

INCLUDING RESILIENCE IN NON-TECHNICAL SKILL TRAINING – A RESEARCH AGENDA FOR THE SHIPPING AND HEALTHCARE DOMAINS

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Abstract

Crew Resource Management (CRM) was developed in the late 1970s to increase safety in operations in the aviation domain. After several accidents where causes were associated to aspects of communication and leadership, such as in the Tenerife crash in 1977, it had become clear that technical skills alone do not guarantee safe operations. In the last three decades, CRM has been adopted in multiple high-risk domains. Non-technical skills (NTS) are defined as the social, personal and cognitive skills required for operations in complex work environments and are trained as part of CRM training. These skills include situation awareness, decision making, communication, teamwork and leadership. This paper presents a review of how NTS are trained in the shipping and healthcare domain to explore the potential to improve current training regimes with the help of resilience engineering concepts. While there is a large body of research focused on CRM training, the application of NTS in shipping and healthcare, especially in relation to resilience engineering remains sparse. Further, CRM training as developed in the aviation domain and adopted in shipping, heavily focuses on how to avoid errors in complex operations, which is necessary but shows disregard for the human contribution to safety.

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