

Relationship between incident occurrences and feeling states of nurses in a surgical ward

Keyword : Incident, feeling, mood, careless mistake, handheld terminal

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Background

Incidents are not decreasing and are leveling-off, current measures are therefore ineffective in reducing workplace incidents. This may be because of an inability to distinguish between incidents caused by physical states and those that are considered “careless mistakes.”

In the field of occupational safety, they **focused on physical condition and reduced accident occurrences.**

Emotional states are an example of physical conditions that differ from nurses’ usual status.

By clarifying **the relationships between adverse incidents and emotional states**, we may be better able to **take effective measures to reduce or eliminate these incidents.**

Aim

We seek to clarify the relationship between workplace incidents and continuous emotional states of nurses. We also aim to obtain suggestions for **preventing “careless mistakes”** by clarifying these relationships.

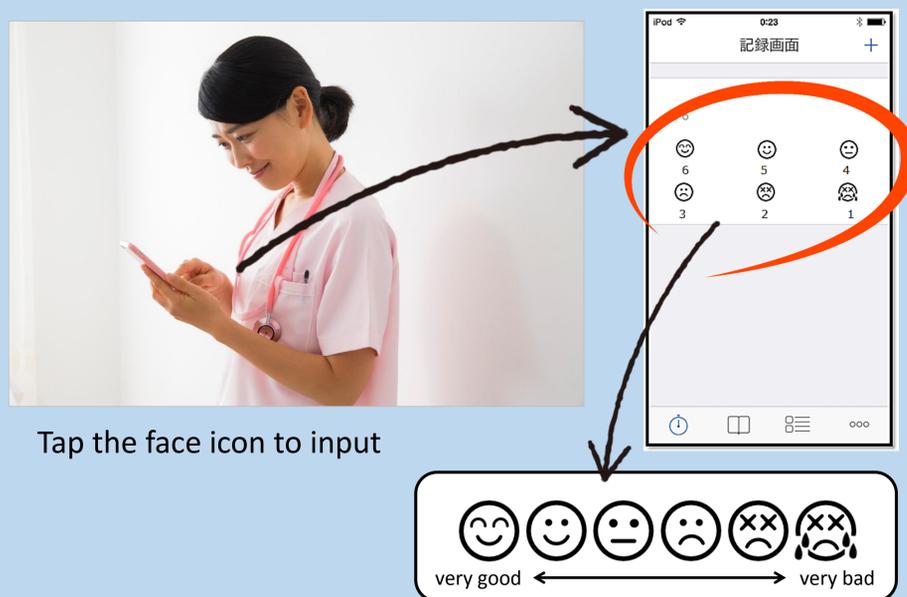


Figure 1. handheld terminal and face scale

Method

Target : Nurses who work day and night shifts in a hospital ward.

Period : February 1 and 26, 2016.

Input : Nurses were given a handheld terminal and were asked to input their subjective emotional states.

Input timing : During the morning and evening staff meetings.

Scale : **6-level face scale.** (Figure 1)

6 indicated a “very good” and 1 indicated a “very bad” mood.

Incident information : Obtained incident reports from the hospital.

Divide score : 3 working shifts indicating **day, night, and both shifts.**

Compile score : Compiled a total of 5 items.

At the start of work and at the end of work, at both the start and end of work, change over work, and change over work: absolute value.

Analyze : Using a Wilcoxon test and descriptive statistics. ($P < 0.05$)

Result

Target : 28 nurses (experiment participation rate: 97%) participated.

Input rate : At the start of work was 71% and the end of work was 56%.

Incident information : Occurred a total of 14, of which 8 occurred during the day shift (57%) and 6 occurred during the night shift (43%).

Grouping : Nurses who had experienced incidents at least once during the experiment were assigned to **the Incident Group**, and did not experience were assigned to the **No Incident Group**.

There was **a significant association for change over work: absolute value for the nurses’ individual scores and incident occurrences.**

The Incident Group score was 1.25 [0.88, 1.80], and the **No Incident Group** score was 0.75 [0.54, 1.00] ($p = 0.018$). (Figure 2)

		p		Median [interquartile range]
change over work: absolute value	day shift	0.072	Incident	1.25 [0.92 ,1.42]
			No Incident	0.75 [0.51 ,1.00]
	night shift	0.839	Incident	1.00 [0.50 ,1.33]
			No Incident	1.00 [0.33 ,1.63]
both shifts	0.018 *	Incident	1.25 [0.88 ,1.80]	
		No Incident	0.75 [0.54 ,1.00]	

*:p<0.05

Figure 2. Relationship between nurses’ score and incidents occurred

In **change over work: absolute value** of both shifts, Incident Group took a significantly larger score. **The greater the range of change, the more experienced the incident.**

Discussion

There was a significant relationship between the emotional state of the nurse and the occurrence of workplace incidents. The change over work: absolute value score of the Incident Group were significantly larger than that of the No Incident Group.

we determined that **the fluctuation in emotional states was more closely related to incident occurrence than the direction of change** (for example, going from a bad to a good mood, or vice versa). **By evaluating nurses’ emotional states, it may be possible to reduce incident occurrences.**

Also, by scoring the feeling states, it becomes possible to clarify the subjective physical condition of nurses. **Scoring feeling states feeds themselves back to self-state recognition and attention to their actions,** it can reduce careless mistakes and be more safely nursed.

