

THE USE OF SOCIAL NETWORK ANALYSIS FOR EVALUATING THE RESILIENCE POTENTIALS: A STUDY OF AN INTENSIVE CARE UNIT

Vanessa Bertoni Becker¹

Tarcisio Abreu Saurin¹

¹⁾ Federal University of Rio Grande do Sul, Brazil

Abstract

Performance adjustment relies on social interactions between agents, which in turn influence the four resilience potentials at the organizational level: responding, monitoring, anticipating, and learning. This study reports the use of social network analysis (SNA) for evaluating the resilience potentials and for understanding how social interactions influence resilience. A study of applying SNA for this purpose was conducted in an intensive care unit (ICU) of a teaching hospital. The SNA survey consisted of: (i) characterization of the respondent and of three contextual factors, namely the frequency of interruptions, participation in daily rounds, and shift; (ii) a full roster of ICU staff, from which the respondent should select those with whom they rely upon for advice or information; (iii) questions on the contribution of social interactions with each selected staff for the operationalization of each resilience potential – there were three questions for each potential; one related to the frequency of the interaction, one related to the availability of the contacted person, and another related to the reliability of the received information; (iv) 23 questions on the general implementation of the potentials, based on the resilience assessment grid; (v) three closure questions on the general perception of the ICU's resilience, patient safety, and professionals' safety. The survey was complemented by semi-structured interviews with 14 ICU's professionals as well as by 80 hours of observations of the daily work. Results allowed for: (i) the development of one social network for each potential; (ii) the investigation of correlations between the networks structural characteristics and the contextual factors; and (iii) a multiple regression analysis to determine which potentials have the greater influence on the ICU. A feedback meeting was conducted with some of the professionals in order to discuss opportunities for work system re-design.

Keywords: social network analysis, resilience, intensive care unit