

## 論文の内容の要旨

論文題目: Development and validation of the palliative and end-of-life care index: A cross-sectional study in the Egyptian intensive care units and educational settings  
(緩和ケアとエンド・オブ・ライフケアインデックスの開発及び妥当性検討: エジプトの集中治療室と教育機関における横断的研究)

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### **Background:**

Worldwide, the provision of palliative and end-of-life (PEOL) care in intensive care units (ICUs) is still insufficient. A psychometrically robust tool to assess all aspects of PEOL care in the ICUs does not exist. In Egypt, there are no data on the PEOL care nursing education or PEOL care nursing practice.

### **Objectives:**

The aim of the current study was three-fold: 1) to develop a psychometrically robust, comprehensive instrument to assess PEOL care education, practice, and perceived competence among ICU nurses; 2) to explore the current situation of PEOL care education, practice, and perceived competence in ICUs in Egypt; 3) to assess PEOL care education content delivered to undergraduate nurses in faculties of nursing in Egypt, as well as the teaching strategies used to deliver this content.

### **Method:**

We proposed an assessment instrument (i.e., PEOL Care Index) and examined its content

validity by 3 expert panels comprising 23 experts from 11 countries. The PEOL Care Index was primarily developed in the English language and then translated to the Arabic language. We used the PEOL Care Index in three studies as follows.

**The first study** was a pilot study on 40 staff nurses from 3 ICUs in a randomly selected university hospital in Egypt to assess the new instrument's comprehensibility and test-retest reliability. We collected data at two time points (T1 and T2) using an anonymous self-reported paper questionnaire.

**The second study** was a cross-sectional questionnaire survey of ICU staff nurses and nurse managers in university hospitals in Egypt. A total of 403 staff nurses and 33 nurse managers from 16 randomly selected university hospitals in Egypt responded to anonymous, paper questionnaires. Staff nurses' questionnaires collected data about nurses' PEOL care undergraduate education, practice, and perceived competence, as well as their socio-demographic data, work-related data, and perception of the care quality in their ICUs. Nurse managers' questionnaires collected data about nurse managers, unit-related data, and patient-related. We examined the construct and criterion validity of the PEOL Care Index. We also used multilevel regression analysis to identify predictors of PEOL care practice and competence.

**The third study** was a cross-sectional online survey of nursing educators in the faculties of nursing in Egypt. Ninety-five nursing educators who were affiliated to three departments in ten randomly selected faculties of nursing were involved in the study. Of them, one faculty of nursing (7 educators) were used to pilot test the online survey, and the

remaining nine faculties of nursing (88 educators) composed the sample of a multisite study. In both studies, we asked nursing educators about the integration of PEOL care content in their courses and the teaching strategies used to deliver this content. The questionnaire included questions about respondents' characteristics, course characteristics, and the PEOL Care Index.

### **Results:**

After multiple modifications, the final version of the PEOL Care Index included 25 items under eight domains. Expert panelists judged the final instrument as content valid. In **the first study**, all staff nurses reported that the PEOL Care Index is comprehensible. Thirty nurses responded at both T1 and T2, and the test-retest reliability of the PEOL Care Index total scores showed that the largest magnitude of difference between T1 and T2 was .2.

In **the second study**, on a 0-100 scale, staff nurses' PEOL care undergraduate education, practice, and competence mean scores were 54.0, 49.7, and 54.5, respectively. The *Spiritual, religious, and existential aspect of care* had the lowest mean scores in education, practice, and competence. PEOL care education, practice, and competence were statistically significantly positively correlated. Nurse managers reported that most of the ICUs have restricted visitation policy, do not have a room for the family meeting, and do not have EOL care standards. There was a statistically significant positive correlation between PEOL care practice and staff nurses' perceived care quality. PEOL care practice was significantly related to nurses' age, PEOL care undergraduate education, in-service training on PEOL care, job satisfaction, and organizational support. PEOL care perceived competence was significantly related to nurses' gender, nurses' age, PEOL care

undergraduate education, job satisfaction, and type of ICU.

In **the third study**, nursing educators reported that the use of online survey was feasible. Most of the educators agreed or strongly agreed that their courses need more content on PEOL care. Most faculties of nursing integrated PEOL care education content in their curricula. *Care of the patient nearing the end-of-life* and *Spiritual, religious, and existential aspect of care* were the least frequently reported PEOL care topics. Lecture format was the most frequently used pedagogy.

### **Conclusion:**

We developed the PEOL Care Index. We developed both an Arabic and English version. The PEOL Care Index is comprehensible among nursing educators and ICU nurses. The PEOL Care Index is content, construct, and criterion valid, and its scores are reliable -. PEOL care education, practice, and perceived competence among ICU nurses in Egypt are unsatisfactory. Nurses' PEOL care practice and perceived competence vary significantly between ICUs and are related to both individual and organizational factors. Most faculties of nursing in Egypt integrate PEOL care content in their undergraduate curricula. Yet, educating this content is predominantly theoretical, and most nursing educators believe that their courses need to integrate more PEOL care content. The online questionnaire is a feasible methodology for multisite curricula evaluation and is also a feasible data collection method among nursing educators in Egypt. Nevertheless, the findings mentioned above should be interpreted and used in light of the limitations of the current study. Recommendations based on the current study findings were proposed.