



Correlation between Demographic Information and Rate of Conflict among Nurses in Emergency Department

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Abstract

Introduction: The conflict phenomenon has been always problematic in the health system leading to reduced efficiency of the staff and increased health care costs. Conflicts in the hospital are high due to frequent interactions among nurses, physicians, and other members of the treatment team and their multiple roles. This study expunged upon the correlation between demographic information and the rate of conflict among the nurses in the emergency department (ED).

Methods: A total of 147 nurses of teaching hospitals affiliated to Shahid Beheshti University of Medical Sciences participated in this descriptive-analytic study in October, 2015. The nurses were selected using the random cluster sampling method. The data were collected with a researcher-made instrument. The gleaned data were analyzed with descriptive statistics, Pearson product moment correlation coefficient, and one-way ANOVA.

Results: Our findings demonstrated that the rate of conflict was higher in the intrapersonal dimension in nurses employed in ED of the hospitals under study compared to the other two dimensions, i.e., intraclass and interclass. There was significant correlation between gender and rate of conflict in intrapersonal and interclass dimensions while the rate of conflict was higher among the males than females. There was also a significant association between the rate of conflict in intraclass dimension and employment status.

Conclusions: The results of this study can help managers to remove or diminish conflict-inducer factors. They may further adopt appropriate methods to manage conflict and promote nursing services through cooperative and supportive interaction.

INTRODUCTION

Conflict indicates literally struggle, challenge, tension and quarrel. It is a process in which an individual tries to deliberately prevent others from achieving their intended goals and interests leading to their failure [1]. Today, one of the basic problems of organizational management is confrontation with disparities and conflicts since conflict is an inevitable phenomenon and nobody may claim that they have never faced it before or

will not encounter it in future [2]. Although the negative aspects of conflict are usually noticed, it can be positive and constructive, too [3]. In the case that conflict is used to satisfy personal wants and wishes, it would be destructive for the organization serving as a detrimental factor so that if these conflicts are not managed properly, they may predispose to the incidence of stubborn problems. Nonetheless, if they are directed towards the

benefits of the organizational goals and creation of intellectual opportunities, they may lead to the incidence of innovative and creative ideas of the organization predisposing to useful changes and innovations in the organization [4].

Individuals with various ages, genders, income levels, racial groups, educational designs, life styles, goals, and expertise have gathered together to foster the community health. Disparities in beliefs and opinions about the method of goals fulfillment are a natural part of working with individuals who possess different skills and expertise [5]. Hospitals are one of the complex and conflicting settings and the crux of healthcare system of any country [6]. The staff of the health care institutes is exposed to conflict. The study conducted by American Management Association reported that nurse managers spend %20 of their total time to deal with conflict [1]. Socio-economic and sexual inequalities in the community as a whole are felt in the hospital. Hence, various conflicts are likely to manifest themselves in this type of organization. If the conflict is very deep and serious, it may affect patient treatment and also the health and well-being of the personnel turning to a problematic issue [7].

The ED of the hospital is rendered as one of the major wards serving as a basic and unforgivable foundation of the hospital especially with regard to its critical role in saving human lives and also its unique role in emergencies and disasters so that its improvement would lead to promotion and completion of treatment chain [8]. Consequently, it is better to prevent any destructive factor such as conflict among the nurses which affects negatively the activities of this ward [6]. From the present researcher's point of view, an identification of the rate of conflict in the organization may prove useful in controlling it and optimizing its beneficial application towards our goals. Previous studies have dealt with level, intensity, and frequency of conflict among nurses employed in different ICUs or with managing conflict in nurses [9].

To understand and reduce the conflicts in different levels of incidence among ED nurses, research is necessary. However, there is no study for evaluation of conflicts among ED nurses. Contreras et al. (2018) indicates that ED patients are admitted at any time of the day and night without a prior notice or scheduling [10]. Chiarchiaro et al. (2016) described Conflicts and management Strategies it in the ICU [11]. Losa Iglesias et al. (2012) showed that there were the predominant conflicts in nursing profession. Also they described that there are significant correlation among demographic data and conflicts [12].

Seeing the importance of the ED, the presence of an experienced treatment team, incidence of critical situations in this ward, and also given that demographic information such as age, sex, marital status, etc. can have a relationship with the conflict, the researchers in this study embarked on elucidating the conflict rate and the

correlation between demographic information and the rate of conflict in nurses employed in ED of hospitals affiliated to Shahid Beheshti University of Medical Sciences in 2015.

METHODS

In this descriptive-analytic study, the subjects were selected with random cluster sampling method. In so doing, the hospitals affiliated to Shahid Beheshti University of Medical Sciences were divided into four geographical zones including north, south, west, and east and then the large hospitals of each zone (hospitals which were not single-specialty and had more than 200 clinical beds) were selected randomly (table 1).

Subsequently, the nurses in the ED of these hospitals entered the study randomly. Panahi et al. (2014) study was used to determine sample volume that was calculated as 120 nurses using the following formula ($\alpha = 0.05$, $P = 0.8$, $d = 0.05$) [8]:

$$n = \frac{Z_{1-\alpha/2}^2 * p * (1 - p)}{d^2}$$

To compensate for probable subject attrition, the questionnaires were distributed among ED nurses to be completed. Given that there were about 40 to 60 ED nurses in each hospital, 150 nurses were selected using simple sampling method proportional to the number of nurses per hospital. The data were culled by the use of a researcher-made questionnaire which consisted of two sections: The first section included demographic variables such as age, gender, marital status, and education level and also occupational variables like work experience, nursing experience in ED, employment status, type of work shift, second job, mean work hours per month, and passing an educational program related to the subject of conflict. The second part included 20 items about the rate of conflict which were divided into three dimensions: intrapersonal dimension (7 items), intraclass dimension (9 items), and interclass dimension (4 items). It used a five-point Likert scale ranging from never=1 to always=5. The maximum and minimum scores of conflict ranged between 20 and 100. Instrument validity consisted of content validity and face validity.

Content validity included Content Validity Ratio (CVR) and Content Validity Index (CVI) [13]. Inclusion criteria were: having at least a two-year work experience in ED [14], and holding a BS or MSc degree in nursing. The exclusion criterion was a deficiently completed questionnaire. To collect the required data, the researcher turned to the selected hospitals in person with introduction letters given by the university authorities on the basis of arrangements made beforehand. The participants were oriented about the procedures and goals of the study, their informed written consents were obtained, and they were asked to complete the questionnaires. It should be pointed out that the participants could freely complete the questionnaires voluntarily in sufficient time. They were distributed among the nurses at nurses' break

time or when the ward was less crowded. The data were analyzed using descriptive statistics and also

inferential statistics like Pearson's product moment correlation coefficient and ANOVA with P = 0.05.

Table 1: Hospital Names and Number of Nurses Participating in this Study

Hospital name	Total number of nurses	Completed questionnaires
Imam Hussein	50	38
Taleghani	24	13
Modarres	35	21
Fifteen Khordad	18	16
Loghman Hakim	50	32
Massih Daneshvari	30	27
Total	207	147

RESULTS

A total of 147 nurses finally completed the questionnaires with a return rate of %98. Most of the study units (%81) were female, married (%61.5), and held a BS degree in nursing with a mean age of 30.82 years (Table 2). The longest work experience in ED was 240 months (20 years)

and the shortest was 2 years (Table 3). Our findings indicated that the rate of conflict in the intrapersonal dimension was greater than the other two dimensions in ED nurses employed at hospitals affiliated to Shahid Beheshti University of Medical Sciences (Table 4).

Table 2: Distribution of Demographic Characteristics

Category	Frequency	Percentage
Gender		
Male	28	19
Female	119	81
Marital Status		
Single	58	38.5
Married	89	61.5
Other	0	0
Level of nursing Education		
BS	141	95.9
MSc	6	4.1
Employment Status		
Employed Formally	59	40.1
Employed Under a contract	12	8.2
Contractual employment	48	32.7
Training program	28	19
Type of work shift		
Fixed morning shift	12	8.2
Fixed evening shift	3	2
Night shift	14	9.5
Rotating shift	118	80.3
Type of second job		
Nursing	22	15
Non-nursing	8	5.4
No second job	117	79.6
Formal education about conflict		
Yes	28	19
No	119	81

Table 3: Mean and SD of Demographic Information

Variable	Range	Mean	SD
Age (year)	22-55	30.82	6.35
Total nursing work experience (month)	5-336	85.13	69.64
ED work experience (month)	24-240	52.26	44.48
Mean of work hours per month	100-400	2.22	52.96

Table 5 reveals that there is no statistically significant correlation between age and rate of conflict in intrapersonal, intraclass, and interclass dimensions (P>0.05). Also, there is no statistically significant correlation between nursing work experience and rate of conflict in intrapersonal, intraclass, and interclass dimensions (P > 0.05) (Table 5).

Table 6 indicates that there is a statistically significant correlation between gender and rate of conflict in intrapersonal and interclass dimensions (P<0.05). Also, there is no statistically significant correlation between marital status and rate of conflict in intrapersonal, intraclass, and interclass dimensions (P>0.05) (Table 6).

Table 4: Mean and SD of the Rate of Conflict in Intrapersonal, Intra-class, and Interclass Dimensions in ED Nurses

Type of conflict	Range	Mean	SD	Coefficient of changes
Intra-personal	22.86-94.29	57.22	14.96	26.14
Intra-class	22.22-88-89	51.86	12.45	24.01
Interclass	30-90	56.08	13.58	24.22

Table 5: Investigation of Correlation between "Age, Working Hours per Month, and Work Experience" and "Rate of Conflict in Intra-personal, Intra-class, and Interclass Dimensions" in ED Nurses

Conflict dimension	Age		Work experience		Work hours per month	
	r*	P**	r	P	r	P
Intra-personal	-%085	0.06	-%047	0.07	%114	0.06
Intra-class	-%006	0.06	%109	0.07	%161	0.06
Interclass	-%086	0.06	-%006	0.07	-%088	0.06

Note. *r= Pearson correlation coefficient, **P<0.05 is significant.

Table 6: Investigation of Correlation between "Gender, Marital Status, and Education Level" and "Rate of Conflict in Intrapersonal, Intra-class, and Interclass Dimensions" in ED Nurses

Gender	F**	P-value	Marital status	F	P-value	Education Level	F	P-value
Intra-personal								
Male	-902	0.02*	Single	231	0.396	BS	216	0.156
Female	807	0.02*	Married	109	0.396	MSc	-167	0.156
Intra-class								
Male	501	0.08	Single	-203	0.620	BS	348	0.916
Female	202	0.08	Married	-342	0.620	MSc	-267	0.916
interclass								
Male	990	0.005*	Single	-145	0.835	BS	146	0.963
Female	823	0.005*	Married	265	0.835	MSc	215	0.963

Note. *P<0.05 is significant. **F= ANOVA

The other results of this study, the findings of one-way ANOVA suggested that there is a significant difference between the rate of conflict and employment status in the intra-class dimension ($P<0.05$). Moreover, Tukey test showed that the rate of conflict is smaller in employment under a contract compared to other types of employment. Additionally, ANOVA demonstrated that there is no significant correlation between rate of conflict in intrapersonal, intra-class, and interclass dimensions and work shift ($P>0.05$). One-way ANOVA demonstrated that there is a significant correlation between rate of conflict in intrapersonal, and intra-class dimensions and second job ($P<0.05$) so that those who had nursing as their second job had less conflict.

DISCUSSION

In this study, most of the study units were female, married, held a BS degree in nursing, formally employed, had a rotating work shift, and had no second job without any training about conflict. In the study by Esmaealzadeh (2013), most study units were male, held a BS in nursing, were employed under a contract, had a rotating work shift, and without a second job with no education on conflict [15]. Moreover, in the study by Panahi et al. (2013), most of the participants were female, married, employed under a contract, and held a BS in nursing [8]. In our study, the rate of conflict in intrapersonal dimension was greater than the two other dimensions in ED nurses while in Esmaealzadeh (2013) study [15], intra-class conflict was more frequent. Perhaps, the reason for this can be attributed to the difference in the ward in which the nurses worked. The

findings suggested that there was no significant correlation between age and rate of conflict in intrapersonal, intra-class, and interclass dimensions. The results of the study by Dwomoh et al. (2014) indicated that there was a reverse correlation between age and the rate of conflict so that conflict decreased with increasing age [16]. Their results are consistent with the findings of the present study. The reason of this consistency may be attributed to the point that with increasing age, then nurses get more experienced and skilled leading to their easier control of conflicts. In our study, there was no significant correlation between nursing work experience and the rate of conflict in intrapersonal, intra-class, and interclass dimensions. The study by Dwomoh et al. (2014) showed that there was a positive significant correlation between the rate of conflict and work experience [16]. Their study is not consistent with our research. It appears that the cause of this disparity may be attributed to nurses' work place. ED nurses can handle the conflicts better with increasing work experience while in Dwomoh et al. study, the nurses worked in different wards, and employment in different wards has resulted in their reduced control of conflict [16]. Our findings demonstrated that there was no statistically significant correlation between mean work hours per month and the rate of conflict in intrapersonal, intra-class, and interclass dimensions. Moreover, there was no significant difference between university-affiliated and non-university-affiliated hospitals regarding mean work hours in Esmaealzadeh's study. In our study, there was a significant correlation between gender and the rate of conflict in intrapersonal and

interclass dimensions with the rate of conflict being greater in these two dimensions in men compared to women. The study by Dwomoh et al. (2014) suggested that women are more frequently involved in conflict than men [16].

This is not consistent with our results. In our study, men were more greatly involved in conflict probably due to their personality type. Our findings indicated that there was no statistically significant correlation between marital status and the rate of conflict in intrapersonal, intraclass, and interclass dimensions in ED nurses. Esmaelzadeh's (2013) study revealed that there was no significant difference between university-affiliated and non-university affiliated hospitals with regard to marital status [15].

Our study showed no significant correlation between education level and the rate of conflict in intrapersonal, intraclass, and interclass dimensions in ED nurses. Dwomoh et al. (2014) reported in their study that the highest level of conflict occurred in nurses with low education [16].

The results of the study by Kaitelidou et al. (2012) also indicated that differences in education level can function as a strong source of conflict [17]. Teaching hospitals have their own characteristics such as the presence of different medical education levels including physicians, assistants, and residents, numerous medical orders written by them, and also the presence of inexperienced junior students that can predispose to the incidence of conflict in work settings [18].

In the present study, there was a significant correlation between the rate of conflict in intrapersonal and intraclass dimensions in nurses and second job so that those with a second nursing job had less conflict. The dual occupation of nurses is one of the disasters of the health care system the solution of which is related an increase in nurses' salary on the basis of annual inflation rate and also obtaining the permission for employing more nurses to remove the nurse shortage. This problem is not resolved yet due to limitations of the health care system serving as a great challenge for this academic major. The dual occupation of nurses imposes obligatory conditions on other professionals leading to unwanted and unexpected detrimental incidents that may serve as a source conflict [19]. Also indicated that individual (personal characteristics), group (staff team and patients' original community), and environmental (outside and inside care settings) factors were significant causes of conflict among nurses [19]. The findings in these studies were consistent with our results related to the causes of conflict.

CONCLUSIONS

Regarding the qualitative demographic variables of this study, there was a significant association between gender and the rate of conflict in intrapersonal and interclass dimensions while the rate of conflict was higher among men than women. There was also a

significant correlation between the rate of conflict in intraclass dimension and employment status. A more detailed analysis revealed that the rate of conflict was less in employment under a contract compared to other types of employment. Moreover, the results demonstrated a significant correlation between the rate of conflict in intrapersonal and intraclass dimensions and second job so that those with a second nursing job showed less conflict.

Study Limitations

The limitations of this study included limited investigation of the rate of conflict and factors contributing to conflict in nurses, lack of sufficient control on probable intervening variables like those affecting the personnel's concentration at the time of completion of questionnaires due to high workload, and lack of awareness of some nurses about the meaning of conflict. To overcome these shortcomings, the questionnaires were distributed at an appropriate time. Regarding nurses' unawareness of the concept of conflict, some explanations were provided on the basis of the nurses' needs.

Ethical Consideration

Code of Ethics this article was published on IR.SBMU.IASB.REC by the Ethics committee of the Shahid Beheshti University of Medical Sciences.

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Conflicts of Interests

There was no conflict of interest.

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Authors' Contribution

This study is a part of MSc Thesis of Mohsen Ganji Zadeh, who developing original idea, study concept and design and study supervision; other authors Neda Mirbagher Ajorpaz study concept and design, critical revision of the manuscript for important intellectual content; Manijeh Naderi and Mansoureh Zagheri Tafreshi acquisition and analysis of data, interpretation of data and writing the manuscript.

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