




Review on Patient Safety Climate – Staff Survey

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Introduction:
This is a questionnaire survey to look into the Teamwork and Patient Safety Climate in the clinical areas of three hospitals (acute, rehabilitation and convalescent respectively) in a hospital cluster in Hong Kong. It aims to identify an appropriate tool to measure safety culture in hospitals and to validate the tool for local use. The result will determine the baseline safety culture and helps to plan various strategies to enhance safety culture.

Methods:

- Self-completion questionnaire ('Teamwork and Safety Climate Questionnaire' with registration made at the University of Texas website)
- 35 statements (8 for local context)
- 3 parts
 - A with the 35 statements
 - B for free text comments
 - C for demographic background.
- 5-point Likert : Strongly Disagree (1) to Strongly Agree (5)
- Descriptive and inferential statistical analysis

Study period: December 2007
3 hospitals in the cluster
• Medical, nursing and allied health
• Implied consent
• Ethics Committee approved

Results:

Response Rate:

- A total of 3647 questionnaires were sent and the return rate is 29% (n=1057)
- Responses include nurses 76%, medical 12% and allied health staff 12%.
- Junior staff 73%, middle and senior staff 27%.
- Response rate per hospital ranged from 23.36% to 38.04%.
- The distribution of respondents between hospitals of staff disciplinary (p=0.38) and seniority groups (p=0.23) were similar.

Factor Analysis:

- Initial factor analysis showed a clear separation between teamwork and safety climate.
- Exploratory analysis was performed on Exploratory QEH sample for teamwork and safety climate and revealed a two-factor structure for each climate.
- Confirmatory factor analysis showed good fit into the remaining QEH sample and KH and BH sample. (Comparative Fit Index > 0.9)

Baseline Teamwork and Safety Climate:

- The overall mean score for teamwork climate was 3.6 and that of safety climate was 3.41.
- In the teamwork climate, two statements were rated with score below neutral of 3, which were about the staff speaking up of a problem with patient care (mean = 2.71) and expression of disagreement with doctor (mean = 2.99). The highest (mean = 4.31) was on staff knowing names of workmates.
- In the safety climate, seven statements were rated below neutral. Two statements were rated lowest (mean = 2.36) which were on the level of staffing and perceived room to reduce medical incidents. The highest (mean = 3.7) rated one was on staff being encouraged to report of patient safety concerns.

Results:

Baseline Teamwork and Safety Climate:

- Difference in rating was observed among different hospitals, staff disciplinary and seniority groups.
- Senior staff gave more favourable rating for statements on decision making, work collaboration and speaking up.
- Responses of ICU staff were significantly different with others in statements related to communication and safety. OT staff gave different ratings on reporting behaviours.

Criterion-related Validity:

- Concurrent validity was evaluated using half-yearly number of adverse patient incidents in 2007, but could not be established. Pearson's correlation coefficients were not significant.

Discussion & Conclusions:

- The tool had been validated for use in this population.
- Teamwork and safety climate scores were lower compared to overseas studies, yet there is no clear evidence that culture would affect the ratings.
- Much room for improvement was observed with regards to teamwork and safety climate.
- Seniority, discipline, age-group, years of professional experience and type of care-setting had varying significant effects on the scores for climate factors
- Further survey on individual groups for qualitative analysis to review the in-depth phenomenon and the reasons behind for maintaining such a culture
- An extremely worthwhile exercise to review the current situation of safety climate and to provide the baseline information for planning of safety improvement strategies