

## Evaluating ED nurses' knowledge, self-reported competencies & attitude in sepsis by an education program

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**DOI:** XXX

Sepsis has been regarded as one of the cardinal causes of death across the globe. Its significance and time-critical nature accounted for 20% of worldwide deaths according to a study conducted by WHO in 2024. As for the Hong Kong condition, Ling et al. documented a 21% surge of incidence and 1-in-4 deaths from 2009 to 2018 in the Intensive Care Unit of Hong Kong, leading to a major health burden to society. Emergency Department (ED) Nurses as the “gatekeeper” or various life-threatening diseases, while it appears not to be the case in the ‘Hour-1-Sepsis Bundle’ judging by its low compliance rate. Nevertheless, various studies focused on Sepsis management instead of reviewing knowledge, attitude, and self-reported competencies of ED Nurses towards Sepsis screening, or implementing educational programs prompting early identification of Sepsis in the ED.

This is a single-center interventional study conducted in the ED of Kwong Wah Hospital. 70 eligible ED Nurses were recruited between October 2024 and January 2025. This study consists of 3 phases: Pre-test, educational program, post-test, and 1-month post-test. After the questionnaire study, they were invited to the SEPSIS For Nurses program tailored to themselves and asked to complete the same questionnaires right after and 1-month after the program.

Sixty completed measurements at all points. The most significant change was the Knowledge gain, with +7.91 marks reported, followed by the shift in the attitude and competencies scale. This proves that the education program has a positive relationship towards knowledge gain, as evidenced by a W-value equal to 92 and a *p*-value less than 0.0001. It has also been reassured that after attending the program, the respondents show more confidence and willingness to identify and manage Sepsis patients at the right time and properly (Attitude = +4.5). The loss of knowledge after 1 month was also recorded, which is negligible and minimal.

This study proves that a structured education program significantly improves ED nurses' knowledge of Sepsis screening. It improves the attitude and self-reported competencies of ED nurses towards sepsis management. The year of experience has a negligible effect on the change of knowledge score.

**Keywords:** Sepsis, nursing education, emergency nursing, sepsis screening.