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**15-minute oral presentation**

## **Improving sensemaking, exploring adaptive team performance: a rapid scoping review**

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### **ABSTRACT**

Measuring adaptive performance at the individual level has been examined by cognitive and organizational psychologists across a range of contexts (e.g., sport, military, health) over the past two decades. This work has had some success and research continues to explore the underpinnings of adaptive cognition to develop training that will improve performance (see Ward, Gore et al., 2017). Attempts to measure, assess and train adaptive performance at the team level, is, however, a relatively nascent area.

Prior research has raised concerns that the concept of “adaptivity” is not an empirically robust one (Hutton et al., 2017; Ward et al., 2017). This is further exacerbated at the team level, given the challenges of operationalising and measuring team-based constructs (Burke et al, 2006). Whilst research has examined behavioural markers of effective teams (Salas et al., 2007; Flin, 2008), measuring adaptivity in teams suggests further layers of complexity.

The aim of this paper is to review existing measures of team adaptation, with a view to identify an appropriate measure for use in a military context. A validated measure could be used to test training outcomes by providing a before and after assessment of team adaptation, therefore informing the development of effective training.

## METHOD

Prior to carrying out the literature review, it was important to establish a clear working definition of team adaptation. A brief survey of the literature indicated that definitions varied across contexts and between academics and practitioners. Accordingly, an operational definition was developed by the research team to meet the requirements of the military and to assist the focus of the rapid review. The definition was designed to apply across work contexts:

“Team adaptation involves the adjustments to actions that teams implement (team adaptation processes) as well as the result of those actions (adaptive team performance) in response to the demands of new, unforeseen, uncertain, or changing situations, environmental demands, or task barriers”. (Clerici, Hillyer, McEwan & Gore, 2021, p.8)

A rapid scoping review of existing literature that has explored ways to measure and train adaptive team performance was then completed. Search-term combinations of library databases, were completed (1104 abstracts). From these abstracts, those sources most relevant to our goals ( $n = 34$ ) were identified. Based on subsequent reading of these and related articles, a database of 170 publications was collated.

## RESULTS

Two key findings derive from this review. First, the literature on adaptive expertise remains largely conceptual, especially at the team level. Empirical data are sparse at the individual level and almost non-existent at the team level. Second, adaptive performance training for teams has multiple interpretations and understandings of “adaptivity” are nuanced in a number of ways.

Nine self-report measures<sup>1</sup> were identified in the review which measure adaptive team performance. Based upon the practitioner requirements of this project, Rousseau & Aubé’s (2020) self-report measure of team adaptation was deemed the most appropriate as it could be readily embedded alongside other measured military team training activities.

Rousseau & Aubé’s (2020) Team Adaptive Performance Scale consists of 7 items, each of which are rated on a 7-point response scale (1 = strongly disagree, 7 = strongly agree). A sample item is “*Members of this team take effective action to deal with crises or urgent work demands*”. The authors advise that the measure can be completed by team supervisors/leaders (as was the case in the Rousseau & Aubé (2020) study) or by the team members themselves (as seen in other studies of adaptation; see Abrantes et al., 2018; Georganta et al., 2020; Marques-Quinteiro et al., 2013). Importantly, the development of this measure was guided by the conceptual framework of adaptation put forth by Pulakos et al. (2000) and displays evidence of good reliability (Cronbach’s alpha: .84) and various aspects of validity (e.g. data from this measure were significantly related to data from measures of leader behaviours and shared team leadership; therefore, there is evidence of construct validity).

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<sup>1</sup> The report measures and assessments of inclusion for this context, along with validity criteria will also be presented.

## CONCLUSION

This review suggests that a number of gaps remain in the empirical evidence that underpins existing training approaches designed to improve adaptive performance and sensemaking. Nevertheless, there is an appetite in many organizations to continue to improve our development and understanding of adaptive individuals, teams and sensemaking in the future. Crucially, this study concurs with previous studies on adaptive performance, and continues to suggest that there is sufficient scientific and practitioner interest to warrant further development and testing of measures of adaptivity in a range of organisational contexts.

The intended impact of this work is to support guidance decisions for training and education in the area of improving team adaptive performance. We are continuing to explore this area of cognitive and practical complexity.

## Keywords

*Adaptive Performance; Teams, Sensemaking*

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