Steele GA & Plenty D. Supervisor–subordinate communication competence and job and communication satisfaction. *International Journal of Business Communication.* 2015; 52 (3): 294 – 318.

4. Madlock PE. The link between leadership style, communicator competence, and employee satisfaction. *Journal of Business Communication.* 2008; 45 (1): 61 – 78.

5. Witos M. The effect of nonverbal immediacy and biological sex on subordinate job satisfaction and supervisor credibility and liking. *Graduate Annual Journal.* 2015; 3 (1): 57 – 65.

6. Teven JJ. The effects of supervisor nonverbal immediacy and power use on employees' ratings of credibility and affect for the supervisor. *Journal of Human Communication.* 2010; 13 (2): 69 – 85.

7. Alsayed AK, Motaghi MH, & Osman IB. The relationship between communication satisfaction and performance indicators in Palestinian governmental organization. *International Journal of Scientific and Research Publications.* 2012; 2 (11): 1 – 9.

8. Jones KJ. Considering the relationship of communication style and communication satisfaction in the supervisor-subordinate dyad: an exploratory study. *Journal of Global Business, Economics and Finance.* 2014; 1(1): 22 – 41.

9. Voon ML, Lo MC, Ngui KS, & Ayob NB. The influence of leadership styles on employees' job satisfaction in public sector organizations in Malaysia. International *Journal of Business, Management and Social Sciences.* 2011; 2 (1): 24 – 32.

10. Kelly P. *Essentials of Nursing Leadership & Management.* (2nd ed.). Ch.5. USA: Delmar, Cengage Learning. 2010; 124.

11. Krejcie RV & Morgan DW. Determining sample size for research activities. *Educational and Psychological Measurements Journal.* 1970; 30: 607 – 610.

12. Monge PR, Backman SG, Dillard JP, & Eisenburg EM. Communicator competence in the workplace: Model testing and scale development. *Communication Yearbook Journal.* 1982; 5: 505-528.

13. Richmond VP, McCroskey JC, & Johnson AE. Development of the nonverbal immediacy scale (NIS); measures of self- and other-perceived nonverbal immediacy. *Journal of Communication Quarterly.* 2003; 51: 502-515.

14. Hecht ML. The conceptualization and measurement of interpersonal communication satisfaction. *Human Communication Research Journal.* 1978; 4: 253-264.

15. Russell SS, Spitzmuller C, Lin LF, Stanton JM, Smith P C, & Ironson G H. Shorter can also be better; the abridged job in general scale. *Educational and Psychological Measurement Journal.* 2004; 64: 878-893.

16. Anderson CM, Martin MM, & Infante DA. Decision-making collaboration scale: Tests of validity. *Communication Research Reports Journal.* 1998; 15: 245-255.

17. Madlock PE. Supervisors' communicative behaviors as predictors of their subordinates' communication satisfaction, job satisfaction, and willingness to collaborate. Published Master Thesis, Art department, Graduate Faculty, University of Akron, USA. 2006; 20, 30 & 33.

18. Simmons SA and Sharbrough WC. An analysis of leader and subordinate perception of motivating language. *Journal of Leadership, Accountability and Ethics*. 2013; 10 (3): 11 – 27.

19. Madlock PE. Employee satisfaction; an examination of supervisors' communication competence. *Human Communication Journal*. 2008; 11(1): 87 – 100.

20. Robert M & Savic BS. Job satisfaction of nurses and identifying factors of job satisfaction in Slovenian Hospitals. *Croat Med Journal*. 2012; 53: 263 – 70.

21. El-sayed HA. The effect of nursing care delivery systems on nurses' job satisfaction. Unpublished master thesis, Nursing Administration, Faculty of Nursing, Zagazig University, Egypt. 2015; 54.

22. Sharma PR. Organizational Communication: Perceptions of Staff Members' Level of Communication Satisfaction and Job Satisfaction. Published Doctorate Thesis, Educational Leadership and Policy Analysis Department, East Tennessee State University, USA. 2015; 91 & 98.