

ATTITUDES OF HEALTH CAREGIVERS ON TEAMWORK AND SAFETY CLIMATE IN AN EDUCATIONAL MEDICAL CENTER

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ABSTRACT

Objective: To study the attitudes of health caregivers on teamwork & safety climate in an educational Medical Center in Tehran Iran.

Methodology: In this descriptive study, 225 residents physician, nurses and other paramedics working for at least one month in the studied hospital participated. Data collection tool was Safety Attitudes Questionnaire (SAQ) which consisted of three sections: provider group characteristics, 14 teamwork questions, and 13 safety climate questions. Validity (content) and reliability (test-retest) of the questionnaire were confirmed and chi square test was used for data analysis.

Results: The results indicated that from 225 subjects, 39.11% were male and 60.89% were female, with 70.23% being married and 26.66% being single. There was not a significant relationship between caregivers' attitudes on teamwork & safety climate with provider group characteristics (gender, experience in organization, marital status, and organizational position). By comparing teamwork & safety climate points, the status of teamwork in the studied hospital was better than that of safety climate and the caregivers were more satisfied with status of teamwork in the hospital.

Conclusion: Achievement of patient safety depends on teamwork. Safety climate also leads to an appropriate feedback and culture of learning from errors. Therefore, further studies on safety climate related factors, for continuous improvement in patient safety is recommended.

KEYWORDS: Teamwork, Safety Climate, Patient Safety.

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INTRODUCTION

Recent reports of health organizations show there has been a tremendous interest in patient safety research and improvement.¹ Safety culture is increasingly recognized an important strategy and necessary precursor to improve the widespread deficits in patient safety and "½To Err is Human" is a motivation for health organization to implement this precursor for patient safety.²

On the other hand, in response to growing concern for occupational health in the hospital system, studying safety climate has gained

attention and there is a significant relationship between safety climate and predictions resulting from workplace injuries, so that safety climate in workplace accounts for 71% of occupational injuries.³ Today, by studying safety culture, health organizations have made managers accountable in appropriately allocating the scarce resources.⁴

Safety climate and feeling safe in workplace are the strong commitments of the organization regarding safety, which leads to an appropriate performance feedback, development of culture of learning from errors and the leaders listening to the suggestions.⁵

Factors such as ethics and feeling safe at workplace, environmental factors such as caregivers levels and management supports, workgroup factors such as teamwork and its leadership and occupational factors such as self-esteem while working will influence providing effective safe care.⁶ Teamwork culture in health organizations and extent of patients satisfaction that received health care, implies significant relationship between these two factors.⁷ and the hospitals using teamwork in health care provided better care results to the patients and had better functional results regarding human resources management than traditional care models.⁸

Decreased patient stay time, decreased re-hospitalization likelihood, increased communication and cooperation between physicians and health caregivers, delegation of patient care responsibility by physicians to other health caregivers, decreased health expenses as a result of delegation of patient care responsibility all are among the functional results of teamwork in health organizations.⁹

In fact, teamwork will not merely improve patient safety – achievement of patient safety depends on teamwork.¹⁰ However, caregivers' attitudes about key factors influencing safe care remain largely unexplored and influential organizations in healthcare agree with the need to examine caregivers' attitudes about these issues.¹¹ This study was conducted to determine the status of teamwork & safety climate from the viewpoint of health caregivers at an educa-

tional medical center, situated in Tehran-Iran. We hope that the results may develop deeper attitudes among the managers of health organization to enhance teamwork motivation and safety climate at workplace.

METHODOLOGY

In this descriptive study, 225 participants including 29 residents physician, 102 nurses and 94 paramedics (such as operation room technician, anesthesia technician, laboratory technician, radiology technician, nutritionist, pharmacist) working for at least one month with 20 hours work, per week, at Shahid Labbafi Nejad Hospital, in Tehran were selected by census sampling method. Formal consent was taken from the hospital manager & all the participants, and anonymity was confirmed. The main limitation of this study might be the problem of generalizability which can be overlooked due to lack of knowledge in this field.

Data collection tool was Safety Attitudes Questionnaire (SAQ). The content validity of the questionnaire was confirmed by experts. And reliability was determined by test-retest method. The tests were performed with two weeks interval ($r=0.9$). (This was performed for the accuracy of the translation into Farsi). The questionnaire consisted of three sections: provider group characteristics (experience in organization, gender, marital status and organizational position), 14 teamwork questions, and 13 safety climate questions. Each question was evaluated by Likert Scale with expressions of Agree strongly (5), Agree slightly (4), neutral (3), Disagree slightly (2), Disagree strongly (1) and Not Applicable (0). For negative questions, the items were adversely scored (from 5 to 0). Accordingly, study subjects were categorized into three groups of agree (scored between 66.67 and 100), no comment (scored between 33.34 and 66.66) and disagree (scored between 0 and 33.33).

The samples were collected by providing the questionnaire in a single phase and they were coded by organizational position to determine the relationship between provider group characteristics. For caregivers' comment, chi

Table-I: Relationship between provider group characteristics and caregivers' attitudes on teamwork

Provider Group Characteristics	Agree		Disagree		Neutral		Total		χ^2	p
	N	%	N	%	N	%	N	%		
Gender										
Male	57	64.8	19	21.6	12	13.6	88	100	0.22	0.89
Female	87	63.5	33	24.1	17	12.4	137	100		
Experience in organization										
<6month	13	56.5	3	13	7	30.5	23	100	8.55	0.74
6-11month	5	71.4	1	14.3	1	14.3	7	100		
1-2year	10	20	3	66.7	2	13.3	15	100		
3-7year	32	62.7	11	21.6	8	15.7	51	100		
8-12year	43	64.2	18	26.9	6	8.95	67	100		
13-20year	33	69	11	23	4	8	48	100		
>21year	9	64	3	22	2	14	14	100		
Marital Status										
Single	41	61.1	16	24	10	14.9	67	100	0.46	0.79
Married	104	65.8	34	21.5	20	12.7	158	100		
Organizational Position										
Residents Physician	16	55.2	7	24.8	6	20.7	29	100	4.57	0.33
Nurse	68	66.7	26	25.5	8	7.8	102	100		
Paramedics	58	62	21	22	15	16	94	100		

square test (χ^2) was used and confidence coefficient of 95% and significance level of $\alpha=0.05$ were considered and data was analyzed by using SPSS 16 Software.

RESULTS

The findings indicated that from total 225 subjects, 88 were male (39.11%), 137 were female (60.89%) with mean experience in organization of 10 years and 158 being married (70.23%) and 60 being single (26.66%).

There was not any statistically significant difference between caregivers' attitudes on teamwork & safety climate and their gender, experience in organization, marital status and organizational position (Table-I&II).

Furthermore, data analysis suggested that agreement points of research units for teamwork were always higher than for safety climate according to provider group characteristics (gender, experience in organization, marital status and organizational position).

DISCUSSION

The results did not show any difference between variables such as gender perception of

teamwork motivation, and quality of cooperation among caregivers, with the organization's commitment for safety climate. This was in accordance with Rudman et al. study results.¹²

No significant relationship exists between work experience, and desirability of teamwork & safety climate. Rudman et al. also reported the same findings. According to the results, positive attitudes on teamwork & safety climate in married caregivers are similar to singles.

The results also indicated that the role of caregivers in teamwork had no relationship with their perception from teamwork & safety climate. Kaya et al. concluded that there was a significant difference between physicians and nurse's perception in safety climate.¹³ Sexton et al. found that physicians were more satisfied with teamwork than the nurses working with them in a workgroup, and anesthesiologists gave higher points to teamwork than anesthesia technicians.¹⁴

By comparing teamwork & safety climate, the research units gained better scores in teamwork questions than safety climate. The status of teamwork in the studied hospital was better than that of safety climate and the caregivers

Table-II: Relationship between provider group characteristics and caregivers' attitudes on safety climate

Provider Group Characteristics	Agree		Disagree		Neutral		Total		χ^2	p
	N	%	N	%	N	%	N	%		
Gender										
Male	30	34.1	40	45.4	18	20.5	88	100	0.26	0.87
Female	45	32.7	60	44	32	23.3	137	100		
Experience in organization										
<6month	8	35	5	22	10	43	23	100	11.77	0.46
6-11month	3	43	3	43	1	14	7	100		
1-2year	5	33.3	5	33.3	5	33.4	15	100		
3-7year	21	41.2	17	33.3	13	25.5	51	100		
8-12year	31	46.2	26	38.8	10	15	67	100		
13-20year	25	52.1	14	29.2	9	18.7	48	100		
>21year	8	57.1	4	28.6	2	14.3	14	100		
Marital Status										
Single	28	41.8	21	31.3	18	26.9	67	100	1.22	0.54
Married	74	46.8	52	32.9	32	20.3	158	100		
Organizational Position										
Residents Physician	9	31	10	34.5	10	34.5	29	100	4.93	0.29

were more satisfied with status of teamwork in the hospital.

CONCLUSION

Considering the findings of this study, teamwork & safety climate are not influenced by provider group characteristics. Caregivers' agreement with teamwork in the hospital is better than the hospital's commitment on providing patient safety.

It is recommended to study the relationship between other factors such as, shift and individual's responsibility in care team with teamwork & safety climate. Continuous study of teamwork & safety climate related factors (annually, biannually) for each ward is helpful. These results might be considered as an appropriate update guideline to reduce the existing deficiencies.

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