Evaluation of the impact of the Royal College of Psychiatrists Clinical Assessment of Skills and Competencies masterclass on reducing the attainment gap

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1st June 2023

Content

CASC examination: The Clinical Assessment of Skills and Competencies examination is an assessment of the clinical skills where a candidate is expected to have attained all core competences and is ready to begin higher training. The CASC follows after a pass in theory papers A and B. It is based on a format similar to an OSCE (Objective Structured Clinical Assessment), with several clinical tasks that need to be completed. More information can be found via the following link:
https://www.rcpsych.ac.uk/training/exams/preparing-for-exams/casc-guide-for-trainees

Differential Attainment: Differential attainment (DA) is what we call the unexplained gap between attainment levels of different groups of doctors. External factors including the quality of their relationships with trainers can affect trainees' access to resources and slows their progress through training. It occurs across many professions (General Medical Council (GMC) 2023a).

EEA: A doctor who completed their primary medical qualification in the European Economic Area excluding the UK.

IMG: A doctor who completed their primary medical qualification outside the UK and EEA - referred to as an International Medical Graduate.

PMQ: Place of Primary Medical Qualification (UK, EEA or IMG).

RCPsych: Royal College of Psychiatrists.

Background

Across the MRCPsych assessment there is an 11% points and 41% points difference in pass rates for UK white trainees and UK ethnic minority or IMG ethnic minority trainees respectively.

Eight two-day masterclasses were delivered between July 2021 and Nov 2022 to provide targeted support for trainee groups considered statistically as being at higher risk of failing to pass the clinical examination and to progress in training; trainees from deaneries with average pass rates below the national average, trainees with a previous fail, from a UK ethnic minority background, or who completed their undergraduate training overseas.

Findings

Tracking of participant outcomes will continue to the end of 2023. However, early findings indicate higher pass rates and a narrowed attainment gap for masterclass participants:

- Pass rates in the September 2021 and January 2022 CASC sittings were 11.3% points and 12.9% points higher for UK and overseas-qualified ethnic minority trainees respectively for those who attended the masterclasses.

These findings add to the existing evidence (Hawkridge and Molyneux 2019) that early, targeted support improves outcomes for groups at greater risk of examination fails. A final evaluation of the examination and Annual Review of Competence Progression (ARCP) outcomes of masterclass participants will be published in 2024 when each cohort will have been able to attempt at least two CASC sittings.

Interviews with Core Psychiatry trainees show that the masterclass improved their understanding of the examination and its requirements. A phased process of learning developed over the two days:

1. raising awareness of key factors including: examiner marking domains, time management and answer structure related to the examination;
2. developing skills related to examination preparation and performance;
3. applying skills that impact on examination preparation and performance.

The interview feedback suggests there is a knowledge gap and variation in access to support which is being addressed by the masterclass.

Most learning seemed to focus on quite generalisable examination skills rather than a specific skill related to the CASC examination itself. Trainees were not always fully aware of examination preparation resources already provided online by, for example, the RCPsych.

Trainees particularly valued that the masterclasses were facilitated using current MRCPsych examiners to give detailed, more focused and relevant feedback in what was perceived to be a safe and trusted learning environment. This seemed to alleviate trainee anxieties and add to their own self-belief.

Application of findings

The findings are relevant to organisations and individuals providing support to trainees to prepare for high-stakes assessment and those with shared responsibility for reducing the attainment gap in medical education and training including postgraduate training organisations, local education providers, Medical Royal Colleges and Faculties as well as trainers and trainees.

The findings may also be relevant to other systems which rely on high-stakes assessments such as recruitment and selection and to those supporting doctors preparing for specialty examinations who are not in a training programme.

- Medical Royal Colleges and Faculties publishing materials to support candidates should ensure that these are well signposted, and understandable to candidates less familiar with UK examination formats and terminology. Guidance should meet the differing needs of candidates from different backgrounds including hints and tips

around common issues which can lead to examination failure especially around technique.

- Postgraduate training organisations, Employers and Colleges/Faculties should consider what worked well in this case study to improve examination preparation support provided. Support focused on generic examination techniques such as time management and answer structure may be of particular benefit to doctors who completed their PMQ outside the UK or have less support to prepare for examinations.
- Postgraduate training organisations should develop learning needs analysis tools to help identify learners who would benefit from this type of support earlier in training and to avoid the negative impact of examination fails.
- Organisations including the GMC should consider monitoring equality of access to examination preparation support. This should be across specialties and training locations to ensure that targeted support is safe, fair and proportionate.

Targeted examination support should prepare candidates for what to expect and provide an opportunity to practice technique to ensure that candidates have equity of opportunity to demonstrate their clinical knowledge and skills.

The potential risk of a conflict of interest for existing MRCPsych examiners delivering training will need to be carefully managed to maintain separation from the examination itself. Scenarios used in preparation training should reflect the examination but not be taken from live question banks.

Enhanced support such as the CASC masterclass should be offered where there is evidence of a knowledge gap and as a means of minimising disadvantage.

INTRODUCTION

Specialty examinations are a critical progression point in postgraduate medical training. Core trainees cannot progress to ST (specialty training) until they have passed the necessary examinations (MRCPsych). Support for trainees preparing for examinations may come from different places; Medical Royal Colleges and Faculties publish guidance for candidates, postgraduate training organisations and local trusts offer examination preparation training and trainees themselves often form study groups. The availability and quality of support available varies between locations and depends on individuals' wider networks.

Commissioned by the GMC and HEE, the Royal College of Psychiatrists designed and delivered eight two-day courses on technique and preparation for the CASC examination. These were aimed at trainee groups identified as being at higher risk of failing to pass the examination and to progress in training; those in training locations with pass rates below the national average and either with a previous fail, from UK ethnic minority backgrounds or who completed their undergraduate training overseas. The primary aim was to improve the progression of doctors into higher specialty Psychiatry training. This report outlines the methods undertaken for this evaluation, the findings and points for further consideration.

A qualitative evaluation was carried out by Edge Hill University into the perceived benefit of the masterclasses from participants. This is supported by quantitative data analysis of participants examination results and ARCP outcomes from the GMC. Interim results for September 2021 and January 2022 CASC sittings are reported. A final quantitative analysis will be published in early 2024, when all eight cohorts have had the opportunity to sit at least two CASC examinations.

1.1 Background

The UK medical workforce is becoming increasingly diverse. The number of International Medical Graduates (IMGs) whose primary medical qualification is from outside the UK and European Economic Area has increased by 40% over the last 5 years and in 2021, half (50%) of the doctors who joined the medical workforce were IMGs (GMC 2022a). Related to this is the increasing ethnic diversity of UK graduates as there have been significant increases in

the number of Asian or Asian British and Black or Black British trainees. In 2021, just under half (46%) of all trainees were from an ethnic minority (GMC, 2022a).

GMC data shows a persistent and unexplained difference in educational outcomes for UK ethnic minority and overseas qualified trainees. Nationally, across all specialty examinations, the pass rate for UK ethnic minority trainees is 12% points lower than UK white trainees. The pass rate for IMG ethnic minority trainees is 32% points lower than UK white trainees. In the MRCPsych examinations the difference is 11% points and 41% points respectively.

In 2016 and 2017 the GMC commissioned Woolf et al to explore the significant barriers that IMGs and UK ethnic minority trainees faced in their postgraduate training that was affecting individuals' career progression and therefore contributing to the wider challenges around workforce planning. Woolf identified twelve barriers to progression. These included perceived biases amongst trainees in assessments that could increase anxiety and contribute to a negative impact on examination performance; a lack of familiarity amongst IMGs with UK assessments; less access to support from seniors and peers, and lower levels of self-belief. The research concluded that one of the greatest barriers to change is a lack of evidence to identify which interventions successfully improve outcomes and recommended more evaluation of impact.

The GMC is working with partners to build stronger evidence about which interventions improve outcomes for ethnic minority and IMG trainees and to understand what participants gained so that similar initiatives can be developed across different specialties and locations. A range of promising interventions for evaluation have been drawn from published case studies (GMC 2023b) and which ethnic minority learners have reported as being beneficial (Patterson et al 2019).

This report focuses on the formal evaluation of the MRCPsych CASC masterclass developed by RCPsych as part of a multipronged support system for IMGs led by Prof Subodh Dave, and with support from HEE (GMC 2023c).

Evidence from another case study ***MRCGP Clinical Skills Assessment – 'Support on Extension'*** developed by GP trainers (Hawkridge and Molyneux 2019), to support candidates

in the North West region had shown significant improvement in examination pass rates particularly for IMG candidates. (GMC 2023d).

A second report published recently focused on Educator Workshops for Educational and Clinical Supervisors titled 'Encouraging compassionate, courageous, cross-cultural conversations in training', and can be accessed here: https://www.gmc-uk.org/-/media/documents/eqit---embedding-compassionate-courageous-cross-cultural-conversations-into-training_.pdf

1.2 CASC masterclasses

Eight online two-day masterclasses were held for Core Psychiatry trainees from July 2021 to November 2022. 183 participants attended in total. In order to maximise impact, the classes were targeted to trainees in regions that had CASC examination pass rates below the national average, based on GMC progression report data 2014 to 2019. Places were available to all trainees in these regions but priority was given to applicants with a previous fail, or from a UK ethnic minority or IMG background. Where places were unfilled, these were offered to trainees from other training locations.

1.3 Masterclass design

This CASC masterclass was designed and delivered by current and experienced MRCPsych examiners within the Royal College. Materials were developed from scratch and mock questions were created outside any formal examination question banks. The masterclasses were designed to teach key principles specifically focusing on CASC examination technique and then implementing those principles into practice in real CASC like scenarios. The sessions featured mock stations with patient actors and provided participants with the opportunity to mark themselves from the perspective of the examiner. Each day involved larger group teaching sessions and small group discussion (6 in each group) with a focus on feedback. The 4 small groups of 6 rotated through rooms on the online platform Zoom with the examiner, the invigilator and the simulated patients who formed a team and remained in the same virtual room throughout the day. Participants were given personalised feedback

but not told if they had passed or failed a mock station. More information on the masterclasses can be found in the course flyer in appendix A.

1.4 Quantitative evaluation aims

Quantitative research was carried out to evaluate the impact of targeted examination preparation support on participants' subsequent pass rates. Analysis focused on examination performance of demographic groups who did and did not attend the masterclasses.

1.5 Qualitative evaluation aims

The qualitative evaluation was designed with one distinct phase of data collection that focused on the views and experiences of the Core Psychiatry trainees who attended the masterclass.

Trainee interviews focused on key domains:

- motivations for signing up to attend the masterclass;
- what worked well?
- what could be improved?
- what was learnt?
- is there an intention to implement changes in examination preparation as a result of attending the masterclass, and if so what are those changes likely to be?

The perceptions and 'products' of immediate learning (knowledge, skills and new attitudes /awareness) and intention to put new learning in practice were a key focus for this evaluation. To add further context, one masterclass designer and two facilitators were also interviewed and these perspectives with illustrative quotes are also reported at the end of the findings section.

1.6 Quantitative evaluation methods

Since 2014, the RCPsych have provided the GMC with examination outcomes for all doctors holding or have ever held registration with the GMC. The GMC combine this data with National Training Survey, the medical register and other datasets held in the UKMED[1] to publish reports on outcomes by training location and demographic characteristics in the Progression Reports (https://reports.gmc-uk.org/ntsportal/Account/GuestLogin.mvc).

For the evaluation of the CASC masterclass, the RCPsych provided a list of masterclass participants and subsequent CASC examination outcomes. Records were matched with registrant demographic data (PMQ and ethnicity) and mean pass rates calculated for each demographic group using SPSS and Tableau. The results of masterclass attendees were compared to trainees taking the same examinations but who had not attended a CASC masterclass.

To increase sample sizes, results for IMG and EEA trainees are combined into 'Rest of World' (RoW).

The final quantitative evaluation will cover the following five CASC sittings and will be published in 2024 when all eight masterclass cohorts have had the opportunity to attend at least two CASC sittings from:

- September 2021
- January 2022
- September 2022
- January 2023
- September 2023

This report covers data from the first two CASC sittings only.

[1] UK Medical Education Database https://www.ukmed.ac.uk/

1.7 Qualitative evaluation methods

1.7.1 Interview design

Semi-structured interviews were undertaken with participants via Microsoft Teams. Interviews were audio-recorded and conversational in style to allow the interviewer to address themes relevant to the evaluation questions, whilst allowing them to follow relevant avenues of inquiry opened by the participants. Each interview lasted approximately 30 minutes. Interviews in most cases took place within one month of the masterclass.

1.7.2 Process

1.7.2.1 Pre-interview

Ethical approval via expedited review was granted by Edge Hill University's Health Related Research Ethics Committee.

1.7.2.2 Post-interview

Audio files of the interviews were loaded up to a secure network where they could only be accessed by the transcriber. All information collected during the evaluation has been stored on a secure electronic server at the University with access restricted to the evaluation team at Edge Hill University. None of the stored material contained any details that breached confidentiality or anonymity of participants.

1.7.3 Recruitment to participate in qualitative evaluation

A masterclass flyer was distributed to Core Psychiatry Trainees who had been invited to apply to take part in the pilot initiative (Please see appendix A). The flyer advertised the masterclass as well as the quantitative and qualitative work being undertaken. The flyer explained that participants could express an interest in the qualitative evaluation by contacting the evaluation team at Edge Hill University. At the event itself, the masterclass leads introduced the evaluation and referred to the flyer already distributed.

Trainees emailed the evaluation team after the masterclass to volunteer to take part in an online interview. Interviews on Microsoft Teams were then arranged at a time convenient to the participant. The evaluation team emailed a Participant Information Sheet (please see appendix B) and a consent form (please see appendix C) as attachments to participants ahead of the interview, with a copy of some of the key core questions to be asked for preparation purposes (please see appendix D). At the start of each interview the wording of the consent form was talked through by the interviewer and the participant gave their verbal consent to proceed.

QUALITATIVE ANALYSIS

The interview transcripts for both phases of the evaluation were analysed using a Thematic Framework Analysis method (Ritchie, Spencer & O'Connor 2003). The process for each transcript was as follows: they were first read in their entirety to remind the analyst of the interview's content. Next, a thematic framework was established according to the codes identified, with focus coding undertaken to identify key quotations within each identified theme.

1.8 Quantitative findings

183 participants attended a CASC Masterclass.

- 12 participants attended only one day of the 2-day course or only observed on both days.
- 10 further applicants were invited but did not participate.
- One attendee was ineligible to take the CASC having failed to pass paper B.

Figure 1 below shows the number of participants in attendance at each of the eight masterclasses, Figure 2 shows the demographics of these Masterclass participants, and Figure 3 demonstrates their training locations.

Figure 1: Masterclass attendance

CASC Masterclass date	Number of participants
15-16 July 2021	20
22-23 July 2021	23
4-5 November 2021	20
11-12 November 2021	19
12-13 May 2022	24
14-15 July 2022	24
3-4 November 2022	27
10-11 November 2022	26
Total	**183**

Figure 2: Demographics of Masterclass participants

PMQ and ethnic group	Number of participants
UK ethnic minority	19
UK White	24
IMG ethnic minority	119
IMG White	7
EEA ethnic minority	4
EEA White	10
Total	**183**

Figure 3: Training location of Masterclass participants

Training location	Number of participants
HEE East Midlands	13
Health Education and Improvement Wales	22
HEE East of England	22
HEE North West	28
HEE Kent, Surrey and Sussex	9
HEE London	7
NHS Education for Scotland (East Region)	3
NHS Education for Scotland (North Region)	6
NHS Education for Scotland (South-East Region)	6
NHS Education for Scotland (West Region)	11
HEE West Midlands	14
HEE North East	12
HEE Thames Valley	2
HEE Yorkshire and Humber	27
Not in PG Training	1
Total	**183**

1.8.1 Examination performance – early findings

Analysis was conducted on 62 masterclass participants, who made 68 attempts at the CASC in September 2021 and January 2022 examinations. This represents a third of the pilot cohort. These are early findings while we wait for further examinations. In terms of further cohorts, the exam data is collected around 8 – 12 weeks after the exam diet and is then prepared for analysis.

Mean pass rates of these masterclass participants were compared with the mean pass rates of trainees who had not attended the CASC masterclass from across the UK, and had attempted the CASC examination in the same time-period.

To test whether differences between mean pass rates were statistically significant, four independent samples t-tests and three Wilcoxon signed rank tests were conducted. The results of these tests are presented in Figure 4.

Figure 4: Results of examination pass rate comparisons

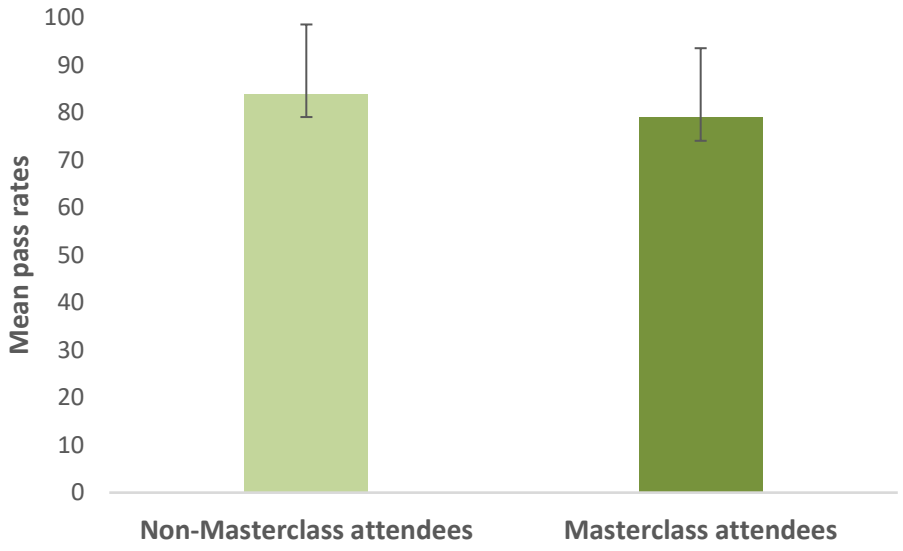
Trainee comparison groups		Number of participants (*n*)	Mean exam pass rate (%)	*P* value for test of differences
All trainees	Masterclass attendees	68	79	.330*
	Non-masterclass attendees	324	84	
Trainees with a UK PMQ	Masterclass attendees	22	91	.869*
	Non-masterclass attendees	245	90	
Trainees with a non-UK PMQ	Masterclass attendees	46	74	.428*
	Non-masterclass attendees	79	67	
Trainees with a UK PMQ - White	Masterclass attendees	10	90	.783**
	Non-masterclass attendees	184	92	
Trainees with a UK PMQ – BME	Masterclass attendees	12	92	.355**
	Non-masterclass attendees	56	80	
Trainees with a non-UK PMQ – White	Masterclass attendees	5	80	.546**
	Non-masterclass attendees	20	90	
Trainees with a non-UK PMQ - BME	Masterclass attendees	41	73	.182*
	Non-masterclass attendees	58	60	

Note. * Independent samples t-test conducted for groups with 15 or more participants
** Wilcoxon signed rank test conducted for groups with less than 15 participants

- **Masterclass attendance comparisons**

  Masterclass attendees achieved similar mean pass rates compared to non-masterclass attendees; 79% compared to 84%. Figure 5 displays this comparison below:

Figure 5: Examination pass rate comparisons between masterclass attendees and non-attendees



- **Masterclass attendance comparisons by sub-group**

  Positive non-statistically significant improvements in pass rates were observed for numerous participant groups. Figure 6 displays these comparisons below.

  Trainees with a UK PMQ – BME

  Ethnic minority trainees with a UK PMQ who had attended a masterclass achieved a pass rate 12% points higher than those not attending the masterclass; 92% compared to 80%.

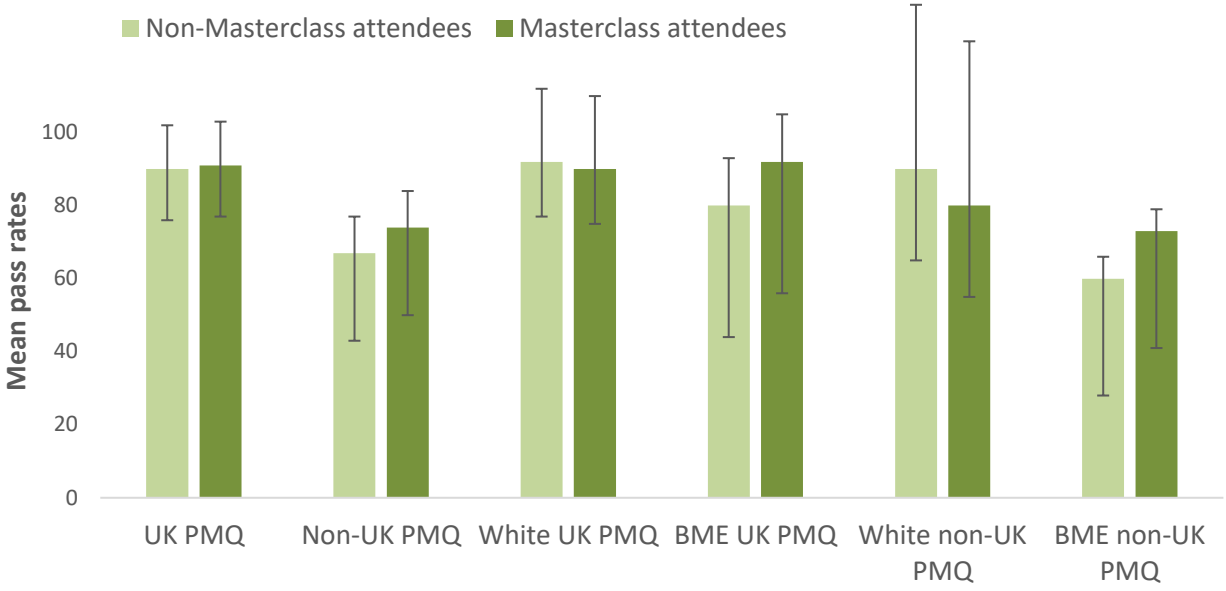
  Trainees with a non-UK PMQ

  Trainees with a non-UK PMQ who had attended a masterclass achieved a pass rate 7% points higher than those not attending the masterclass; 74% compared to 67%.

Trainees with a non-UK PMQ – BME

Ethnic minority trainees with a non-UK PMQ who had attended a masterclass achieved a pass rate 13% points higher than those not attending the masterclass; 73% compared to 60%.

Figure 6: Examination pass rate comparisons by sub-group between Masterclass attendees and non-attendees



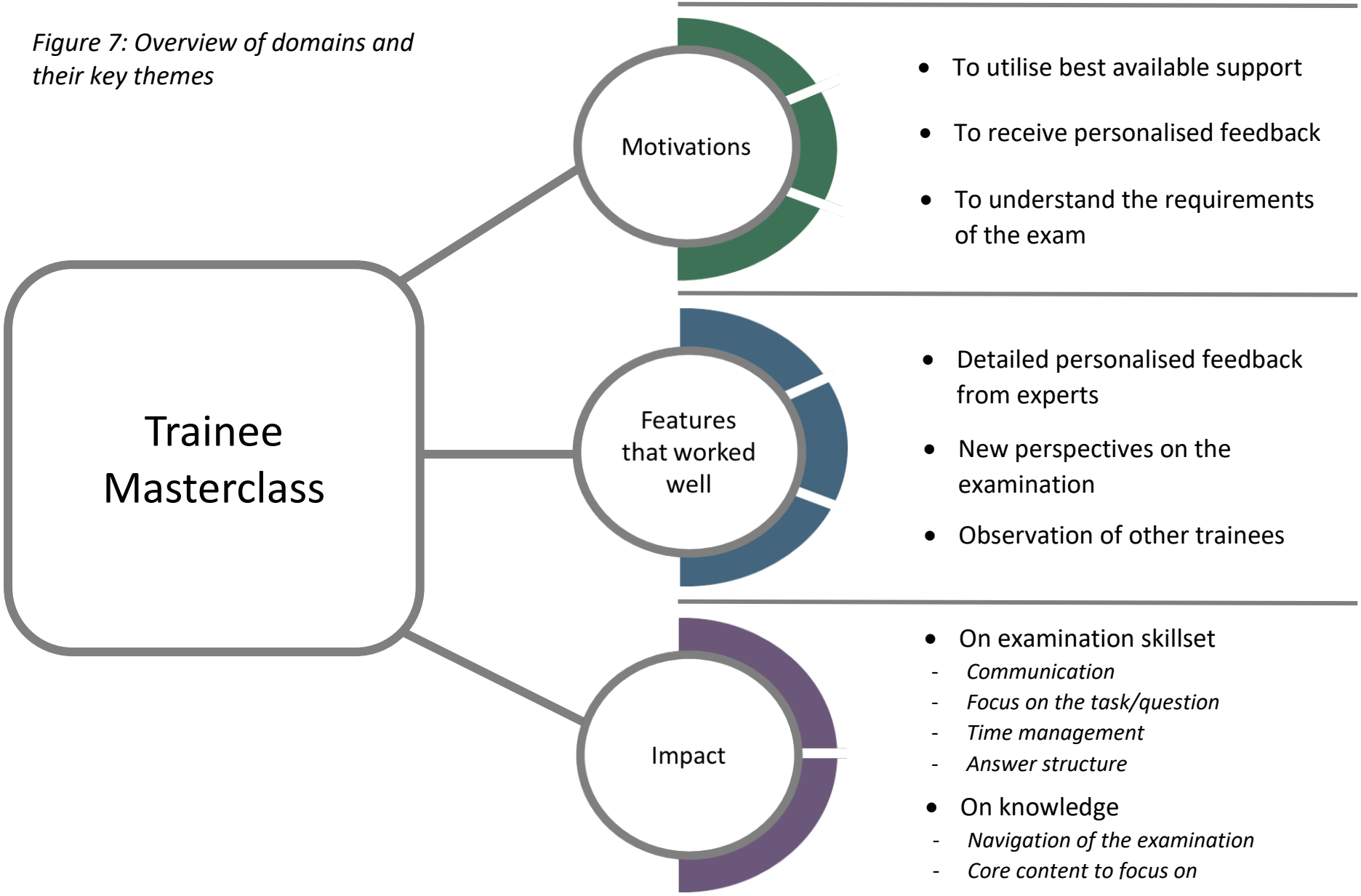
1.9 Qualitative findings

Twenty-four trainees volunteered and participated in an online semi-structured interview. Participants from all 8 masterclasses were invited to take part in interviews. Findings are separated into three domains:

Domain 1: Motivations;
Domain 2: Features that worked well; and
Domain 3: Impact.

Figure 7 on the next page provides an overview of the analysis and key themes.

Figure 7: Overview of domains and their key themes



1.9.1 Domain 1: Motivations

Participants highlighted three different motivations for attending the masterclass:

- Theme 1: to utilise best available support;
- Theme 2: to receive personalised feedback;
- Theme 3: to understand examination requirements.

1.9.1.1 Theme 1: To utilise best available support

Participants explained that they sought to utilise the best available support open to them and these masterclasses offered them a different opportunity compared to what was on offer from their organisation:

> *"My current Trust didn't run any kind of formal kind of teaching (on the CASC examination) across the years."*
>
> (Interviewee 1)

The masterclasses were also seen as an improvement on participants' current group practice and they really appreciated the opportunity to learn not only from examiners but also new (to them) trainees:

> *"… acting of some people is not as serious as it is in the course, so I thought that was a really good thing to be able to attend."*
>
> (Interviewee 13)

> *"I feel like even though we do have some local practice between ourselves, it was a good opportunity to have practice with other people."*
>
> (Interviewee 6)

Trainees were attracted to a course that was designed and facilitated by CASC examiners as it provided them with a reliable source of information:

> *"I thought if it's by the Royal College, it's probably going to be a high-quality course."*
>
> (Interviewee 19)

> *"In my opinion, I couldn't it get any better anywhere. So, I felt I'd be getting first-hand information of what is actually required."*

(Interview 23)

This perceived trustworthiness and reliability was a key factor compared to other courses on offer:

> *"It's more trustworthy. It has the credibility of the Royal College and they're the ones doing the exam so they should approve of what's in the course. So I think that would be a huge advantage in comparison to other courses."*

(Interview 24)

> *"So the main clincher for me was that this is something official and whatever I get from here, I can base the rest of my preparation on this… and actually it was an eye opener because it was opposite to quite a lot of what we're being told by these online courses."*

(Interview 10)

> *"So sometimes like private companies, or even people who've given exams for everyone, have some opinion, and they only remember the bad parts. No one talks about the good parts. So I felt confident that what I was told was objective and was from someone who knew what they were talking about."*

(Interview 4)

Participants also appreciated the invitation of a free masterclass on examination preparation:

> *"The courses which are available outside, like the commercial one, they are very pricey and I feel like I've been quite lucky to be selected to take part in this course."*

(Interview 8)

> *"I haven't paid for them yet but I'm sort of looking into it, some of them are about £500 for a mock for example"*

(Interview 11)

1.9.1.2 Theme 2: To receive personalised feedback

Some participants were motivated to attend the masterclasses to obtain personalised feedback from external individuals knowledgeable about the examination:

> *"Well, given the notoriety of the CASC exam, any masterclass would be helpful, especially from getting first-hand feedback from experts."*
>
> (Interviewee 24)

One participant pointed out that obtaining this feedback would be an improvement on their current practice with fellow trainees:

> *"I think the advantage of having feedback from examiners and real actors because when we train amongst ourselves, it's quite different the feedback you get…"*
>
> (Interviewee 13)

Another mentioned that due to their own organisation's circumstances they felt quite isolated, so the masterclasses provided them with an opportunity to have interactive discussions about the examination with experts and fellow trainees:

> *"Unfortunately psychiatry is a very isolated job … you don't have many people to ask questions about how they approach it and training for the exam … I thought it would be an excellent opportunity to understand the process and see my peers, how they interact in such a situation."*
>
> (Interviewee 20)

1.9.1.3 Theme 3: To understand the requirements of the examination

Some participants explained that before the masterclass session they were unaware of the CASC examination requirements:

> *"I had absolutely no idea what this exam is about…"*
>
> (Interviewee 9)

As a consequence, participants were keen to gain a better understanding of the examination itself:

> *"I wanted to have a better understanding of what is required in the CASC exams… it's like to get orientated to how CASC works and just to get a baseline of how the whole process is and how the station feels."*

(Interviewee 23)

Understanding the requirements of the examination was perceived as a valuable source of information for one participant, who struggled to find the information elsewhere:

> *"There were only a limited number of individuals that I know had attempted the exam online… and I think it gave me a quite interesting view of how things could work and what is expected and what is not expected."*

(Interviewee 5)

One participant detailed the importance of receiving guidance on the examination, due to the cost of taking the examination itself:

> *"I think firstly just taking the opportunity for any help towards the CASC, which is very expensive."*

(Interviewee 7)

1.9.2 Domain 2: Features that worked well

Participants reported three key features that enhanced the utility of the masterclass sessions:

- Theme 1: Detailed personalised feedback from experts;
- Theme 2: New perspectives on the examination;
- Theme 3: Observing others.

1.9.2.1 Theme 1: Detailed personalised feedback from experts

Participants highly valued the opportunity to receive external feedback from current examiners about their examination approach:

> *"Having the feedback from the examiners on the first day was quite invaluable to me … the fact that I had actual examiners watching the simulated exam scenario was actually quite good, their feedback was really valuable."*

(Interviewee 18)

The personalised nature of feedback was a key part of the success of this feature according to the participants:

> *"I thought it was really useful mainly because everyone is different, everyone has their own style, their own weaknesses, and I thought all four of the examiners were very good at picking out this is what you need to improve on."*

(Interviewee 19)

> *"The examiner feedback individually was very useful, very tailored, so I think even in that context when you're doing it in front of somebody, I was able to reflect."*

(Interviewee 20)

Some participants also praised the large amount of time allocated for each individual to be provided with detailed feedback:

> *"I felt like there was a lot of time allocated for feedback which was really good because that's the main thing we wanted to get out of it. It wasn't just like a few comments per person, even though it's the same scenario, they would take a long time to give feedback to each individual. So I thought that was really good."*

(Interviewee 13)

One participant explained that the frequency of the feedback allowed them to build on their skills as the masterclass session progressed:

> *"I appreciated building on the information, and having that feedback progress from day one to day two."*

(Interviewee 20)

1.9.2.2 Theme 2: New perspective on the examination

Participants valued the opportunity to view the examination from a number of different perspectives, including facilitators with different cultural backgrounds. A range of different approaches enabled this opportunity; asking participants to mark an example answer from the perspective of an examiner, providing marking domain sheets to participants, and facilitating participants to get a different angle on the questions:

> *"They gave us an opportunity to watch videos which was really helpful, to watch a video of somebody doing a past CASC station and we got to mark them or being in the examiners shoes to see how we would have acted which was a good experience."*
>
> (Interviewee 22)

Some participants explained the advantage of knowing what the examiner was thinking when marking their own answers:

> *"So rather than just being in a generic approach that we usually use for our clinical sessions, we were able to identify what exactly the examiner might be thinking"*
>
> (Interviewee 5)

> *"Things which worked well for me was… looking at the perspective of the examiner, how they're evaluating our answers."*
>
> (Interviewee 15)

One interviewee explained that it was a surprise to them to see that some of the facilitators were IMGs and it came as a reassurance to them:

> *"Seeing the examiners and other people from the same background - they were actually able to understand… the problem especially with the IMGs who are from some other part of the world, is that we actually take in the information, translate it, then think in our own language and then translate it again and say something, which is a process that takes time. And I was so surprised to know that this is what the examiner also understands, because RCPsych examinations are not only for people who are working in the UK, it's for people around the world."*
>
> (Interviewee 5)

Others saw the utility in comparing their own marking to what an examiner was looking for:

> *"Not just to see from a different perspective but also to help my mind focus on what's important because you're marking now, so it's very evident what you have to do to get the mark and the minimum criteria. When we did the marking initially, it seemed like the candidate must perform this, this and this, and then most of us were giving the full marks. But that was just to get a basic pass, so it's important to understand that because I mean it helps me mentally to know what I need to do."*

(Interviewee 2)

Participants were also provided with a marking domain sheet, which enabled them to gain an insight into what was required of them to pass the examination. This was new information to them, despite this type of guidance being available on the Royal College website:

> *"The session was quite helpful because that's where they introduced the whole marking domain and things. Until now, I've been doing it completely blind. It was like playing a game and what was never really explained was the rules."*

(Interviewee 9)

Participants saw this as a good opportunity to gain some guidance on what their own answers should look like:

> *"I think also going through the example marking sheets of thinking about the different domains that the examiners use and then taking that away and looking at a practice station and thinking what do I think the domains the examiner will have set here, so that was really useful."*

(Interviewee 1)

> *"Otherwise I hadn't seen yet the marking sheets, so I wouldn't know necessarily what they might be looking for in some particular scenario or at least not everything. So it was good to have an idea with that type of question - this is the things they will be looking for and this can give you extra marks. So that was good."*

(Interviewee 13)

The combination of both approaches appeared to work well in the masterclass sessions:

> *"What stood out was understanding the marking domains. That was really helpful. I think that was cemented by the practice of being a marker."*

(Interviewee 7)

> *"In that exercise, we really got an idea of what the examiner expects and that was good practice to be on the other side, on the marking side, and we knew some*

difficulties for the examiner. So yes, that exercise where we were made examiner, it was really good. And we got that domain marking, how the examiners should mark with each domain. That sheet was really helpful, so that now we've got an idea in a station of what is expected from us."

(Interviewee 14)

For one participant, these features provided the clarity that they were searching for:

"I struggle with ambiguity. I don't know what they want, so I think that was kind of touched on which was helpful."

(Interviewee 9)

Participants valued being provided with a different perspective on the stations. Some participants outlined the different timing across the two masterclass days as important to this process, as participants were given a shorter amount of time on the first day for their answers:

"I particularly liked on the first day, instead of a normal seven-minute time to complete a station, we had five minutes. The expectation wasn't that you'd finish everything, but it prepared you to actually get to know what it's like in the exam in doing the various stations."

(Interviewee 22)

"Practising it in a shorter amount of time each scenario - that was probably the most useful thing that ever happened in the whole thing. It was brilliant because the idea of the CASC is being very time limited, so practising it in less time and then the next day, doing the proper time, it just felt a lot easier."

(Interviewee 24)

One participant described that this design provided them with a learning pathway across the duration of the two day schedule:

"And I liked how it came off as something which was very organised…. Five minutes at the beginning in the first day and then moving on to seven minutes. It felt like

learning exposure, so you thought, everyone's in the same boat, everyone's anxious that they're messing up."

(Interviewee 4)

One trainee reported that seeing a variety of answers to the stations was useful:

"…looking at a good and a bad station. And having the same station but looked at from different angles. So different questions for the same case, I think that's useful because you can then focus on exactly what they're looking for."

(Interviewee 11)

Another interviewee reported how the emphasis placed on the different phrasing of similar questions was particularly useful:

"What I found most useful was the way they phrased the questions. On the first day, they gave us a scenario and then they had a similar scenario but with different questions, so it showed me how I could approach a similar topic. Rather than thinking about the station as the OCD station, it was more like what you actually have to do"

(Interviewee 16)

1.9.2.3 Theme 3: Observing others

The group design to the stations appeared to contribute to a number of perceived benefits to participants, with some reporting that observing fellow trainees' answers were a useful learning point for themselves:

"We got to practise one station, one exercise, but then observe four, five other candidates do that same thing, because always the feedback was different from all the candidates. So even if we are not doing the station, the feedback given to others was also helpful."

(Interviewee 14)

"…you can observe your colleagues, you're able to see, ok, this was actually a cue, I would have missed this as a cue I wouldn't have thought to follow up on this question. It's one thing that was really good being in groups of colleagues and being

> *able to learn from them, their style of questioning, how they would do things differently."*
>
> (Interviewee 22)

One participant explained that this observation was advantageous for their own reflection:

> *"Seeing other trainees being examined also gave you 'oh actually I could say it like that' or actually 'that's how I sound when I do these things so that's not great'; it was really good for reflection."*
>
> (Interviewee 20)

Another mentioned putting into practice the results of this learning process:

> *"Seeing other clinicians, actually seeing their approach and listening to the feedback from the examiners for everybody, it was an original experience and going forwards dealing with patients, there are certain things I would pick from one or two people that I will apply to my communication and there is some knowledge of psychiatry that I took home from it."*
>
> (Interviewee 18)

1.9.3 Domain 3: Impact

1.9.3.1 Theme 1: Examination skillset

Participants outlined four key examination skills that had been impacted by the masterclass sessions:

1. Skill area 1: Communication;
2. Skill area 2: Focus on the task/question;
3. Skill area 3: Time management;
4. Skill area 4: Answer structure.

Skill area 1: Communication

Participants learned from others in relation to their own communication:

> *"There are certain things I would pick from one or two people that I will apply to my communication."*
>
> (Interviewee 18)

For some participants, this involved highlighting the importance of the content of their communication with patients:

> *"I know it's completely different in your clinical practice because you've had more time, but I thought it was really good to reflect on what you're saying to clients… I think I'm more aware now… to try not to be too wordy and to say it in a way that is more understandable to them."*
>
> (Interviewee 20)

> *"Summarising things back to the patient, I think, was focused upon more than I had realised, and in my practice when I am doing it now, focusing on that and making sure that I get that in at the end of the station."*
>
> (Interviewee 3)

For others, the manner of participants' communication was of particular focus:

> *"…it was pointed out that I wasn't being very empathic with the patient, because I had a checklist of questions on my mind and I was ignoring the verbal and non-verbal cues from the patient and this was the feedback I got on the first day. And I really picked up on that and I implemented that on my second day and it happened to be the same examiner and she gave a very positive feedback…"*
>
> (Interviewee 12)

> *"How you ask things, or the way you say things, certainly. Also in the session where the patient was kind of manic and speaking quite quickly and trying to interrupt him, it was quite difficult. So just practising that and getting details from both the actor - what's the best way to do it by not coming across as rude, but also being assertive."*
>
> (Interviewee 3)

One participant explained that the communication skills they learnt transcended the CASC examination, and will have a wider impact on their daily practice:

> *"The way I used to do things, or the way I used to speak to patients, it was just a bit different from what CASC needs. CASC needs you to be very efficient and very to the point. So in my current practice, I've noticed, in some situations it became a bit of a hybrid of what I used to do, and what I've learned from CASC, which goes beyond the exam actually… it just changed how I approach my patients now in general."*
>
> (Interviewee 24)

Skill area 2: Focus on the task/question

Participants described this focus on the task/question as a key learning point, with take home messages from the sessions emphasising the importance of answering what the question was asking of them:

> *"Not only focus on what it is asking you to do, but also focus on what it's asking you not to do and that's a big take home message for me."*
>
> (Interviewee 19)

> *"We marked with one of the examiners but I was quite surprised as to how low they were scoring, which really helped me identify that it's not just about what you say or how well you say it, but you really need to focus on the specific components of what the task is asking."*
>
> (Interviewee 19)

As a result of this learning, participants outlined some subsequent direct changes, such as adapting their practice to take note of this newfound focus on the task/question:

> *"So prior to attending the class, I would just have been working on my interpersonal skills and learning so much about different presentations and how to manage them. But knowing that the CASC is question specific made me read the questions better and try to think about what is actually being asked, rather than just what I think I should be doing."*
>
> (Interviewee 23)

Others described direct changes to their examination approach and technique:

> *"One of the biggest things that I've already changed is… I no longer look at the exam as 'that's the bipolar scenario', 'that's the depression scenario', 'that's the suicide scenario', when actually each scenario can have different presentations. And this is what they spent a lot of time trying to tell us to do, by using the same scenario but approaching it from different angles. So you still have to use your common sense and you cannot be using formulas to approach a station."*
>
> (Interviewee 10)

Skill area 3: Time management

Participants also valued the emphasis on time management:

> *"I think it was useful just how much they honed in on - you know, timing is something that's important, and having that just drilled into us a little bit was quite useful."*
>
> (Interviewee 3)

This emphasis enabled participants to understand the importance of making sure they used their time efficiently during the CASC examination, especially so that they could answer all that was required of them:

> *"There were some quite beneficial things that were explained there, that if there are two tasks, it's better to perform a little bit of both rather than missing out on one and doing an excellent job in the other."*
>
> (Interviewee 5)

One participant had adopted with colleagues the masterclass idea of practising CASC answers initially in a shorter than the allotted time:

> *"It was brilliant because the idea of the CASC is being very time limited, so practising it in less time and then the next day, doing the proper time, it just felt a lot easier. So now actually with my current colleagues, that's how we're practising. We're practising in shorter time so we've kind of adopted that from the masterclass."*
>
> (Interviewee 24)

The importance of time management for the CASC examination was something that one participant had been previously unaware of:

> *"I attempted CASC twice previously and one of the most important things which was the time management, I just dismissed it. I was not looking at the time and the task in hand, what I should be doing. I was not aware of that."*
>
> (Interviewee 15)

Skill area 4: Answer structure

Participants explained that as a result of the masterclasses they had shifted their structural approach to their answers in examinations. For one participant, this involved utilising the time period before answering to plan out their technique:

> *"…using the minute to plan all possible domains might come up in a station and structuring accordingly."*
>
> (Interviewee 7)

For other participants, this structural focus provided clarity as to how they would address each station in the CASC examination:

> *"I think because now that I understand how the domain system works, I would perhaps not waste too much time in one domain."*
>
> (Interviewee 9)

> *"I think it has maybe slightly shifted my thinking about how to approach the stations in terms of the structure... I think definitely I feel more prepared in a different way than I thought I would, just in terms of breaking the exam down in terms of structure not knowledge."*
>
> (Interviewee 1)

Feedback from the examiners played a large role in this approach for one participant:

> *"The first day, I just went in and jumbled through it all. The feedback from the examiner was to make sure you add structure and I wasn't really sure how to do that, but after the feedback, I understand more now."*
>
> (Interviewee 16)

The learning about structure appeared to feed into some direct changes in individual practice:

> *"In the past I would just practise the way I did that in my clinics or when I see the patients, but in the exam, there is a structure that you have to focus on… You need to meet their exam criteria, the marks that they are giving…I think that is a core thing that I've learned from the course."*
>
> (Interviewee 8)

> *"I learnt quite a lot of lists and structures so that was very helpful. Knowing that the examiner has three domains that they're going to grade me on and it's up to me to be able to predict what domains are based on, which question and that's really revolutionised the way I am practising."*
>
> (Interviewee 10)

The structural focus also fed into changes to group practice:

> *"I have a group of colleagues I practice with and we tend to watch out for each other to make sure we follow a particular structure which is definitely different."*
>
> (Interviewee 2)

In a similar manner to the previous theme, the importance of answer structure was a notion that some participants were unaware of before the masterclasses:

> *"There was a lot of emphasis on structure which I didn't think was that important. I know it's important, but you have seven minutes and I felt like the main thing is to do everything you need to do, who cares if you're organised or not. But I realised that that's the best way the examiners can follow you, follow your course of thinking and it's really important, so it will affect my preparation definitely."*
>
> (Interviewee 2)

1.9.3.2 Theme 2: Knowledge (as a result of the masterclasses)

Participants reported that the masterclasses had impacted on their knowledge surrounding:

1. Knowledge area 1: Navigation of the examination;
2. Knowledge area 2: Identification of core content.

Knowledge area 1: Navigation of the examination

With the examination providing a unique challenge to trainees, some participants outlined the benefit of increasing their understanding of the examination as a result of the masterclasses:

> *"It's not necessarily about the theory if that makes sense, because that's something we need to train in our own time, but just how to navigate the exam – what kind of things are expected, how to interpret the tasks and the questions. That was really useful information."*
>
> (Interviewee 13)

Knowledge area 2: Identification of core content

Participants also explained that the masterclass sessions had helped focus them in on what core knowledge was required for the examination:

> *"It was much clearer to me what I intend to know about the main exams, what will help me, because obviously you don't know anything about what sort of questions are coming, but what can I go through with any form of question that will come that day. It's very helpful for me."*
>
> (Interviewee 17)

This impact on knowledge appeared to provide direction to participants' preparation, with some participants explaining that the masterclass sessions helped them to understand what topics to focus on, and how to carry out their examination preparation:

> *"For example, before I took that class, in my mind I'm like 'if my communication is great, I will just pass the exam' but the fact is it's not just the communication skills.*

So communication is like 30%, but the rest is like you need to know the ICD criteria. So those are the things that I got from the course."

(Interviewee 8)

"I got a good idea of which direction to go and how to start preparing and practising."

(Interviewee 14)

"It definitely prepared me more, or in fact, made me realise what I need to prepare for."

(Interviewee 6)

This direction also enabled participants to know what content to focus on in their preparation. For one participant, this involved focusing more on specific areas:

"…making sure I work out clear explanations in my head for certain common things."

(Interviewee 2)

Another participant mentioned the benefits of the masterclasses identifying what information and skills were important:

"Oh, definitely (the masterclass had an impact). Because before it was…it was very hazy, but I was motivated to work or study, but I didn't know what was important or how to go—what exact skills are needed?"

(Interviewee 4)

This content focus was particularly pertinent for one participant, who explained that the masterclasses enabled them to be brought back onto the right path for preparation:

"Knowing what is expected will reorient my practice."

(Interviewee 23)

This impact on preparation was not only seen on individual practice; one participant described the impact that the sessions had on collective examination practice:

"It helps not only the person who is practising a scenario but also the others in giving more feedback and even whoever is doing the patient's role on that occasion, to just

know a bit better how we can help each other I guess. Because before we would give feedback to the best of our knowledge, but sometimes not having into account all of this information bits that we got from the course. So I think it can change, as in we can become a bit more critical because we know a bit better what to look for."

(Interviewee 15)

1.9.4 Key enablers that contributed to the masterclass's impact

Interviews were held with one of the masterclass designers (Professor Nandini Chakraborty (NC)) and two masterclass facilitators (please see the interview schedule in appendix E), to discuss their perceptions on what were the key enablers that contributed towards making the masterclasses impactful. Three key enablers were identified: the expert facilitation; facilitators were current examiners; organisation.

1.9.4.1 Expert facilitation

The masterclasses utilised four facilitators across both days of the masterclasses:

"We have 4 examiners who do the principal setting in four stations on day one, and the same examiners then do the CASC stations on day two."

(NC)

The experience of these facilitators appeared to play a significant role in the running of the masterclasses:

"I'm very experienced in delivering feedback to trainees and medical students anyway. I've done previous formal training and delivering feedback. So I felt I was kind of prepared in that sense."

(Masterclass Facilitator (MF) 1)

"…the whole thing that we try and build into them is that it's you need to keep practicing. In addition to this, you need to listen to what the experience of the facilitators is, and to try and take away messages from there."

(MF 2)

This experience also enabled facilitators to meet the challenge of having to guide a variety of different trainees, each with their individual needs:

> *"I think probably most importantly is uniformity in approach in terms of how you deliver the feedback. I think it's worth noting that some trainees receive feedback more favourably than others and that's why I think you've got to be very careful as a facilitator in terms of how the feedback is delivered. So I suppose that kind of uniformity in approach would be the key thing."*
>
> (MF1)

> *"You could see where quite a lot of the candidates were falling down… but you had pockets of candidates or individuals who you thought, wow, they're really, really good… when you've got people who are big outliers, it's then dependent on the facilitator to make sure that the rest of the group don't get too despondent, or because some people are so good they know all the answers and people are just going 'wow, I can't do that'."*
>
> (MF 2)

Each masterclass facilitator attended a meeting prior to the sessions which provided them with guidance on what was expected of them during the masterclasses. When combined with the previous experience of these facilitators, this created a powerful combination to enable facilitators to be prepared to effectively run the sessions:

> *"I was provided with guidance in that we had a pre-meet, so I met with the organizers of the CASC masterclass to discuss how the course would run and that that happened for both masterclasses that have been involved with. That was really helpful. I got lots of useful background information from the college staff as well about how the two days would run. So I felt suitably prepared… I think the opportunity at the beginning to kind of have a like an introduction and set an agenda for the day was helpful."*
>
> (MF 1)

Other aspects of the facilitation that contributed to the impact of the sessions were the enthusiasm shown by facilitators, and the ability of the actors utilised for the stations:

"And I suppose the other really important thing is just having examiners who are enthused by the process and actually there because they want to be involved… I think you need that enthusiasm in order to sort of ensure that actually what you're able to deliver to the course is going to be most beneficial to the trainees… and just having the professional actors doing the stations, playing the role players for the stations, I think that massively helps and they're a real source of information for trainees as well."

(MF 1)

1.9.4.2 Facilitators were current examiners

An important feature of the masterclasses was that they utilised facilitators who were current CASC examiners:

"I see my role as a CASC examiner being potentially beneficial to the trainees, in terms of getting some valuable feedback about the sort of things that they need to do in order to improve their chances of passing the CASC. So I just really want to impart that knowledge and experience really so that trainees feel better prepared and feel more confident about setting the task."

(MF 1)

This enabled up-to-date information to be provided to trainees in the feedback given to trainees:

"…real examiners hooked into the running so that they would give advice which was genuine and up to date."

(NC)

This was particularly pertinent due to the changing requirements of the examination year-on-year:

"Exam formats keep changing. The advice they (consultants who took the exam many years ago) give is very well meaning, but if it's not specific to exams, it does not help."

(NC)

1.9.4.3 Organisation

The organisation of the masterclasses was perceived as key factor towards its impact:

> *"I think it was incredibly well organized, and I think we're very lucky that with the masterclass, we've got sort of good support from college staff. And despite the fact that the two masterclasses that I've done have both been online, I don't think that's kind of hindered the quality of the educational experience for the trainees. So the level of organization really impressed me."*
>
> (MF 1)

Two key factors played an important role in the masterclasses' organisation; the first was the timing of the masterclasses and the second was the focus of the masterclasses:

(a) The timing of the masterclasses played a large role in the success of the sessions' organisation, as the organisers intentionally positioning the masterclasses to run two or three months before the CASC examinations. This enabled trainees to have enough time to put into practice what they had learned from the masterclasses:

> *"Sometimes that's intentional, so that people have got sufficient time. And the same with the masterclass in November, even if the candidates have applied for the January one (CASC examination), they've then got a couple of months... if you've only got 2-3 weeks, you can make various modifications of how you approach things, but you're not going to change things significantly. Whereas if you've got at least two months, you've got that bit more of a time scale."*
>
> (MF 2)

(b) The masterclass sessions were organised to focus on the areas where common mistakes were being made by trainees, an approach by that went hand-in-hand with the feedback provided to participants by current examiners:

> *"So a lot of the emphasis that I put on was from my experience as an examiner where I saw candidates going wrong, what kind of mistakes they keep repeating over and over again… trying to break that, trying to make them focus on the task."*
>
> (NC)

DISCUSSION

Personalised, targeted support for learners is a key factor in fostering a culture of equality, diversity and inclusion, by providing a focus on the specific needs of each individual. The quantitative findings demonstrate that this level of targeted support for trainees can lead to positive improvements in examination pass rates, and signifies an important step in the right direction.

Positive non-significant differences were exhibited in trainees that attended the masterclasses from IMG and ethnic minority backgrounds, with these trainees appearing to perform at a higher level on their CASC examinations than their counterparts who had not attended the masterclasses. This provides evidence that the differential attainment gap can be reduced, with subsequent impact on improved progression into specialty training.

This discussion section addresses what worked well and why; what did trainees learn; and what are the lessons learned and factors that will help trust/boards, postgraduate training organisations and colleges design and deliver courses which meet the needs of ethnic minority and IMG learners.

1.10 What worked well in the masterclasses

Participants valued the opportunity to gain a better understanding of the CASC examination from current CASC examiners. This expert and trusted advice on how to prepare for the examination was particularly appreciated by trainees. The quality of the design and organisation of the sessions was a key factor, with participants praising a number of different factors as beneficial to their learning. The sessions were perceived as very well organised and kept to time, and the facilitators were praised for creating a safe and supportive environment where mistakes could be made and learned from. Trainees valued the honest and relevant feedback and seemed open to receiving negative feedback. The learning environment created by the organisers focused on large amounts of time being allocated for individuals to discuss their own performance with expert facilitators.

The online format also gave some participants the opportunity to attend the session, when an in-person delivery may have been more of a practical challenge for many participants.

Even if it was perceived to be more convenient to be online most participants recognised that future masterclasses needed to reflect the format of the examination, as evidenced by one participant stating that *"I think the masterclass should just mimic what was going on with the exam… moving forward it would just have to be copying what they do in CASC."* An aspect for consideration for the sessions' format is the cost of face-to-face courses for both trainees and organisations, for example the cost of travel and accommodation. Participants valued the opportunity to look at the examination from different angles, observe and learn from some of their peers and develop their examination skillset including time management and communication skills.

Course organisers reported anecdotally that participants had commented on the timing of the masterclass sessions, with a majority mentioning that the masterclasses fit well in relation to when they planned to take their CASC examination. The sessions coincided with an opportunity to implement what they had learned into changes to their preparatory practice.

1.11 What did trainees learn during the masterclasses

Participants reported that the masterclasses' content helped to improve their understanding of the examination and its requirements. A phased process of learning developed over the two days:

1. raising awareness of key factors related to the examination;
2. developing skills related to examination preparation and performance;
3. applying skills that impact on examination preparation and performance.

Raising awareness of key factors related to the examination

The masterclasses set the foundations for learning to occur, through raising participants' awareness to a number of different examination related factors.

Skillset requirements

Participants reported being made aware of four skills that were key towards a successful examination performance: Communication, task/question focus, time management, and answer structure. Some participants were previously unaware of the level of importance that these skills held towards examination performance. They therefore benefitted from the masterclasses firstly drawing their attention to these skills, and encouraging their utilisation moving forwards. The heightened awareness facilitated by the masterclasses therefore acted as the first step for participants, and helped to provide a common basis for these skills to be developed across the sessions. It should be noted that these are mainly quite generalisable skills that are not only related to the CASC examination.

Examination requirements

Participants were motivated to attend the masterclass sessions so that they could gain a better understanding of what was expected of them in the examination. The masterclasses appear to have achieved this, through raising both participants' awareness to the requirements of the examination, and their understanding of how to navigate some of the tasks and questions. Specifically, participants' attention was drawn to the areas of content

that were important for them to know and provided direction to their preparation. Additionally, clarity was provided to participants on what tasks they were required to perform during the examination, therefore taking away the ambiguity that some participants felt before their attendance. An example of this is the participants being given the opportunity to mark from an examiner's perspective under the supervision of current CASC examiners.

Comparison to peers

Participants valued the opportunity to observe their peers answering questions on the mock stations. They could learn from both the positive and negative features of their peers' answers, alongside the feedback provided by the examiners. This allowed participants to gauge their own performance compared to their peers. Key to this was that it was facilitated by the CASC examiners and that this was greater than what previous group practice could offer.

Developing skills related to examination preparation and performance

Once the foundations had been set by providing participants with a heightened awareness to the key necessary skills, the masterclasses provided the time and space for participants to develop these skills. The format of the sessions fostered a graded exposure to participants, where knowledge and skills could be built on with each exercise. The mock stations provided an opportunity for participants to put into practice the skills that they had learned, with features of these stations emphasising each skill in a similar environment to their examination. For example, by designing the first day to host stations at a shorter duration of 5 minutes, participants were required to put into practice their time-management, task-focus and answer structure skills to successfully answer the station in a shorter time than usual. On the second day, these mock stations reverted back to the usual duration of 7 minutes, thus completing the learning exposure by allowing participants to apply their newly-developed skillset in a more realistic time-frame. The examiners also contributed to this learning exposure with the personalised feedback that they provided to participants; this was an aspect highly valued by trainees, as it provided them with real-time learning points to apply across the sessions. With this feedback playing a major role in participants'

motivations for attending the masterclass sessions, it seems to have been a key feature in skill development. Facilitators also managed to foster an environment that was a safe space for mistakes to be made, a key tenet for learning to occur.

Applying skills that impact on examination preparation and performance

The final stage of this learning process saw participants plan to apply these skills into examination practice and preparatory practice.

Examination practice

The masterclasses impacted the way that participants planned on approaching the examination, with key principles learned from the masterclasses providing the backbone to their plans for answers when undertaking the examination itself. Some participants emphasised their focus on the content and manner of their communication with patients when providing their answers in the examination, including ensuring that they summarised to patients what they had spoken about. Some mentioned that they planned to utilise their time efficiently during the examination, particularly so that they answered all parts of the question, instead of using their time to complete just one aspect of the answer. Participants also mentioned intending to read the question better and focus on what was being asked of them, whilst others placed emphasis on structuring their answers in a way that demonstrated to the examiner the domains that they were required to cover.

Preparatory practice

The masterclasses also impacted the way that participants planned to approach their preparation for the examination. Both intentions to change and actual actions were outlined in relation to individual and group practice. For example, participants reported that an emphasis on structure had been implemented into their collective examination practice after the masterclass sessions and that they were in a better place to receive and provide feedback to their peers.

Formative learning

One of the purposes of high-stakes examinations is to drive learning. Providing trainees with formative feedback directs their future learning so this should be acknowledged when focusing purely on examination pass rates. Trainees were learning knowledge and skills which they were applying to their everyday clinical practice. One participant, for example, explained that learning to be more direct and efficient with communication had improved their approach to patients.

1.12 Lessons learned and factors that help meet the needs of ethnic minority and IMG learners

As funding for initiatives like this are limited, it is essential that trust/boards, postgraduate training organisations and colleges design and deliver courses which meet the needs of ethnic minority and IMG learners. The lessons learned are discussed below.

Quality of facilitation

A key foundation of any course related to examination preparation is the use of high quality, honest and accurate feedback from facilitators. If possible this should be offered by those who are current examiners. If not current examiners, those facilitating sessions need to be up to date and aligned to current examination guidance to foster an element of trust in the quality of the feedback.

The reliance on current examiners does create implications related to cost and capacity. Four senior clinicians were needed for 2 full days to facilitate 30 trainees in this model. There may be ethical implications to consider. Current examiners may be perceived as being too close to the assessment process. Alternative delivery models may be developed which overcome these barriers.

Targeted support

The aim of the pilot was to test the impact of the initiative on specific groups and so the intervention was offered to all core psychiatry trainees in locations with examination pass rates below the national average and priority given to doctors with a previous fail, with an overseas PMQ, or from a UK ethnic minority background. Individuals were not selected on the basis of their personal learning needs and some participants would have passed the CASC examination without the additional support.

Further work would be needed to refine the selection process to ensure resources are focused on the trainees that really need it. Objective measures of performance earlier in training or introducing a learning needs analysis may aid Educational Supervisors to improve the approach.

Awareness of available resources and signposting to them

Trainees reported being provided with new resources in the masterclasses that were in fact already available to them online. For example, the marking domain sheets and CASC guides for trainees' information are in the public domain (RCPsych, 2023). More work needs to focus on why this information is not being accessed and to ensure all trainees are signposted to up to date and trusted information. This could all be done outside any specific examination preparation course. There may be regional variation in terms of signposting of resources and examination preparation information.

Generalisable versus specific CASC examination skills

Despite focusing on the CASC examination, trainees reported valuing the opportunity to learn generalisable examination skills, such as time management and answer structure. The perceived success of the masterclasses was based on the value of developing these more transferable skills rather than any rote learning. The implication of this is that these more transferable skills could be developed in other ways and formats that have less of a cost implication for trainees and organisations.

Cascading

Trainees reported cascading what they had learnt to others, by changing how they practiced in groups. For example, they practised examination question responses in shorter allotted times as recommended in the masterclasses. More work could be done to focus on what could be cascaded across organisations in a way that ensures that high quality, trusted advice and guidance is accessed by all trainees. It is important to note that some trainees may not be in a position to cascade, as they reported being isolated within their Trust.

LIMITATIONS

The findings reported above represent those masterclass participants who volunteered to take part (n=24 out of a maximum of 183 participants (12.4%). Care should be taken when extrapolating these findings to the wider masterclass participant group. We also do not know which of the 8 masterclasses the interviewees attended. Interviews took place before trainees had had a chance to attempt the CASC examination so their comments may not reflect the impact the masterclasses had on their actual performance. Views may have changed if they had failed their attempt. Although examination outcomes have been reported in this report, these refer to all masterclass participants. We have no specific information related to the trainees who participated in interviews in relation to their own examination performance. The progress of those taking part in the masterclasses will be monitored by the GMC including future examination outcomes and progress into higher specialty training as part of its statutory duties.

CONCLUSIONS

This evaluation concludes that trainees, particularly those from IMG and ethnic minority backgrounds, appeared to perform at a higher level on their CASC examinations than those who had not attended the masterclasses. This provides evidence that the differential attainment gap can be reduced, with subsequent impact on improved progression into specialty training.

Trainees reported a raised awareness of the CASC examination requirements, what was expected of them during the examination, and how they should approach their examination preparation. This highlights that there is a knowledge gap to be more widely addressed. Most learning seemed to focus on quite generalisable examination skills rather than a specific skill related to the CASC examination itself. Trainees were not always fully aware of examination preparation resources already provided online by, for example, the RCPsych.

The content of the masterclasses and the experience of attending the two-day event was reported to be particularly beneficial to these trainees. They particularly valued that the masterclasses were facilitated by current CASC examiners to give detailed, more focused and relevant feedback in what was perceived to be a safe and trusted learning environment. This seemed to alleviate anxieties and add to their own self-belief. Trainees placed significance emphasis on CASC examiners being facilitators but one participant did report they were reassured that current CASC examiners were IMGs.

Wider support networks were reported to be varied with some trainees within targeted groups struggling to access examination preparation support in their own Trusts. Some felt isolated while others relied on and valued group practice and they intended to pass on what was learned to others.

POINTS TO CONSIDER

The findings are relevant to organisations and individuals providing support to trainees to prepare for high-stakes assessment and those with shared responsibility for reducing the attainment gap in medical education and training: postgraduate training organisations, local education providers, Medical Royal Colleges and Faculties as well as trainers and trainees.

The findings may also be relevant to other systems which rely on high-stakes assessment such as recruitment and selection and to those supporting doctors preparing for Specialty examinations who are not in a training programme.

- Medical Royal Colleges and Faculties publishing materials to support candidates should ensure that these are well signposted, and understandable to candidates less familiar with UK examination formats and terminology. Guidance should meet the differing needs of candidates from different backgrounds including hints and tips around common issues which can lead to examination failure especially around technique.

- Postgraduate training organisations, Employers and Colleges/Faculties should consider what worked well in this case study to improve examination preparation support provided. Support focused on generic examination techniques such as time management and answer structure may be of particular benefit to doctors who completed their PMQ outside the UK or have less support to prepare for examinations.

- Postgraduate training organisations should develop learning needs analysis tools to help identify learners who would benefit from this type of support earlier in training and to avoid the negative impact of examination fails.

- Organisations including the GMC should consider monitoring equality of access to support to prepare for examinations across specialties and in different training locations ensuring targeted support is safe, fair and proportionate.

Targeted examination support should prepare candidates for what to expect and provide an opportunity to practice technique in order to ensure candidates have equity of opportunity to demonstrate their clinical knowledge and skills.

The potential risk of a conflict of interest for examiners delivering training will need to be carefully managed to maintain separation from the examination itself and scenarios used in preparation training should reflect the examination but not be taken from live question banks.

Enhanced support such as the CASC masterclass should be offered where there is evidence of a knowledge gap and as a means of minimising disadvantage. There is no evidence to suggest that all candidates require or benefit from this type of intervention.

ACKNOWLEDGMENTS

The authors would like to acknowledge and thank all interviewees, key stakeholders, and contributors who have taken part in this evaluation.

We would also like to thank the team at the GMC, including Andy Knapton, for their help and guidance in shaping the research report and providing the quantitative findings.

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APPENDICES

Appendix A – Example of a masterclass flyer

Free RCPsych CASC masterclass – sign up now

You are invited to take part in a free RCPsych CASC Masterclass this July to support important research into the effectiveness of educational initiatives

Dear Core Psychiatry trainee,

The Royal College of Psychiatrists is offering a limited number of places on a newly developed CASC masterclasscourse designed by MRCPsych examiners to support candidates preparing for this exam. This course is available to you if you are:

- preparing to sit the CASC exam in September 2021
- available to attend a two-day course on either 15 & 16 July or 22 & 23 July 2021

This initiative is being funded by Health Education England and the GMC in order to evaluate the impact of initiatives to support trainees progress into higher specialist training and to reduce the ethnic attainment gap.

How can I sign up?

If you are intending to sit the CASC exam in September and are available for the course dates you can enrol forthe CASC masterclass now by completing the CASC masterclass application form. There are 24 places available for each of the two courses in July. Places will be allocated on a first come, first served basis and courses will run only if there is sufficient demand.

The deadline for enrolment is 4 June.

What will the CASC masterclass involve?

This two-day CASC masterclass is designed and delivered by experienced MRCPsych examiners, featuring mockstations and the opportunity for you to have a go at marking

yourself to get a flavour of how it feels as an examiner. Each day will involve a mixture of larger sessions and small group discussion with an emphasis on feedback. For further information on the masterclass please contact the college on **CASCMasterclass@rcpsych.ac.uk**

Who is being invited to take part?

This opportunity is limited only to invited individuals from specific training programmes and taking the CASC inSeptember.

48 trainees will be able to take a CASC masterclass in July 2021. If you are planning to take the CASC exam in 2022, we will be running two further masterclass courses and wewill be in touch later this year about the next opportunity to enrol on these.

We are trialling a parallel initiative in some of the selected locations for trainers and supervisors and both initiatives will be evaluated together. Core Psychiatry Trainees in the following areas are being invited to take part in this first pilot:

East Midlands	North West	Wales
East of England	Scotland	West Midlands
KSS	Thames Valley	
North East	Yorkshire and Humber	

What is the purpose of the research and evaluation?

The GMC, Health Education England and the Royal College of Psychiatrists are working together to develop and test this initiative. We will be evaluating whether the initiative supports the progression of doctors into higher specialty Psychiatry training and reduces the ethnic attainment gap.

The CASC masterclass initiative will be offered to 120 candidates over three exam diets in 2021 and 2022. Participants invited to take part will be a mixture of those sitting CASC for the first time and those who have attempted the CASC previously. The evaluation will look at outcomes of candidates and a range of factors suchas previous exam attempts, as well as

ethnicity and place of primary medical qualification to identify if the initiative may help address the ethnic attainment gap.

More information about the attainment gap, research into causal factors and interventions to reduce the gap can be found on the GMC's website.

How will I contribute to the research?

Qualitative evaluation

Following the CASC masterclass, all participants will be asked to complete a

Feedback questionnaire. You will also be invited to express an interest in taking part in a more in-depth evaluation interview with our research partners at Edge Hill University. If you are invited to take part in a MS Teams meeting, you will be asked to reflect on your views of the CASC masterclass and whether you think it improved your preparation for the CASC examination. The Teams meeting will last no more than 30 minutes and will be scheduled at a time convenient to you.

Quantitative evaluation

The progress of those taking part in the masterclass will be monitored including future exam outcomes and progress into higher specialty training. Analysis of outcomes will include candidates' demographic data includinggender and ethnicity. This data is collected and held by the GMC as part of its statutory duties.

How will my information be used and stored?

Your contact details and other information gathered during the course of the research will be used for the purposes of this research project only.

By signing up for the masterclass you will give consent for the RCPsych to contact you to schedule the CASC masterclass, collect survey feedback following the masterclass and invite you to express an interest with Edge Hill University for an interview. By expressing an interest in a follow-up interview you will give permission for Edge Hill University to contact you to arrange a suitable time for an interview to take place.

Edge Hill University will digitally record and transcribe Teams interviews for the purposes of analysis. Your nameand other identifying characteristics will not be attached to the transcript

and the digital recording will be deletedonce the study has ended. The information you provide will therefore remain anonymised.

All information collected during the study will be stored on a secure electronic server at the University with access restricted tothe researchers and the person who transcribes the recording. Interview transcripts will be held securely for fiveyears and then disposed of. None of the stored material will contain n any details that would breach confidentialityor anonymity of participants.

The GMC will analyse exam and recruitment outcomes for trainees taking part in this pilot over the three examdiets. This data is collected and stored each year by the GMC and is used for quality assurance and research purposes. Only aggregated, non-identifiable information on the exam pass rates and progression will be sharedoutside the GMC, and the data will be governed by our data protection protocols.

Any information provided during the course of the research will be treated confidentially and findings will be reported at a group level only. Data and comments will not be attributable to individuals. An evaluation report detailing impact of this initiative will be published and will be publicly accessible using non-identifiable data.

If you are concerned about how your data will be used you may request to discuss this with the team at any point. You will be free to remove your qualitative data up to one week after the interview has taken place. Please contact the Edge Hill University evaluation team.

We thank you very much for your interest and support with this research project.

If you have any questions regarding the evaluation, please contact us at **CASCMasterclass@rcpsych.ac.uk**

Appendix B – Example of a Participant Information Sheet

Evaluation of the impact of the RCPsych CASC masterclass

Participant information sheet for trainees

You are being invited to take part in an evaluation study to explore your experiences related to participating in the above two-day course. Please take the time to read this information carefully before agreeing to take part.

What is the purpose of this study?

The aim of this study is to explore the perspectives of those attending the course across schools of Psychiatry in England (Health Education England (HEE)). The study will investigate whether those participating in the course have any immediate intention to put new learning into practice and then in time investigate if any intended changes have taken place or not. Another aim of the evaluation is to focus on what aspects of the course were considered as particularly useful /not useful - such as an overview of differential attainment (DA). This will allow the evaluation to inform any adaptations of the course. This evaluation will inform HEE. the General Medical Council (GMC) and the Royal College of Psychiatrists (RCPsych) about the potential to improve the quality of clinical supervision across the country.

Why have I been invited to take part?

You have been invited to take part as you are a trainee due to participate in a CASC masterclass, which has been funded by the GMC and HEE. The evaluation team are seeking to evaluate its effectiveness.

Do I have to take part?

It is up to you to decide if you wish to take part. If you agree to take part in the study, you are free to withdraw from the study at any time, without having to give a reason.

What will happen if I take part?

A member of the evaluation team will be in email contact to arrange an initial interview using Microsoft Teams at a time convenient with you within 4 weeks of the course taking place. The interviewer will audio record the interview. The interview will last no longer than 30 minutes and we will stop at any time if you wish. In this interview, you will be asked about your perceptions of the session, and whether you plan to implement what you have learned through the workshop into your examination preparation. The interviews will be transcribed, anonymised and analysed.

What are the possible disadvantages and risks in taking part?

A small risk is that we may ask questions about your experiences that you find uncomfortable. If this happens we can end the interview. If you need further support, we will offer you the opportunity to contact Jules Woodcock at HEE.

What are the possible benefits?

The main benefits will be that your participation will help enable the evaluation team to explore the impact of this high-value course that, as part of this project, you get access to at no cost. These courses have been shown to improve CASC success for those who attend, and your feedback will help to inform future iterations of the course.

Will my taking part be kept confidential?

Yes. Any personal information about you, colleagues, patients or work sites will be removed from the transcripts so that only quotations that are not attributable to any individual will be used in any final reports. Any audio recordings will be kept secure and then destroyed once transcribed and any written information will be kept strictly confidential. Only if the interviewer uncovers information that suggests that you, or others, are at risk of coming to any harm, will they break this confidentiality and follow set HEE reporting processes. The procedures for handling, processing, storage and destruction of data from the study are compliant with the Data Protection Act 2018. At Edge Hill University (EHU), we are committed to respecting and protecting your personal information. To find ways in which we use your data, please see edgehill.ac.uk/about/legal/privacy.

The University is committed to ensuring compliance with current data protection legislation and confirms that all data collected is used fairly, stored safely, and not disclosed to any other person unlawfully. The University is a data controller and, in some instances, may be a data processor of this data. Please note: if unsafe or illegal practice is disclosed during the interview, the researcher will take appropriate action (if information is identifiable) as is the norm in medical education.

What are you going to do with the results of the study?

The results of this study will be reported to HEE, GMC and RCPsych. Findings may also be reported in academic journals, at conferences , or published on relevant organisation's website. You will not be identified in any publication. You will be offered a copy of any report arising from the study.

Who is organising and funding the evaluation?

This evaluation is being funded HEE, the GMC and RCPsych.

Who has reviewed the study?

This study has been approved by HEE and the Health Research Ethics Committee, EHU.

What if there is a problem?

If you are unhappy with the study in any way please tell us. If you would prefer to talk to someone outside the evaluation team or if you are not happy with the way we deal with your problem please contact J Woodcock at HEE: 01612689597/julia.woodcock@hee.nhs.uk

Evaluation team: Prof Jeremy Brown, Liam Jenkins, Prof John Sandars, Julie Bridson, Dr Mumtaz Patel. JB and LJ will be undertaking the interviews.

Contact Details

If you would like to ask any other questions regarding the evaluation please contact: Liam Jenkins, Research Assistant, Faculty of Health, Social Care & Medicine, Edge Hill University, St Helens Road, Ormskirk, Lancashire L39 4QP. **T.** 01695 650919 **E.** jenkinsl@edgehill.ac.uk

Thank you for taking the time to read this information Version 3 16/7/21

Appendix C – Consent form

Evaluation of the impact of the RCPsych CASC masterclass

Consent form for trainees interviews

Please initial each box:

I confirm that I have read and understand the information sheet Version 3 dated 16/07/2021 for the above study. I have had the opportunity to consider the information, ask questions, and am satisfied that I have had all the information that I require.	
I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my legal rights being affected. I will be free to remove my research data from the study up to one week after the interview has taken place. I will do so by contacting the research team using the details on the information sheet.	
I hereby grant Edge Hill University authority to process my personal and research data for the purpose of my participation in the above-named research study. I also understand that my personal contact details will not be passed to anyone outside of the research team at Edge Hill University.	
I agree to take part in the above study and that the interview can be digitally audio-recorded.	
I understand that data collected during the study may be looked at by individuals from Edge Hill University and Health Education England. I give permission for these individuals to have access to this information.	
I agree to the use of anonymised quotations within reports and publications.	

Participant ID:…… (to be completed by member of Evaluation team)

Participant Name Person taking consent Date

_____ _____ _____

Version 3 16/7/21

Appendix D – Trainee Interview schedule

Trainee interview schedule

1. What is your current year of training, and which Trust are you currently working in?

2. In terms of your motivations for attending the masterclass, were there any reasons in particular for you signing up to the masterclass sessions?

3. In your opinion, were the learning outcomes of the workshop met? These were:

a) Addressing how you can better prepare for the CASC exam

b) Addressing the differential attainment gap

4. What aspects of the workshop worked well?

5. What aspects of the workshop could be improved?

6. If the exam was to return to being in-person, should the masterclass be held in-person or continue being online?

7. How did the timing of the masterclass work, in relation to when you plan to take the CASC exam?

6. Do you think the workshop has had an impact on the way you will prepare for your CASC exam? Can you give examples?

7. Is there anything that you have learned from the masterclass that you will implement in your exam preparation practice?

8. Is there anything you want to add that we have not discussed?

Appendix E – Masterclass organiser interview schedule

Masterclass organiser / Facilitator semi-structured interview schedule

1. Can you please summarise your professional role?

2. Could you explain the background to setting up the CASC masterclasses? *Organiser only*

   a. When did they first run?

   b. Why were they set up?

   c. Which trainees were targeted to participate?

   d. Who was involved in setting them up? Who were the key stakeholders?

3. Who designed the masterclass and what were the main principles in the design of the masterclass? *Organiser only*

4. How many facilitators took part in the masterclass? *Organiser only*

5. What was the overall aim of the masterclasses? *Organiser only*

6. On reflection, what are your main observations after running the masterclass?

   a. What worked well?

   b. What would you do differently next time?

   c. Did you get feedback from participants? What did they identify as the most useful aspects of the masterclass?

7. What are the future plans?

Explore: Should the masterclasses be rolled out to wider groups of trainees?