Report on user testing of Mimi Coach in 2023-2024

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Mimi Coach is a digital system that works on phones, tablets or computers, for healthcare students and professionals to practice their Motivational Interviewing (MI) skills by talking to an AI generated patient. At the end of each session, Mimi will analyse the conversation and provide detailed feedback on the users MI.

For the purposes of this user testing, Mimi Coach was advertised via the 'Centre or Health and Clinical Research' (CHCR) newsletter at the University of the West of England. As a result, 14 academic staff contacted to express an interest in testing Mimi Coach and trialling it with students. All staff were introduced to Mimi Coach and sent information and an invitation to be trained. Staff included academic lecturers and teaching practitioners with additional employment in healthcare across a mix of clinical and academic courses including:

1. Health psychology (postgraduate)
2. Mental health nursing
3. Remote clinical decision making
4. Physicians' assistant training (postgraduate)
5. Sports rehabilitation
6. Radiotherapy
7. Adult nursing
8. Learning disability nursing

Not all courses were running in the 6-month testing period. Therefore, Mimi Coach was formally tested in 3 lectures (1-3 listed above) and introduced in 2 (2 and 4 above), accessing 214 students with a completed testing rate of 14% (32 students). Testing required the user to use it both in class and at home. Two of the three lecturers in whose classes we tested completed the questionnaire. In the latter 2 courses (7&8 above) there was not enough time to teach Motivational Interviewing (MI) as well as to schedule a trial of Mimi Coach, as time devoted to MI was sometimes as short as 1 hour. Therefore, lecturers included brief teaching about the app and asked the students to trial it in their own time. A further 9 staff expressed an interest in using Mimi Coach in future lectures starting in the academic year 2024. 3 of these staff teach motivational interviewing in more than one course.

In the first round of Mimi Coach testing with a previous funding source, 3 different staff members tested Mimi Coach with post-registration students. For this current round, the previous staff recommended testing with pre-registration students who are actively learning Motivational Interviewing. However, several students who started the trial in the lecture did not complete the second round as they felt that their knowledge of MI was not sufficient to complete the required 10 rounds to elicit feedback. Therefore, to improve completion rate, it may be possible to include additional teaching modules to support pre-registration students currently learning MI.

"Need further learning, example would be useful"

"I found this quite challenging and interesting to note where I struggled to move the conversation forward"

"Maybe have different training sections where the OARS are broken up and you can try each one before going into a conversation with Peter and doing them all in one go".

The feedback provided by students and staff who trialled Mimi Coach, qualitative data was recorded via Qualtrics and was grouped into broad themes. These are described below.

1. Difficulties in classroom setting

The smallest class size was 30 students and space was sometimes a challenge. Some students highlighted feeling awkward talking in a class setting and reported challenges caused by noise interruption. Most students used the text function in the classroom and for many this worked well but others reported running out of time. It is not clear how much this experience contributed to students not moving onto the second round from home. It was noted that additional time is required within the app for people using the text function to complete the task to elicit feedback. It may also benefit students to use headsets with microphones to encourage classroom participation.

"I found it awkward in person in class"

"there were quite a lot of errors with speech either not being picked up or misheard"

"In class I had to use the text box, thus, ran out of time when talking to Peter".

"I was typing on my phone which made it difficult to give [get] the summary I would like to at the end"

"If typing, there needs to be more time to do it"

People new to MI found time limits to be a challenge, regardless of whether they were speaking or typing and highlighted the potential for a pause function to enable them to read and learn or to visit their notes.

"as I am new to MI, I'm unsure if 10 minutes is enough time as I have to think about what to say".

"Maybe expand the time limit for a bit longer".

2. Positive to use at home

However, the students who completed using Mimi Coach at home reported that talking in a quiet and private environment enabled them to talk freely and benefit from the app more.

"it was very helpful to do it in a private session where there were no distractions. This time I was able to get a lot more in the conversation and have a good go at MI".

"It was good to be able to do it in the comfort of my own home. No one around and I could practice several times".

3. How 'Real it seemed'

People who tested Mimi Coach felt that it was beneficial to speak to a virtual patient to develop their skills beyond the lecture and highlighted potential to work with different personalities beyond 'Peter' (including the potential for including patients with learning difficulties). Informal (verbal) feedback in a session included that it was less 'daunting' working with a virtual patient before applying skills in placements. Written feedback also highlighted the benefits of working with characters that may be difficult to interact with. There was variation in the demand for 'challenging' patients with some testers being new to MI and others wanting to explore a higher level of ambivalence and resistance.

"I prefer the mimi coach as I felt more confident and comfortable talking to AI".

"I think speaking with the patient is very useful to build professional MI skills".

"The responses were detailed and felt realistic, especially because Peter has emotion behind what he is saying".

"Peter felt very stand offish, but that may be due to my questions, it may be good to have people with different personalities or approach types to work with".

"To make it useful for more senior students I'd suggest putting in difficult clients so people who have already practice MI sufficiently can have practice in dealing with people more reluctant to change".

To develop the way that students interact with patients it was noted that the 'head-only' visual of a patient may restrict access to non-verbal and cues and the emotion that patients bring to a scenario. Whilst it may not be possible for Mimi Coach to provide feedback on users' body language and non-verbal cues, it may be possible to develop the visual image of whole patients in the app to see their body language.

"I feel a client may be more resistant and not come up with so many ideas for change after being so reluctant at the beginning".

(Health Professional) *"using the coach made me realise how much I rely on body language/non-verbal feedback in sessions with patients".*

4. Responsiveness of software

Some difficulties were highlighted regarding the ability of the system to respond to certain phrases or accents. However, it is unclear how much of this was due to the crowding and noise in classrooms as highlighted previously.

"I think sometimes it finds to understand certain types of accent."

"There were times when what I said was changed into a different word"…. "Perhaps I should have been clearer when talking."

A small number of testers had difficulty accessing feedback from Mimi Coach and would welcome access to a 'troubleshooting' feature or technical support. For some, this was due to a lack of time

(i.e. using the text function as highlighted previously) and for others, this was despite completing the task.

"I made attempts using voice and text formats, but I still couldn't get a feedback"

"I had both long and precise conversations, I tried to stay within the time limit, I had more than 10 interactions, and I couldn't get feedback".

"I couldn't get the additional notes from the 'teacher' to display, only Peter's notes".

However, most testers were able to complete the whole process and elicit feedback and the response to Mimi Coach from those who did complete was positive emphasising the value of the app for enhancing practical application.

"I think going through each OARS with examples was very useful".

"I think mimi has the advantage of being able to remember everything that was said so I can get clear examples".

"being able to practice multiple times and change my approach each time is really useful and a lot easier to put into practice than feedback can be in class".

5. Feedback from Mimi

Lecturers and students reported finding the feedback provided by Mimi Coach helpful and comprehensive. There was a positive response to the depth of the feedback, and the way that feedback was broken into actionable suggestions as well as giving overall summaries and identifying areas for improvement.

"I found that the feedback was in depth and highlighted key areas that I had missed"

"I found the feedback incredibly useful. the feedback was broken down into sections and then gave an overall summary at the end".

"I think the summary feedback is clear, comprehensive and makes good use of examples. The interactions at this stage are satisfactory and it prompts students to develop their questioning skills".

Feedback was particularly positive from health professionals already using MI in their daily practice who were able to draw upon real world examples of working with clients. This also supports the format of introducing Mimi coach in professional courses and in classroom settings which include use of role play scenarios.

(Health professional) *"I felt the feedback was good, and seemed to reflect what I had done"*

(Health professional) *"I found the app very useful and it made me reflect on my current practice and how to respond to different patient's attitudes".*

For those new to MI, the potential to include learning options and modules was reiterated here.

"I would of liked a few more examples when it shared that an area needed more".

"it would be good to have different options for trying out different OARS when you are a beginner. for example, it feel difficult when you first start to get them all in at once".

Testers identified progression in their language and affirmations from using the trial and the potential for Mimi Coach to develop their conversational confidence.

"It picked me up on some 'unprofessional' language i used".

"The feedback given enable me to realise that I wasn't using any positive affirmations the first time round so I was more aware of this for the 2nd session".

"following my first attempt I read the feedback and went into a second try and already found my responses and feedback had improved"

At times, feedback was identified as having a strict tone which may be addressed according to the users' preference if developed further. Users identified a need for a prompt to show them when the session was close to the end (to encourage summarising).

"I was still in the middle of getting information from the patient, so hadn't summarised, yet the feedback pulled me up for not summarising… I'm not sure if I had reached 10 interactions so it stopped?"

6. Academic feedback

The lecturers who trialled Mimi Coach identified it as a useful tool to enhance their teaching and for students to put their learning into practice. There was no negative feedback regarding the use of Mimi Coach in the academic or clinical training setting. There is a strong rationale for further testing of the Mimi Coach app in the new academic year to incorporate courses that were not running in the trial period and to further harness the engagement and support of those academics who were involved at this stage. This may be further supported through development of learning modules for courses where time available for teaching of MI is limited.

"I think this software once it is finished will be so so helpful in the educational setting as you can go over and over again to get more confident".

"It allows students a further opportunity to consolidate their learning and gain feedback from another source to help identify further developments".

"It empowers students to take ownership of their learning and have a personal experience which is hard to replicate with large cohorts of students".

"I was able to use this in the session or as a supplement and I have decided to blend the tool into my teaching in the latter manner".

"I think there is potential to explore this further and would welcome an opportunity to incorporate this into my module".

7. Positive reception

The response to Mimi Coach was positive. Barriers to completion included difficulty testing in the crowded classroom setting, the need for additional time and user troubleshooting and the mixed

level of knowledge and experience of users. However, where these barriers were overcome, the response to Mimi Coach was extremely in favour of further development.

"I think the idea of Mimi coach is amazing"

"I was really impressed with the whole software"

"Really interesting App would definitely be one I would continue to use in order to adapt and perfect my MI skills"

"I would use the system again".

"I think this software is brilliant and if I can, I would love to carry on using it as i think it is really beneficial to my training!"

(Health Professional) "I really enjoyed the experience and have gone back through it twice to continue my learning and plan to do it again".