Comparative study of competence profiling in health care

Calle Cruz L F

Servicio Andaluz de Salud, Spain

Abstract

This research analyzes the extent to which existing procedures contribute to the determination of the different levels of competence facing death in health care providers. By assigning profiles to different groups based on their manifest skills can help to define the variables that affect their daily practice and facilitate the implementation of training plans and corrective actions. For this purpose, the results obtained by two commonly used classification techniques in unsupervised learning are compared: K-means clustering and Self Organized Maps

Goals: Perform a comparative study of the effectiveness of two different approaches at determining the degree of competence facing death of a sample of health care providers.
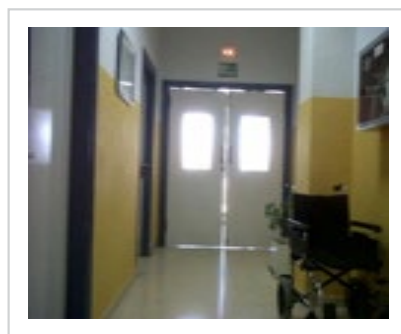
Results Methodology: Quantitative study. A survey using the Collet-Lester and Bugen questionnaires is conducted to 116 health professionals from different levels of assistance. Statistical analysis performed using Weka and PASW 20 software for Windows.

Both K-means procedure and Self-Organized map technique are executed over the same sample of data, but shifting the values of the parameters: number of clusters, neurons per level, learning rates and distance function. The percentage of instances in every group, average distance and variance to the centroids and also the intergroup distance are compared. Finally the plot analysis of clusters and bias found are reported.

Conclusions: Main advantages and drawbacks to define competence facing death when using self-organizing maps against the k-means approach are shown.

Biography

Calle Cruz L F is a Medical Doctor in the department of primary care at Servicio Andaluz de Salud in Spain.

International Conference on Hospice Care and Palliative Care
Webinar | July 10, 2020