

EXPLORING THE QUALITY OF MEDICAL-SURGICAL NURSES' HANDOVER AND INFLUENCED FACTORS IN THE HOSPITAL IN TAIWAN



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Background :

- Nurse handover is critical to the patient safety leading to ensure continuousness and accurateness of nursing care.
- Handover practices, one professional activity of the nursing work, is threatened and interrupted by work-related factors in the clinical environment.
- Nurse-to-nurse handover practice involves patient safety related knowledge, attitude and action such as transfer of information, responsibility for patient at shift change, and comprehensiveness of patient medical plan.
- Based on patient safety notions, using strategies of asking back, safety double-check, updated documentation, structural handover and reviewing medical records in the handover process are required.

Objectives :

Aimed to identify the quality of handover among nurses at hospitals designed for patient safety practices and to investigate factors contributing to handover practices. (Figure)

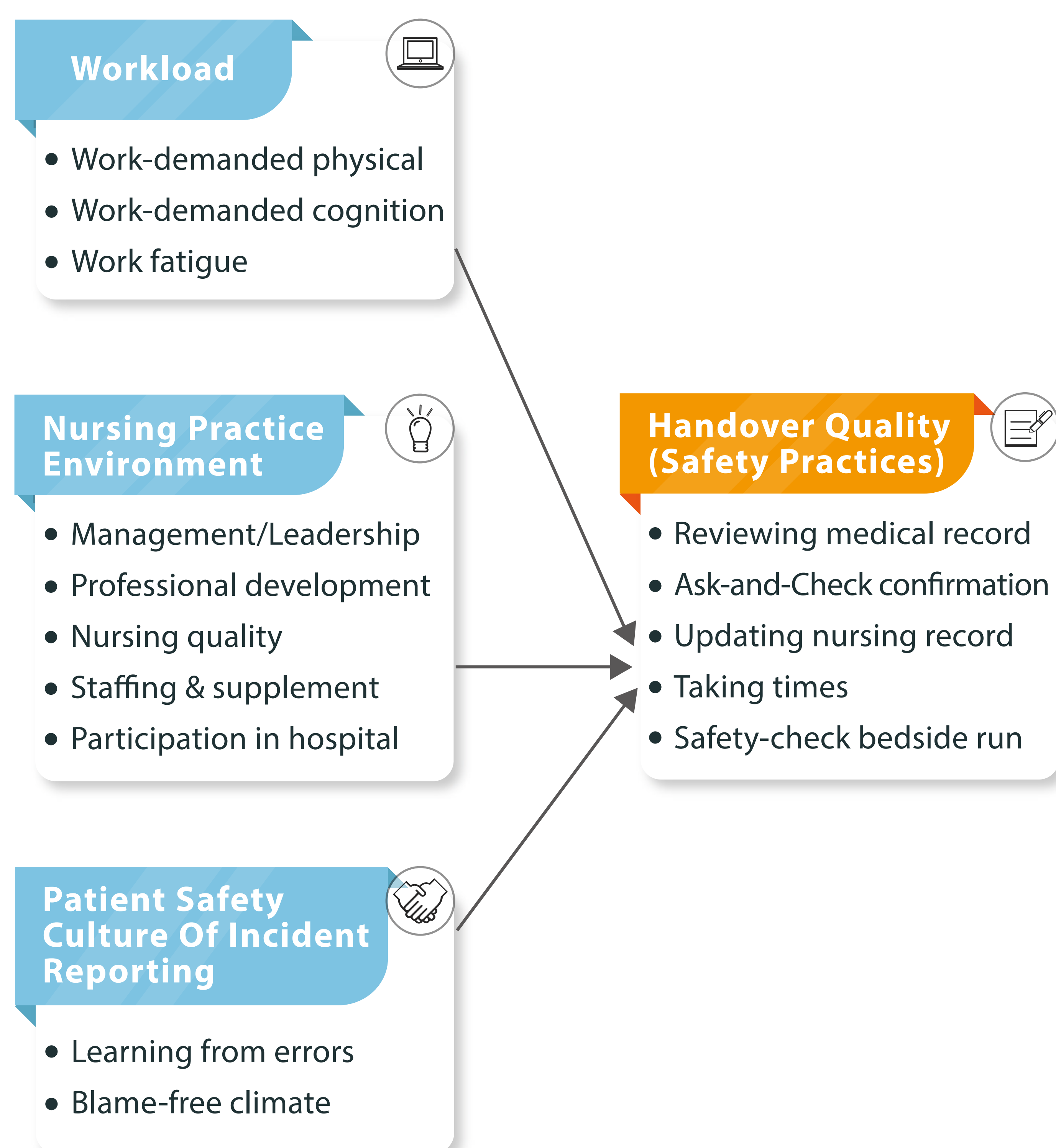


Figure 1. Study Conceptual Framework of Handover Quality

Methods :

- A quantitative, cross-sectional study design with using self-report questionnaires
- 982 frontline nurses (response rate: 95 %) working at medical-surgical units of 6 teaching hospitals in Taiwan in 2020
- Measurements:
 - Quality of handover: a self-developed questionnaire to examine the frequency of safety practices enacted
 - Work-related factors: workload scale, nursing practice environment, incident reporting culture
- Descriptive statistic and correlation analysis

Results :

1. A 5-item questionnaire of handover safety practice had good reliability (Cronbach's alpha 0.91) and construct validity (1-factor model; explained variance 75.73%).
2. Unfinished handover safety practices, "**Doing safety check with hand-on nurses**" and "**Taking times to do handover**" were 48.5% and 44.2% (top 2).
3. Nursing practice environment factors positively impact on the handover safety practices ($r_s = 0.12$ to 0.08 , $p < 0.01$).
4. Learning from errors (a factor of incident reporting culture) positively impact on the handover safety practices ($r = 0.07$, $p < 0.05$).

Table 1. Frequency of unfinished handover safety practices (N=982)

Items	Frequency of Unfinished	
	never to sometimes	often to always
1. Prior to handover, reviewing the medical record	57.3%	42.7%
2. Using "Ask-and-Check" to confirm information in the handover	60.7%	39.3%
3. Updating the nursing record before conducting handover	62.1%	37.9%
4. Taking times to do handover	55.8%	44.2%
5. Doing safety-check run at bedside with hand-on nurses	51.5%	48.5%

Note: 5-level frequency scale from never, very few, sometimes, often to always

Table 2. Correlation analysis of handover safety practice and work-related factors: workload, incident reporting culture and work environment (N=982)

Variables	Mean	SD	α^2	r value
Handover safety practices ¹	17.66	5.73	0.91	
Workload				
Work-demanded cognition	24.99	3.69	0.83	-0.005
Work-demanded physical	12.58	3.09	0.85	-0.123**
Work fatigue	13.74	4.11	0.92	-0.056
Incident reporting culture				
Learning from errors	19.99	2.47	0.88	0.070*
Blame-free climate	16.23	4.31	0.88	-0.025
Nursing practice environment				
Management and leadership	30.82	4.39	0.91	0.103**
Professional development	18.84	2.33	0.86	0.086**
Nursing quality	21.60	2.56	0.85	0.112**
Staffing and supplement resources	11.37	2.02	0.76	0.119**
Participation in hospital affairs	8.96	1.36	0.73	0.102**

Note:

1. Reversed score coding for unfinished safety practices as: 5 = never, 4 = very few, 3 = sometimes, 2 = often, 1 = always

2. Reliability coefficient: Cronbach's α

3. *: $p < 0.05$ **: $p < 0.01$

Conclusion and Implication:

- The culture of learning from errors and nursing work environment factors are advantage to handover safety practices.
- To lower nurses' work-loading through human factor design and informatics technology could save their physical demands and improve the handover quality.
- To share a culture of learning form errors through root-cause-analysis coaching can ensure safety practices applied in the nurse handover.