

**Developing Therapists' Multicultural Orientation Using Web-Based Deliberate Practice:
An Initial Feasibility, Usability, and Acceptability Study**

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Abstract

The value of skillfully adopting a multicultural orientation (MCO) in psychotherapy has been increasingly recognized. Deliberate practice methods may be helpful in developing this capacity, but limited opportunities for practice and feedback exist. The current study provided an initial test of the feasibility, usability, and acceptability of a self-guided, web-based deliberate practice tool designed to support the development of therapists' MCO: MCO Deliberate Practice Online (MCO-O). This tool included brief didactic instructions along with opportunities to practice responding to video vignettes of actors portraying clients discussing cultural topics in psychotherapy. A sample of therapists and trainees ($n = 287$) visited the MCO-O website and consented to the study. Recruitment through emails to listservs and a webinar was highly feasible. Quantitative ratings of usability were modest. Quantitative metrics of acceptability were also modest, with a minority of participants (18.8%) visiting the MCO-O website more than once and 51.2% of participants viewing two or more of the video vignettes. Younger participants found the MCO-O website more usable and having MCO-O assigned was associated with watching more videos, when controlling for participant demographics. Qualitative themes included a mixture of positive feedback along with critiques and confusion regarding the MCO-O website. Taken together, results highlight the potential of this approach along with important limitations. Ultimately, it may prove difficult for therapists and trainees to engage in self-guided MCO training, particularly if using software tools that have not undergone extensive (and potentially resource intensive) user experience testing and development.

Keywords: multicultural orientation; multicultural competence; deliberate practice; technology; training

Public Significance Statement

This study suggests that recruitment of therapists and trainees is feasible for use of a web-based tool for deliberate practice of multicultural orientation skills in psychotherapy. Additionally, it highlights that user experience testing and development of the software may be critical to increase usability and acceptability.

Developing Therapists' Multicultural Orientation Using Web-Based Deliberate Practice: An Initial Feasibility, Usability, and Acceptability Study

Development of multicultural competencies has become an area of increasing emphasis in psychotherapist training and research since the late 1960s (Pine, 1972). Multicultural competencies are skills that demonstrate a psychotherapist's ability to utilize multicultural knowledge and awareness while engaging with a client in therapy (Sue et al., 1982). Building from multicultural competencies, the Multicultural Orientation (MCO) framework emerged as a way to further unpack the ways therapists can engage with their clients' cultural identities, values, and worldviews (Owen et al., 2011a; Owen et al., 2011b). MCO includes the three interrelated components of cultural humility (i.e., adopting a curious, open, non-superior stance that is other oriented; Owen, 2013; Hook et al., 2013), cultural opportunities (i.e., moments in a session when the psychotherapist can ask about the client's heritage; Owen, 2013), and cultural comfort (i.e., the psychotherapist's comfort level with initiating cultural conversations; Cardemil & Battle, 2003; Helms & Cook, 1999; Perez-Rojas et al., 2019). Inherent in the MCO framework is the belief that psychotherapists, regardless of their personal identities and cultural backgrounds, are responsible for effectively treating clients of diverse backgrounds (American Psychological Association, 2017).

MCO training for psychotherapists is an important step toward decreasing instances of microaggressions and facilitating healing conversations that infuse cultural values and beliefs (Benish et al., 2011; Hook et al., 2016; Sue et al., 2019; Tao et al., 2015). Microaggressions, which have been defined as "subtle, stunning, often automatic, and non-verbal exchanges which are 'put downs'" (Pierce et al., 1977, p. 66), are strongly associated with negative mental health outcomes, such as depression and anxiety (Paradies et al., 2015), and contribute to disparities in

healthcare (Cheung & Snowden, 1990; Nadal et al., 2014). The increased focus on MCO in psychotherapist training has become especially salient in the age of the Black Lives Matter and anti-racism movements (Hargons et al., 2017; Kendi, 2019; Roberts & Rizzo, 2021). Increased awareness and visibility of the experiences of marginalized populations in recent years has galvanized the push for MCO within psychotherapy training (Hargons et al., 2017).

While the pillars of MCO have been operationalized, and several researchers have proposed practical guidelines for learning MCO (Hook et al., 2017; Watkins, 2019; Wilcox, 2021), there are barriers to developing these skills, especially for majority group members (Moon & Sandage, 2019). Indeed, therapist interpersonal skills are generally complex and require continuous learning (Chang & Berk, 2009; Hatcher, 2015). Moreover, therapists do not necessarily improve in implementing techniques and competencies simply by gaining experience (Castonguay & Hill, 2017; Hill et al., 2020a; Hill et al., 2020b; Tracey et al., 2014). In fact, there is some evidence that therapists' effectiveness may decline over time (Goldberg et al., 2016b). Thus, there is need for developing ways therapists can practice MCO outside of the therapy room (Bennett-Levy, 2019; Murphy et al., 2019; Rousmaniere et al., 2017).

Drawn from learning science (Ericsson, 2008; Ericsson & Charness, 1994; Macnamara et al., 2014), deliberate practice has emerged as a model for developing therapist skills and may be relevant for the development of MCO (Rousmaniere et al., 2017; Tracey et al., 2014). Deliberate practice is defined as "individualized training activities...to improve specific aspects of an individual's performance through repetition and successive refinement" (Ericsson & Lehmann, 1996, p. 278-279). Psychotherapy researchers have applied deliberate practice to improve a range of therapist skills, including facilitative interpersonal skills, communication microskills, navigating client ambivalence and resistance, and processing one's own uncertainty or distress

when discussing difficult topics with clients (Nurse et al., 2023). Deliberate practice is a relatively nascent area in psychotherapy research and the precise mechanisms throughout which any potential beneficial effects occur are not fully known. Yet, there is promising preliminary evidence that deliberate practice may improve outcomes (Chow et al., 2015; Clements-Hickman & Reese, 2020; Goldberg et al., 2016a; Hill et al., 2020a; Mahon, 2022; Nurse et al., 2024; Rousmaniere, 2019; Westra et al., 2020). Small scale randomized controlled trials of deliberate practice interventions for therapists suggest it is possible to improve intrapersonal skills, even after a brief training (Larsson et al., 2023; Olsson et al., 2024). Within the context of MCO training for psychotherapists, an example of deliberate practice would be rehearsing potential responses to a client's comment about their ethnic background, and receiving feedback afterward from a supervisor with MCO expertise. As described in the vignettes below, psychotherapists could practice how they might respond to a client recalling a microaggression they experienced in their workplace.

A persistent challenge in implementing deliberate practice in psychotherapy training, and one particularly germane to the development of MCO, is a lack of opportunities for practice and feedback (Rousmaniere et al., 2017). Traditional deliberate practice methods typically involve receiving feedback from a peer, supervisor, or another professional with more extensive experience in the skill being practiced. Although it is possible in some training environments to receive live observation and feedback (e.g., in supervision with a supervisor comfortable with deliberate practice), relying on live supervision limits access (Barnett, 2011). Digital technology, which has been proposed as a method for increasing access to mental health care generally (Torous et al., 2019), may also be a means for increasing access to training opportunities for therapists. By practicing with an online training platform, therapists would have opportunities to

engage in repeated rehearsal away from the pressure of clinical supervision. Practicing MCO in this way may be particularly helpful, given the potential risks of microaggressions for therapists attempting to initiate cultural conversations with actual clients prior to developing their MCO (Bugatti et al., in press; Williams, 2020; Yeo & Torres-Harding, 2021).

In recent years, audiovisual technology has been developed for the purpose of deliberately practicing psychotherapy skills (Elliott et al., 2018; Murphy et al., 2019). During the initial development phase of health technologies, it can be important to evaluate key aspects of the tool's utility. This may include testing (a) feasibility, defined as the effectiveness and sustainability of the operational aspects of engaging with the tool, or how the tool is being delivered, (b) usability, defined as users' experience operating the tool or device, and (c) acceptability, defined as participants' willingness to use the tool (Bowen et al., 2009; Ginsburg et al., 2016).

The current study involved the development and initial testing of a self-guided, web-based deliberate practice tool for developing MCO – MCO Deliberate Practice Online (MCO-O). The key characteristic of the tool is providing clinicians an opportunity to practice responding to challenging client situations and to provide feedback to support further practice and skill acquisition. The deliberate practice videos used in this study can be viewed on the Sentio Innovation Lab website: <https://www.sentio.org/innovation>. This project was developed within the Sentio Marriage and Family Therapy masters program, a new 20-month hybrid online and in-person graduate program that emphasizes personalized and intensive skill-development and mentorship through deliberate practice.. This graduate program is the first to our knowledge that systematically integrates deliberate practice skill building into every course and class meeting. The Sentio pedagogy was developed in response to calls for increased experiential methods in

therapist training (e.g., Anderson & Perlman, 2020; Boswell, Constantino, & Goldfried, 2020; Norcross & Karpiak, 2017; Wampold et al., 2019) and data from recent studies that suggest deliberate practice training may outperform “training-as-usual” methods for clinical skills acquisition (for reviews, see Mahon, 2022, Nurse et al., 2024, and Vaz & Rousmaniere, 2024). Here we describe elements of MCO-O and results from offering MCO-O to the psychotherapy community. We evaluate the feasibility of sharing the tool through psychotherapy listservs and an MCO webinar, the usability of the tool based on participants’ feedback, and acceptability of the tool based on rates of repeated use.

Method

Participants and Procedure

Participants were recruited through emails that were sent to listservs associated with psychotherapist organizations, including APA divisions, the Society for Psychotherapy Research, the Society for the Exploratory of Psychotherapy Integration, as well as informal networks. Several authors hosted a webinar introducing the tool on October 20th, 2020. Webinar participants were also encouraged to share the website with colleagues. Study procedures were approved by the University of Wisconsin–Madison Institutional Review Board.

All visitors to the website were required to enter a name and email address. However, website users were given the option of additionally providing their consent for using their data for research purposes. Participants providing their consent were asked to provide basic demographic information. Participants’ email addresses were used to identify instances of repeated visits. The website did not explicitly request that participants use the tool repeatedly; rather, the focus of this research was on the naturalistic usage of the website. Between the start of the study period (October 16th, 2020) and when data collection was stopped (May 12th, 2021),

287 unique participants visited the website, provided their consent, and completed the demographic form. The average participant age was 37.48 years ($SD = 12.52$, range = 19 to 77). The sample was predominantly female (71.8%, $n = 206$), with 26.1% ($n = 75$) identifying as male, 1.4% ($n = 4$) as non-binary, 0.3% ($n = 1$) as queer, and 0.3% ($n = 1$) not reporting gender identity. The sample was predominantly non-Hispanic White (77.0%, $n = 221$), with 10.1% ($n = 29$) identifying as Asian, 3.8% ($n = 11$) as Latinx, 3.8% ($n = 11$) as non-Hispanic Black, 2.8% ($n = 8$) as multiracial, 0.7% ($n = 2$) as Indigenous, and 1.7% ($n = 5$) not reporting race/ethnicity. Slightly less than half of the sample (45.6%, $n = 131$) were trainees and 23.3% ($n = 67$) were assigned to use the website by an instructor or supervisor. The remainder of the sample (54.4%) were not currently trainees but had some clinical background (e.g., were practicing clinicians). Participants came from various training backgrounds, with 38.0% ($n = 109$) with doctoral training in clinical psychology, 17.8% ($n = 51$) with masters-level training in counseling, 11.5% ($n = 33$) with doctoral training in counseling psychology, and the remainder reporting training in school psychology, marriage and family therapy, social work, medicine, or other areas.

Research Team

The qualitative data collected in this study was analyzed by one doctoral student (34-year-old African American and European American cisgender woman) and one faculty member (40-year-old European American cisgender man) in counseling psychology. These two members of the research team have clinical and research expertise in the area of multicultural orientation in the context of psychotherapist training and the use of deliberate practice in clinical training. Prior to coding the qualitative data collected in this study, the two team members discussed their biases about the study. The purpose and nature of the qualitative data collection was exploratory, thus the team members did not develop explicit hypotheses.

Intervention

The MCO-O is based on deliberate practice principles, and its design was inspired by similar interventions that focus on deliberate practice of facilitative interpersonal skills (Anderson et al., 2009). Instead of practicing basic interpersonal skills, MCO-O challenged participants to practice conversations containing cultural content. MCO-O included three levels of difficulty: explicit (easiest), implicit (moderate), and interpersonally explicit (hardest). Explicit vignettes involved clients' reporting overt experiences of racism occurring in their life (e.g., explicitly racist comments from co-workers about "people like you"). Implicit vignettes involved experiences with more ambiguous experiences of racial microaggressions (e.g., significantly delayed restaurant service in an otherwise not busy restaurant). Interpersonally explicit vignettes involved exploring race and racism within the therapy relationship (e.g., asking therapist if they have experience working with racial trauma). The deliberate practice videos used in this study are available for use for teaching, clinical training, and research purposes, for free at the Sentio Innovation Lab website <https://www.sentio.org/innovation>. An introductory video provided a brief demonstration instructing participants to watch a video of a client sharing culturally relevant material, and to subsequently respond (unrecorded) as if the participant were the therapist. The first video was implicit, or the second level of difficulty. An example of an implicit video is of a heterosexual, Black / Ethiopian American man who shares that his supervisors at work do not assign him to certain projects because they do not want him speaking in front of clients (Supplemental Materials Figure 1a). After watching the video and responding, participants were asked to rate the difficulty of the experience. Specifically, they rated how present they felt while watching (from "very present" [1] to "totally drifted away" [10]), their subjective assessment of difficulty ("too easy" [1 to 4], "good difficulty" [5 to 8], "too hard" [9

to 10]), and whether they experienced reactions associated with a good level of difficulty (e.g., “manageable anxiety,” “looking away”) or too high a level of difficulty (e.g., “severe or overwhelming anxiety,” urge to “give up”).

Participants were then given another opportunity to practice MCO, and the level of difficulty of the second video was based on how the participant rated the first. If they reported any reactions indicating a high level of difficulty, subjectively high difficulty, or difficulty staying present (≥ 8 out of 10), they were given an easier video (i.e., an explicit example if implicit was too hard). An example of an explicit video is of a queer, Black woman who shares about a racist comment that a friend made (Supplemental Materials Figure 1b). The client explains that she had dropped her phone recently and the screen had cracked, and when the friend saw the phone, the friend said, “You’re so ghetto!” The client would like to talk to the friend about the comment, but is concerned it will negatively impact the dynamic within their friend group.

If the participant reported subjectively low difficulty, no difficulty staying present (≤ 3 out of 10), and did not report reactions associated with a good level of challenge, they were given a harder video (i.e., an *interpersonally* explicit example if implicit was too easy). An example of an interpersonally explicit video is of a heterosexual, Latinx/Greek woman client who shares that her former therapist spoke openly about her biases regarding other cultures, and assumed the client shared the same biases (Supplemental Materials Figure 1c). The client in this video asks the therapist directly if it would be okay to discuss biases in therapy together. If they reported reactions indicating a good level of difficulty and rated presence in the middle range (>3 and <8) and subjective difficulty as “good difficulty,” they were given a video of the same difficulty level (i.e., another implicit video if first video was implicit).

The purpose of this sequence was to provide a customized experience of DP, wherein the level of difficulty was appropriate to the current skill level of the therapist. After three videos, the training ended, and participants were given feedback. This feedback consisted of a video in which one of the developers of MCO-O, also seen in the introductory video, speaks directly to the participant and provides recommendations on next steps based on the self-assessments the participant reported. For example, if the participant rated the last video as too difficult based on the decision rules described above, they were encouraged to get supervision and individualized coaching on this topic. If they rated the last video as moderately difficult, they were encouraged to continue with deliberate practice. If they rated the last video as too easy, they were encouraged to try a more difficult video. Participants were then invited to offer feedback to the research team about their experience using the website.

Measures

The main aims of this study were to measure feasibility, usability, and acceptability of MCO-O. We operationalized feasibility as our ability to recruit participants to use the site through the advertising methods described above. Usability was evaluated in part through coding of participants' qualitative responses to a feedback form provided at the end of the website inviting them to "Please provide any comments you have about this program." In addition, participants completed a net-promoter item (Reichheld, 2003) asking them to rate how likely they were to recommend the website to a friend or colleague on a 7-point Likert-type scale (1 = not at all likely, 7 = very likely). Responses were categorized as detractors (low ratings), passively satisfied (middle range), and extremely satisfied (high ratings) based on Reichheld's (2003) guidelines. Acceptability was operationalized as participants' use of the MCO-O site including how much of the site they viewed as well as whether they returned to use MCO-O

repeatedly. In addition, assessment of acceptability was provided through participants' qualitative responses to the qualitative feedback item noted above.

Data Analysis

Quantitative Data

Descriptive statistics were calculated to evaluate quantitative aspects of feasibility, usability, and acceptability. We also examined correlations between participant characteristics and these quantitative metrics. A multiple regression analysis was used to examine potential confounding between participant characteristics.

Qualitative Data

Participants' qualitative responses were analyzed using thematic analysis, as defined by Braun and Clarke (2012). Thematic analysis is a method of identifying and organizing themes that emerge from a qualitative data set of natural language, with the goal of understanding what is common about the way participants discuss or write about a particular topic (Braun & Clarke, 2012). Through an iterative process of inferences, data can be analyzed by identifying patterns and developing a sense of the whole phenomenon as informed by those patterns (Levitt et al., 2018). This method offers a systematic and consistent approach to analyzing and including conceptual data in research findings. Participants' responses to the qualitative prompt "Please provide any comments you have about this program" were examined for themes regarding usability and acceptability of MCO-O. Two researchers familiarized themselves with the data, generated initial codes, and named and defined broader themes.

Transparency and Openness

This article follows the JARS reporting standard (Levitt, 2018). The deliberate practice videos used in this study can be accessed through the Sentio Innovation Lab website

<https://www.sentio.org/innovation> De-identified data and analysis code are available from the corresponding author upon request. This study was exploratory and the analysis plan was not pre-registered.

Results

Quantitative Results

Feasibility

A total of 287 unique participants visited the MCO-O website following recruitment efforts. Given the relatively modest recruitment efforts, including emails to four listservs and a single webinar (with these efforts combined estimated to have reached approximately 2,000 individuals), this response was considered indicative of high feasibility. That is, participants were interested in and able to access the MCO-O website. Additionally, most participants (76.3%) used the website without being assigned to do so (0.3% of participants did not indicate whether or not they were assigned to use the website).

Usability

Qualitative indicators of usability are discussed below. A minority of the sample (29.6%, $n = 85$) completed the net-promoter item at the end of the MCO-O website. Among those completing the item, the average rating was 5.41 ($SD = 1.73$, range = 1 to 7). When rescaled to 0 to 10 for categorization based on Reichheld's (2003) guidelines, the mean score was 7.5 ($SD = 2.72$) with 41.2% ($n = 35$) categorized as extremely satisfied, 28.2% ($n = 24$) as passively satisfied, and 30.6% ($n = 26$) as detractors. As discussed below, these ratings should be interpreted cautiously given the low rates of completion of this item.

Acceptability

Qualitative indicators of acceptability are discussed below. Participants collectively visited the website 373 times during the study period. The average number of visits to the MCO-O website was 1.30 ($SD = 0.98$, range = 1 to 14). Of the 287 participants who completed the consent and demographic form, a minority (18.8%, $n = 54$) visited the MCO-O site more than once. Participants viewed an average of 1.83 video vignettes ($SD = 1.84$, range = 0 to 12). Approximately half (51.2%, $n = 147$) of participants viewed two or more video vignettes, while 35.9% ($n = 103$) viewed no video vignettes (participants could discontinue the website at any point, including prior to viewing the video vignettes) and 12.9% ($n = 37$) viewed only one video vignette. When examined per visit (participants could have multiple visits), participants viewed an average of 1.40 video vignettes ($SD = 1.36$, range = 0 to 3).

Correlates of Usability and Acceptability

Table 1 reports correlations between participant demographic characteristics (age, gender, race/ethnicity), trainee status, and whether MCO-O was assigned with quantitative metrics of usability (net-promoter item) and acceptability (two or more visits, total number of visits, total number of videos viewed). Age was negatively correlated with usability and the number of videos viewed. Female participants, trainees, and those assigned to use the website viewed more videos. None of the participant characteristics were associated with whether they returned to use the site more than once or the number of visits. Given the possibility that age and having MCO-O assigned may have been confounded, we conducted a multiple regression analysis including all five participant characteristics as predictors of the number of videos watched. The variance inflation factors were well below commonly used cutoffs (<2 ; Cohen, Cohen, West, & Aiken, 2003). In this model, only having MCO-O assigned with associated with the number of videos watched ($\beta = .18$, 95% confidence interval = [.04, .33], $p = .015$).

Qualitative Results

Forty participants provided responses to the qualitative feedback item. Three major themes emerged regarding the usability and acceptability of MCO-O: Positive Feedback, Critiques, and Confusion. As responses often addressed both aspects of the website itself (i.e., usability) as well as how acceptable they found the task of practicing MCO in this format (i.e., acceptability), responses were not separated by usability versus acceptability. Exemplar responses are provided below. All identifying features about participants have been omitted to protect anonymity.

Positive Feedback

Many participants indicated that they found the MCO-O concept to be promising, the website usable, and were glad it was being developed for psychotherapist training purposes.

I really appreciated the case examples and felt myself nodding as the client shared about their experience...I feel that I would benefit from further practice videos and will send this out to other clinicians in training. Thank you for this valuable module. (Participant 18)

I was really excited about this website where you can do deliberate practice exercises, and I am happy that you started such a website. After some improvements it will be a great tool to practice! (Participant 22)

I loved having the opportunity to practice my responses, even if it was just for myself without getting direct feedback on those responses. (Participant 29)

I enjoyed this program. It felt strength-based, with encouragement to push oneself to improve. I thought these scenarios were realistic, which I also appreciated. (Participant 41)

A few participants shared their appreciation for the tool from the perspective of an educator or experienced clinician:

Really intriguing. I ended up here looking for resources to train students in psychology. So, yes, I have had these kinds of conversations, and am actively trying to teach others how to have them. (Participant 13)

What I can say is that the three scenarios engaged me in a real way, elicited responses I experience regularly as a therapist. (Participant 33)

Critiques

Some participants reported potential limitations or shortcomings of learning MCO in this format and the MCO-O website, such as lack of interaction with a real supervisor and lack of examples of what a “good” response might be.

I like the approach, but less experience[d] therapists would benefit from individual feedback and deep discussions about their own biases, privilege and awareness of their own identities as well as the interplay of those identities with their clients. (Participant 5)

It's odd to respond to a client when there is no one assessing what you are saying...If you are basing your feedback purely on my feedback, I don't know how accurate your feedback can be. It would help me more to get direct feedback from my response than my judgment of the difficulty of the exercise. (Participant 19)

There needs to be some demonstration of what a 'good' response would be - otherwise one is just practicing in a vacuum. I'd like to use something like this with my social work students but without some exemplars it would not give them enough of an idea to encourage learning to practice in an important, but challenging, area. (Participant 27)

Confusion

The third major theme that emerged from the qualitative data was confusion regarding instructions on completing the MCO-O process, what was meant by the term “feedback,” how to select videos oneself, and technical issues with the website, including not receiving feedback.

I think I may have clicked away from the feedback, or I didn't realize that it wasn't actually provided in this research format. (Participant 24)

I'm not quite sure what you mean by feedback...I don't think the program gave me feedback, it just gave me situations to put myself in which I enjoyed. (Participant 32)

I was a little confused about what I was supposed to do after the video clip. I think I was supposed to just respond out loud or in my head to the client, but I was expecting to have to write something or respond in some way through the website. I think it would be helpful to clarify that somewhat. (Participant 38)

Discussion

MCO has increasingly been recognized as a critical component of psychotherapist training (Owen et al., 2011; Quinn, 2013), however, limited opportunities for deliberate practice of MCO are available. This study was an initial feasibility, usability, and acceptability study investigating a self-guided MCO deliberate practice website. In regard to feasibility, we considered the response to our relatively modest recruitment efforts a positive indication of feasibility (although this interpretation is subjective). Evidence for usability was mixed. Among the minority of participants who rated their likelihood of recommending the website to a friend or colleague, average responses were in the passively satisfied range and a sizable proportion of respondents (30.6%) were categorized as detractors. Moreover, participants reported qualitative data indicating difficulties with usability such as technical challenges with the website itself and confusion, especially in regard to the feedback. Importantly, these estimates of usability are

likely positively biased, given that the majority of participants accessing the site did not complete the feedback items at the end of the website. This is an instance of missing data that are likely missing not at random (MNAR; Goldberg et al., 2021a; Graham, 2009).

Both quantitative and qualitative data related to acceptability were also mixed. It is particularly notable that approximately one out of three participants (35.9%) did not persist within the website to watch even the first client video vignette. Moreover, only 18.8% visited the MCO-O site more than once. Given the notion that deliberate practice requires repeated, ongoing practice (Ericsson & Lehmann, 1996) it is discouraging that so few participants returned to practice a second time. However, it is important to contextualize these acceptability metrics within the broader mobile health literature. Indeed, evidence for high and rapid attrition from a self-guided intervention aligns with well-established trends in mobile health: while these approaches tend to be highly scalable and cost-effective, rapid disengagement is the rule rather than the exception (Eysenbach, 2005; Linardon & Fuller-Tyszkiewicz, 2020).

Within the overall modest usability and acceptability data, there was some evidence for variability. In particular, younger participants were more likely to say they would recommend the tool to a friend or colleague. While several participant characteristics were associated with watching more videos, having MCO-O assigned was the only predictor associated with watching more videos when all participant characteristics were examined in the same model.

The current findings provide a somewhat ambiguous picture regarding the potential future for technology-based deliberate practice for MCO. The modest usability and low acceptability seen in the current study may well have been due to limitations of the website itself, many of which were pointed out by participants in the qualitative data. For example, some participants expressed confusion regarding where or how to select videos and some reported that

they did not receive feedback and/or were unsure what the term “feedback” referred to. Furthermore, some participants described having technical issues of video lags or videos not playing at all. A more sophisticated and more functional version of MCO-O could certainly be created. The current MCO-O was intended to test proof-of-concept and was built using a limited budget.

Future efforts could involve industry standard user experience testing, assuring that the website would be functional across a wide range of devices and browsers and provide much more advanced feedback (Torous et al., 2019). Such testing could include observing participants while they interact with the tool and share their experience (e.g., aspects that they find attractive, confusing, helpful, etc.). It would be important to conduct such tests with a wide range of participants who vary in key demographic characteristics that may impact user experience such as age, trainee status, and race/ethnicity. Ultimately, machine learning methods may be particularly helpful for providing feedback based on participants’ actual responses (as has been accomplished with some accuracy for interpersonal skills generally; Goldberg et al., 2021b; Goldberg et al., 2024) rather than their self-report, although creating such a tool would involve a substantial investment of resources. Nonetheless, such a tool could implement key elements of deliberate practice (i.e., targeted feedback based on performance; Ericsson, 2008; Rousmaniere et al., 2017) that would be more sophisticated and participant specific than the feedback that was provided in the MCO-O. Recent advances in the use of large language models for natural language processing (e.g., ChatGPT) highlight the potential of machine learning. These models’ ability to meaningfully interact with novel user input suggests that computerized tools for psychotherapy training may well be on the horizon (Aafjes-van Doorn, et al., 2021; Creed et al., 2022; Imel et al., 2019; Kasneci et al., 2023). Over the last several years, machine learning

methods have been successfully used for extracting meaningful features of text relevant to various populations and settings, including couples therapy (Black et al., 2013), university counseling (Kuo et al., 2023), motivational interviewing (Xiao et al., 2016), cognitive behavioral therapy (Flemotomos et al., 2018), and post-traumatic stress disorder (Shiner et al., 2012).

Another plausible reason for low acceptability would be the challenges inherent in self-guided deliberate practice. Effective deliberate practice is expected to be effortful, which may make it challenging to do on one's own. Consistent with this possibility, we saw evidence that those who had been assigned to use MCO-O watched more videos than those not assigned, although they were not more likely to use the site repeatedly. It may turn out that accountability and closer observation, which were also mentioned in the qualitative data as suggestions for improving use and implementation of MCO-O, play a crucial role in acceptability. Given several participants found the videos compelling, an alternative to MCO-O could be simply a library of MCO-relevant videos that could be used for practice within the context of formal training (e.g., graduate-level multicultural course or clinical supervision). While losing the self-guided element, such a library could nonetheless retain the opportunity for deliberate practice (Liu & Herndon, 2022).

This study has several important strengths and limitations. Key strengths include evaluation of a tool designed to support developing an important orientation in psychotherapy and the use of a highly scalable self-guided format. Limitations include limited resources available to develop a more advanced tool, high attrition from the study which likely biased feedback provided by participants at the end of the website, and limited quantitative and qualitative assessment. Future studies with larger budgets for software development could utilize web analytics to identify unique visitors to provide more information about feasibility and

acceptability. As this study was intended to be a test of proof-of-concept, the conversations practiced by participants were limited in scope to discussions of race and ethnicity, with the hope that eventually MCO-O will be expanded to include opportunities to explore other aspects of identity (e.g., gender, religion, nationality, etc.). Deliberate practice of talking about one aspect of identity may generalize to improved skills in discussing other aspects; however future work is needed to determine whether this is indeed true. We also recruited from the general population of psychotherapy trainees and practicing psychotherapists, without focusing on the experience of participants who may have been particularly well equipped to provide informative feedback. A future study could gather responses specifically from instructors of multicultural counseling courses who may be able to provide more targeted feedback on the tool as well as ideas regarding how it may be used in training. Future studies could also expand the evaluation of tools like MCO-O through the use of additional standardized measures of usability (e.g., System Usability Scale, mHealth App Usability Questionnaire; Bangor et al., 2008; Zhou et al., 2019) and semi-structured interviews with participants who engaged with and did not engage with the tool. Smaller user experience studies designed to improve tools like MCO-O could be valuable both for product design as well as for informing efforts by other researchers and clinicians working in this area.

The use of technology for deliberate practice in psychotherapy training is a topic of growing interest in the field (Elliott et al., 2018; Murphy et al., 2019) and MCO may be a target particularly amenable to this approach. This initial feasibility, usability, and acceptability study is an important initial step toward evaluating the possibility of building tools that are highly scalable and potentially valuable for supporting ongoing clinical training. While with some important limitations, we hope the current study and the MCO-O website help guide and

motivate further work using technology to improve clinical training and ultimately the mental health of the clients we serve.

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Table 1*Correlates of Usability and Acceptability Metrics*

	Net-Promoter	Return	# Visits	# Videos
Age	-.26*	-.06	-.04	-.19**
Female gender	.00	.08	.09	.14*
Non-Hispanic White	-.10	.06	-.02	.07
Trainee	.19	-.01	.05	.14*
Assigned	.14	-.03	.00	.20***

Note. Net-Promoter = Reichheld's (2003) net-promoter item (i.e., likelihood of recommending

the website to a friend or colleague); Return = coded as 1 if participants used the MCO-O

website two or more times; # Videos = number of client video vignettes viewed by participant in

total; Assigned = use of the website was assigned by an instructor or supervisor. * $p < .050$, ** $p <$

$.01$, *** $p < .001$