Continuously monitoring patient safety culture encourages self-reporting among healthcare professions

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Introduction

In recent years, governments around the world have encouraged an increase in incident reporting to identify potential patient safety weak points before incidents occur, which can provide valuable opportunities to learn from situations that were averted. However, an effective organizational approach to encourage incident reporting has not yet been established. This study investigated a continuous safety monitoring culture aimed toward reducing error reporting in healthcare professions.

Methods

The Joint Commission of Taiwan has conducted a national Taiwan Patient Safety Culture (TPSC) survey since 2009. The measurement of the safety climate in organizations was adapted from the Safety Attitude Questionnaire in Chinese, which achieved reliable validity. The self-reported frequency of incidents data were collected at the same time. Hospitals that have participated in the TPSC survey every year were considered to continuously monitor their safety culture. A logistic regression analysis was applied to examine the association of continuous safety culture monitoring with favorable safety outcomes.

Results

Data from 369,034 healthcare professionals were collected from the PSC survey from 2009 to 2016. Sixteen hospitals had continuously participated in the PSC survey since 2009. The rest of the 126 hospitals participated in the survey intermittently. Hospitals that continuously monitored their safety climate demonstrated a significantly more positive safety culture than the hospitals that monitored their safety culture intermittently ($p < 0.001$). In addition, after adjusting for gender, clinical specialties, management position, work experience, and hospital level, a positive safety culture also resulted in increased self-reporting ($p < 0.005$).

Conclusion

This results of this study suggested that hospital managers must assert their leadership concerning patient safety by regularly monitoring the safety climate within their organization. This will tend to increase the willingness of healthcare professionals to report safety issues. Further studies are required to identify the implications of clinical outcomes as a result of regular safety climate investigations.

Table 1: Correlation between Safety Attitudes and Self-reporting by year

self-reporting number / year	2010	2011	2012	2013	2014	2015	2016
0[a]	47.1%	43.9%	47.9%	50.3%	48.8%	50.0%	52.9%
1-5[b]	48.2%	45.6%	49.5%	52.0%	49.0%	51.1%	53.6%
6-10[c]	52.4%	50.0%	53.1%	55.8%	49.3%	56.3%	57.8%
11 up[d]	59.0%	57.1%	55.5%	59.0%	60.7%	64.3%	59.3%
P-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Post Hoc test	d>c>b>a	d>c>b>a	d>c>b>a	d>c>b>a	d>c>b>a	d>c>b>a	d>c>b>a

Table 2: Adjusted Positive Response Rate for Safety Attitudes

	OR	95% C.I		p
Gender(F/M)	0.819	0.788	0.851	<0.001
Managerial/Supervisory responsibility(no/yes)	0.317	0.306	0.327	<0.001
Role (Nursing staff /Doctor)	2.883	2.753	3.019	<0.001
Role (Medical staff / Doctor)	1.267	1.206	1.331	<0.001
Role (Pharmacy staff / Doctor)	6.007	5.652	6.384	<0.001
Role (Rehabilitation staff/ Doctor)	1.06	0.972	1.157	0.187
Role (others/ Doctor)	0.754	0.701	0.811	<0.001
Working hours(1-2y/6-11m)	1.209	1.151	1.269	<0.001
Working hours(3-4y/6-11m)	1.049	0.998	1.102	0.06
Working hours(5-10y/6-11m)	0.941	0.897	0.986	0.012
Working hours(11-20y/6-11m)	0.76	0.723	0.798	<0.001
Working hours(20yUP/6-11m)	0.583	0.547	0.621	<0.001
Frequency of contact with patients	1.048	1.008	1.09	0.019
Safety Attitudes	1.001	1.000	1.001	0.005
Year	0.938	0.932	0.944	<0.001
Hospital Tier(Regional Hospital/Medical Center)	1.165	1.14	1.19	<0.001
Hospital Tier(Community Hospital/Medical Center)	1.012	0.973	1.053	0.545

*Models were adjusted for gender, managerial/supervisory responsibility, role, working hours, frequency of contact with patients, year, Hospital Tier and safety attitudes
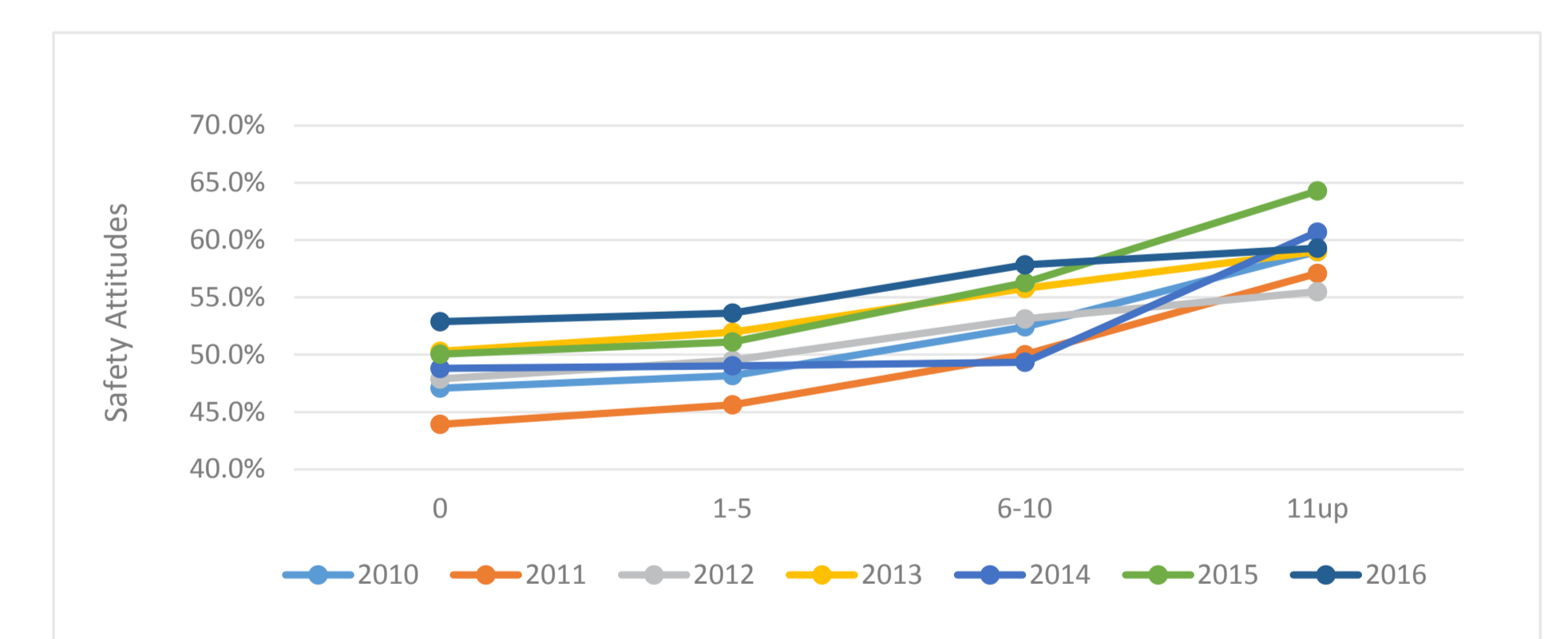

Figure 1: Correlation between Safety Attitudes and Self-reporting by year