How emotional intelligence influences residents’ emergency care activity?

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1. Introduction

Research on emotional dimension in healthcare shows that negative affect may impair medical performance (Arora \textit{et al}, 2009). However, Emotional Intelligence (EI), defined as the ability to recognize, express and regulate one’s emotions, may be trained with the aim of preventing the negative effects of emotions on cognitive activity (Kotsou \textit{et al.}, 2011). In the medical domain, several studies showed a positive effect of EI on medical performance (Quoidbach & Hansenne, 2009) but mostly on global medical performance and rarely in emergency care.

The aim of our study was to 1) verify if EI level has an effect on negative affect and on medical performance during an emergency care simulation and 2) identify the sources of negative affect.

2. Methods

Twenty-one resident physicians underwent an emergency care simulation with a high-fidelity patient simulator (SimMan Laerdal\textregistered). The scenario confronted them to an intubated patient suddenly presenting a severe allergic reaction requiring only one therapeutic action: Injection of adrenaline.

EI level was evaluated with the Trait Emotional Intelligence Questionnaire (TEIQue) (Petrides \& Furnham, 2003) translated in French (Mikolajczak \textit{et al.}, 2007). Participants were divided into two groups reflecting a high or a low level of EI.

The intensity of affect was assessed with the Positive And Negative Affect Schedule (PANAS) (Watson \textit{et al.}, 1988). Individual semi-structured interviews were then conducted following the simulation in order to identify the sources of affect.

Medical performance was evaluated from diagnosis accuracy and therapeutic action relevancy in a five-point scale.

3. Results

Residents with high EI level felt more intense negative affect during the simulation than residents with low EI level ($F(1,19) = 7.52, p<.05 ; \eta^2 = .23$). EI level had also an impact on medical performance since residents with high EI level obtained a higher performance score (M = 3.90, SD = 0.60) than residents with low EI level (M = 1.36, SD = 0.57), (U = 21.50, Z = 2.32, p < .05).

Accordingly to these results, a significant negative correlation was found between the intensity of negative affect and medical performance scores ($r = -.53, p <.05$): Residents experiencing high negative affect had lower performance.

Finally, the analysis of the interviews showed that 16 residents expressed having felt negative affect, equally distributed in the two groups. Four sources of negative affect were identified:

— Difficulty to associate the situation to a known diagnosis
— Confrontation to vital risk
— Low self-confidence
— Difficulty to manage health assistants and material resources

4. Discussion

This study confirmed that a high level of EI reduces the intensity of negative affects felt by residents and improves their medical performance in a situation confronting them to a vital risk for the patient. Moreover, our results showed that the most frequently expressed source of negative affect is the difficulty to associate the situation to a known diagnosis. This difficulty is consistent with the fact that residents have little
experience of medical practice. Yet, if this difficulty causes negative affect, it can impede them to find other relevant diagnoses. Hence, emotional competencies training could be an effective tool to integrate in residents training program.

This study raises also the question of how integrating the influence of emotions in models of decision making in risky and dynamic environments (Mosier & Fisher, 2010). Further studies should be conducted to foster debate in this issue.

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References


