Cognitive Apprenticeship in Clinical Practice; Can it be Extended to Postgraduate Psychiatry Training Programmes?

Farshad Shaddel[1], Marjan Ghazirad[2], Denis O'Leary[3], Kathleen M Quinlan[4], Jonathan Hafferty[2], Tomasz Bajorek[2]

[1]Consultant Psychiatrist, Berkshire Health NHS Foundation Trust, UK.

[2]Psychiatry Specialist Registrar, Oxford Deanery, UK.

[3]Honorary Clinical Tutor, Medical Sciences Division, University of Oxford, UK.

[4]Head, Educational Development Group, Oxford Learning Institute, UK.

Corresponding Author: Farshad Shaddel, Consultant Psychiatrist, Berkshire Healthcare NHS Foundation Trust, UK, **Tel:** 0118 960 5115; **Email:** f_shaddel@yahoo.com

ABSTRACT

Introduction: Postgraduate psychiatry training occurs in the workplace or situated learning settings. The Cognitive Apprenticeship Model [CAM] was introduced as an instructional model for situated learning. While undergraduate medical students' experience of the model has been tested, to our knowledge there has been no such reports from postgraduate psychiatry training.

Methods: We surveyed 134 Oxford Deanery psychiatry trainees recruited between 2005 and 2013 through an online questionnaire. Respondents identified which CAM components [scaffolding, modelling coaching, articulation, reflection exploration] were the best aspects, and most needing improvement, in their clinical training.

Results: Of 57 respondents, 80% were satisfied with and enjoyed [90%] their training. They recognised all individual CAM components; modelling and coaching were identified as the best methods. Exploration was identified as the one most in need of improvement. The behavioural [modelling, coaching and scaffolding] rather than the cognitive methods were identified as the best aspects of their training [54 v 35%, p < 0.001].

Conclusions: The results extend findings from undergraduate students in suggesting that the CAM is a useful model for training strategies. Greater awareness of the cognitive components may be needed. The training methods could be included as indicators of training quality in national quality assurance surveys.

KEYWORDS: Cognitive Apprenticeship; Postgraduate Psychiatry Training.

INTRODUCTION

National and specialty specific trainee surveys tend to focus on the structural aspects of training programmes rather than the training methods used by trainers *per-se.* Knowing what training methods the clinical supervisor(s) use should be as valid for quality assurance purposes as well as knowing whether there is one or not [1-5]. As clinical training is mainly workplace-based we decided to use an instructional model of learning – the Cognitive Apprenticeship model (CAM), designed for situational learning settings - as a theoretical basis for appropriate training methods [6-8]. In addition we considered the training methods (modelling, scaffolding, coaching, reflection, exploration and articulation) to reflect our experience of training methods in practise [face validity]. Notably, while the model has been suggested as a useful one for undergraduate medical teaching, to the best of our knowledge there are no reports of its use in postgraduate psychiatry training settings [9]. The

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aim of this paper therefore is to report on whether the components of the CAM model would be recognised by cohorts of trainees recruited to postgraduate training programmes in psychiatry, so extending findings from undergraduate settings and potentially informing the development of indicators for training assurance purposes.

METHODS

Using the Oxford Deanery database we identified 134 doctors recruited to the basic or core psychiatry training programmes for the period 2005-2013. Trainees were contacted via the Survey Monkey portal from 15/02/2014 – 27/03/2014. The instructions specified that responses and personal data would be anonymised and cited ethical approval. After piloting, minor amendments were made to the survey questionnaire and a protocol for contacting initial non-responders developed.

The questionnaire design included open ended-questions and "free text" boxes. Respondents were asked to describe the best aspects of their training and those in need of improvement across the CAM components; they could identify as many of them as they wished. Baseline demographic data collected included: gender; age-range at time of survey completion; UK graduation; English as first language; year of entering training programme; current post.

The responses were analysed using basic descriptive statistics provided in Microsoft Excel and content analysis of qualitative data. The study protocol was approved by and registered with the Central University Research Ethics Committee (CUREC), University of Oxford.

RESULTS

There was a 43.2% response rate (n = 57). 28 were male; 26 female; 3 did not specify their gender. Their ages ranged 26 to 50; the majority were between 26 and 35 years (59%). Thirty-nine (68%) obtained their primary medical education in the UK; 42 (74%) had English as their first language. Nine started core training in 2005 and 3, 8, 5, 3, 7, 7, 6, 9 in each year to 2013 inclusive. The distribution across current posts was: 12 consultants; 15 higher trainees; and 22 core trainees; 1 non-training grade. One was practising psychiatry outside the UK; six (11%) respondents had left psychiatry.

In terms of overall satisfaction, 80% of respondents rated their training as "what they expected"; 90% agreed that they "enjoyed the job". Respondents rated each of the CAM methods (range 27-63%). About two thirds rated modelling as the best training method; half rated coaching as the best. Exploration was the method rated by the highest proportion of respondents as in need of improvement. On average, 54% of respondents considered the behavioural elements of the CAM methods [e.g. modelling, scaffolding and coaching] as the best part of training versus 34% for cognitive aspects (P = 0.000211). 31 respondents provided qualitative responses. These emphasised the impact of the clinical supervisor (both positive and negative) e.g. "excellent supervisor" rather than the specific CAM training methods.

Table 1: (n = 57): Rating of CAM methods considered "Best" and "In need of improvement".

	Modelling	Coaching	Scaffolding	Articulation	Reflection	Exploration	Learning Climate
Best	63%	55%	43%	27%	43%	33%	43%
Improvement needed	35%	35%	33%	19%	21%	40%	40%

DISCUSSION

The main aim of this paper is to report on whether the CAM can be used in to inform training methods in postgraduate psychiatry training settings. The period of observation includes trainee cohorts recruited prior to and after a move away from an apprenticeship approach to training towards a competency-based curriculum in the UK [10]. We shall begin by discussing the limitations of the study.

The main limitation is the relatively small sample size and modest response rate (43%). However, the range of response rates to unsolicited and non-compulsory surveys is 2- 57% [11]. In addition, we acknowledge the possibility of specialty and locality specific issues on the quality of training.

As far as we are aware, this is the first report to extend the application of the cognitive apprenticeship model (CAM) to postgraduate settings. To provide context, most trainees (90%) enjoyed their training experience – a figure in line with the National Trainee survey satisfaction rates and the learning climate was identified as the best aspect of training by 43% of respondents. In keeping with the findings in undergraduate medicine, respondents were able to comment on each of the CAM training methods [9, 12]. Furthermore as with the undergraduate findings modelling and coaching were identified most frequently as the best elements, suggesting some consistency across training pathways. However this similarly is less evident when the comparison is limited to those undergraduates who have spent more time with a single clinical

supervisor – more akin to the postgraduate setting in this programme. In the latter circumstance the students opted for scaffolding, reflection and coaching. This of course may reflect the greater need for scaffolding in the earlier aspects of the medical training pathway; reflection was identified as third most useful method in the psychiatry postgraduate cohorts, suggesting that it is appreciated by learners throughout their medical pathway. In addition to providing empirical support to the CAM theoretical framework in medical training, these training methods could be used as potential indicators of training quality, so providing more robust theoretical basis for quality assurance surveys nationally. Nevertheless the qualitative comments, while linked to the rating of the CAM training methods, most commonly referred to the general qualities of the clinical supervisor. This highlights to us the importance of the clinical supervisor role itself beyond just training methods [13-15].

The analysis showed that trainees' choice of what they considered as the best training methods within the model are significantly skewed toward apprenticeship teaching methods (modelling, scaffolding and coaching) rather than those aspects that focus on the learner's cognitive activities (articulation, reflection and exploration). Interestingly, when respondents were asked which component of training needs further improvement, they asked for more apprenticeship-based teaching methods rather than support for their own cognitive skills development. If substantiated this pattern of results suggests a need for greater emphasis within competency based education curricula on cognitive skills development.

CONCLUSIONS

The findings support the CAM as a useful model for training strategies in postgraduate training in psychiatry. They support previous suggestions that the model could provide a valuable basis for evaluation, feedback, self-assessment and development of clinical teachers, with a potential focus on developing cognitive training skills. In addition its components are potential indicators in national assurance surveys of trainers' teaching methods in the workplace. Clearly more studies are needed to explore the use of CAM in other branches of medicine and different contexts.

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