



How experience in General Practice influences the clinical thinking of trainees

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Introduction

The aim of this exploratory investigation was to design a method of data collection that would allow the capture and identification of changes in clinical thinking after an attachment in general practice, and to provide a means of analysis of the data collected to inform understanding about how clinical thinking develops and changes. Participants were drawn from the foundation year two and postgraduate GP specialty training years 1 to 3. The method of data collection was innovative, and used Mind Maps.

Method

Participants were given 10 minutes to draw a Mind Map based on a clinical case scenario. The case concerned an elderly female patient who had suffered a recent fall and who was accompanied by her daughter to the consultation. The maps were gathered at two different time periods, before and after an attachment in general practice.

The maps were coded by the principal researchers [SK and SS] and each item was allocated to a theme grouping. Themes were further divided into subcategories to allow more detailed analysis. Coding in this way enabled us to describe the maps and perform a frequency analysis on the total appearances of the themes and subcategories found in maps 1 and 2. To provide a theoretical context, we drew on the work of Linda de Cossart and Della Fish (2005, 2007) to help us look more closely at the nature of the map items in relation to clinical thinking.



Findings

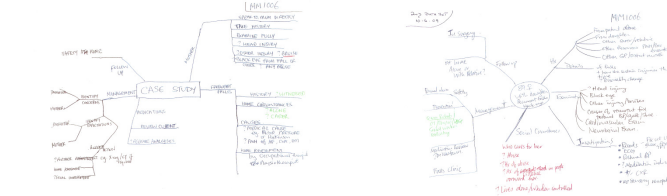
Foundation Year Group (n=11): The most marked changes occurred within this group. No difference was found in map 2 within the clinical reasoning theme, but a highly significant increase in the total number of deliberation items was found. Within the themes, this group showed a decrease in causes and increases in examination and history. In the themes of management, people perspectives, prevention and time, this group also showed significant increases in items appearing in map 2 (see above).

Findings (cont.)

ST1 Group (n=7): No difference was found in the overall number of items within clinical reasoning or deliberation between maps 1 and 2, but an increase was found in the theme of causes and social support, and a decrease in prevention in map 2.

ST2 Group (n=7): There was a decrease in map 2 within the theme of clinical reasoning overall, and an increase in deliberation items. Cause also increased, however there was a decrease in examination and history subcategories in map 2. This group also showed an increase in psychological theme in map 2.

ST3 Group (n=11): No difference was found in the overall total number of items in clinical reasoning, but there was a significant increase in deliberation items in map 2. Within the themes, only examination and uncoded items increased in the second map. The maps of this group had changed in more subtle ways and a further analysis drawing on the perspective of the GP Educators identified areas of growth; these were predominately in the organisation of their thoughts and the management of certain aspects of the case (see below).



Conclusion

In this investigation we have tried to make visible and interpret what goes on when a doctor thinks about a case at different stages of training. To do this we chose to use Mind Maps as the method of data collection, as we felt they offered an unproscribed and creative means for capturing thoughts. This was a novel and unusual approach, which we feel has much future potential in the formative development and learning of trainees. Overall our findings indicate that early on in postgraduate training, time spent in general practice can lead to a demonstrable and significant growth in learning, and understanding about a case. In later years, GPST3 most notably, the change is more subtle; it concerns how thoughts are organised and a sharper awareness about the most important issues to tackle within a consultation of only ten minutes.

[1] de Cossart L & Fish D (2005) *Cultivating a thinking surgeon: new perspectives in clinical teaching, learning and assessment*. Shrewsbury UK: Tfm Publishing Limited.

[2] Fish D & de Cossart L (2007) *Developing the Wise Doctor: a resource for trainers and trainees in MMC*. London: The Royal Society of Medicine Press Ltd.