

# The Effect of a Deliberate Practice Training on the Delivery of Empathetic Interventions in Clinical Psychology Master Students

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## Abstract

Deliberate practice (DP) has been presented as an answer for improving therapists' performance. However, there is a shortage of research on the effect of DP on the development of psychology students' therapeutic skills. Understanding how to facilitate students' transfer of knowledge to therapeutic skills through practice approaches could highly benefit training institutions. The objective of this study was to analyze the effect of a DP training in the quality of empathic interventions of clinical psychology master students, in comparison to traditional "training as usual" (TAU). A quantitative study was conducted, where participants ( $N = 42$ ) were randomly assigned between DP and TAU conditions. During 4 weeks, participants engaged in 3 online training sessions and submitted 8 empathic responses in *Theravue* in 4 different evaluation moments. Participants in the DP group showed significant improvement in the quality of empathic interventions, compared to TAU ( $p = 0.021$ ;  $p = 0.045$ ). Within the DP group, there were not significant differences in empathic skills throughout evaluation moments ( $p = 0.122$ ). There was a positive correlation between solitary practice and quality of empathic interventions in the last evaluation moment ( $r = 0.473$ ;  $r = 0.468$ ). In the TAU condition, there was an initial increase in the quality of empathic interventions, later followed by a significant decline ( $p = 0.001$ ). Findings are consistent with DP literature, further supporting the positive effect DP might have in the development of essential clinical skills for psychology students. The current study contributes to the scarce scientific evidence about DP's effect on clinical psychology students, who often struggle in the process of transferring theoretical knowledge to clinical practice.

## Keywords

deliberate practice, psychotherapy training, empathy, psychology student

## Introduction

The ability to transfer theoretical knowledge to clinical practice is a key challenge for therapists. Previous research indicates that traditional training methods, based on expository lectures on theoretical concepts and literature, have been used to facilitate the development of therapeutic skills. More recently, deliberate practice (DP) has been implemented to improve therapists'

performance (Miller et al., 2020b). DP was introduced by K. Anders Ericsson as a solution for attaining expertise in any profession (Ericsson & Pool, 2016). DP can be described as personalized and highly structured activities, designed with the help of a coach, which allow for the improvement of specific aspects in individual performance (Clements-Hickman & Reese, 2020; Ericsson & Lehmann, 1996;

Ericsson & Pool, 2016). DP requires individual learning goals, guidance from a coach, immediate and continuous feedback, and successive refinement of performance (Chow, 2017; Chow, 2018; Clements-Hickman & Reese, 2020; Miller et al., 2018; Miller et al., 2020a; Miller et al., 2020b; Rousmaniere, 2017; Vaz & Rousmaniere, 2021). The first meta-analysis relating DP to performance concluded that only 12% of the variance in performance was explained by this training (Macnamara et al., 2014). This variance was later adjusted to 16%, corresponding to a correlation of .40, which represents a significant association—enough to recommend DP as a method for improving performance (Miller et al., 2020a). Today, the literature widely suggests that high involvement in DP leads to better performance (Miller et al., 2008; Miller et al., 2018).

Despite evidence indicating the effectiveness of DP for improving performance and maintaining gains in other fields, such as sports and nursing, DP has received limited attention in the area of psychotherapeutic skills training (Chow et al., 2015; Ericsson & Pool, 2016). According to Rousmaniere (2017), the major distinctions between DP and other psychotherapy trainings are as follows: skills are divided into small parts; practice is prioritized; and it is a solitary practice. It also provides opportunities to train in contexts similar to real practice, allowing for more spontaneous transference of knowledge (Vaz & Rousmaniere, 2021).

As DP's appliance in psychotherapy is recent, there is a shortage of scientific evidence about its effect on the field (Clements-Hickman & Reese, 2020; Shukla et al., 2020). However, recent studies have emerged to address this gap. The pioneer study by Chow et al. (2015) showed that the amount of time therapists dedicated to solitary DP outside of clinical context had a significant relationship with patient outcomes, and that the most effective therapists engaged in DP about 2.8 more hours per week. Subsequent studies have indicated that DP has a positive effect in developing both therapists' skills and clinical outcomes (Barrett-Naylor et al., 2020; Di Bartolomeo et al., 2020;

Goldberg et al., 2016; Hill et al., 2020; Muran et al., 2018; Nikendei et al., 2019; Perlman et al., 2020; Shukla et al., 2020; Westra et al., 2021).

DP research in psychotherapy is mainly focused on experienced or young therapists (Hill et al., 2008; Pascual-Leone et al., 2015). There is a lack of studies involving psychology students, which is when they first come into contact with clinical practice (Pascual-Leone et al., 2015). Educational programs in psychology often focus solely on theoretical knowledge, making it difficult for young therapists to bridge the gap between theory and practice (Rosén, 2019). Thus, studies should center on the educational context, by researching how DP can help reduce this gap. The research began with Hill et al. (2008), who applied a skills training program and, 15 weeks later, concluded that psychology students had higher confidence and perceived self-efficacy. Similarly, Pascual-Leone et al. (2015) showed that 13 weeks of a skills training program led to a significant improvement in several skills among psychology students. Later, Anderson et al. (2019) administered a brief training program based on DP principles to students interested in helping professions and found that the DP group had higher levels of Facilitative Interpersonal Skills (FIS).

In 2020, Barata conducted a study examining the effects of DP on the quality of empathic interventions among undergraduate psychology students. Comparing a "training as usual" group and a DP group, the latter showed significant improvement in the quality of empathic responses after two DP workshops (Barata, 2020). The following year, a study analyzed graduate psychology students who engaged in DP for an academic year (McLeod, 2021). Most students perceived DP as valuable, but also challenging, demanding, and time-consuming. DP was also perceived as a vehicle to simplify the complexity of clinical practice (McLeod, 2021). More recently, Newman et al. (2022) divided a sample of graduate psychology students into an online DP training group and a control group, finding that participants in the DP condition significantly improved their communication skills and self-efficacy, and

reported high satisfaction with the training. These preliminary studies reveal promising results from DP training in psychology students, invoking a need to rethink current learning methods (Barata, 2020). Integrating DP does not imply abandoning other learning strategies, but rather calls for creating structures that support DP engagement outside academic contexts (McLeod, 2021).

DP training should focus on skills that significantly affect clinical outcomes and are common across psychotherapeutic approaches (Miller et al., 2018; Perlman et al., 2020; Tracey et al., 2014). Since facilitative interpersonal skills have been shown to play a decisive role in clinical outcomes (Anderson et al., 2009) and have been recommended as primary target for DP training in psychotherapy (Rousmaniere, 2017), this study chose empathy as the focus for DP training. The present study aims to analyze the effect of DP training versus traditional training on the quality of empathic interventions among clinical psychology master's students. Traditional training ("training as usual" – TAU) focuses on expository lectures on theoretical concepts and literature, without opportunities for practical application. To achieve this goal, a randomized controlled trial (RCT) was conducted, and during four weeks, participants from both groups recorded empathic answers to two weekly videos simulating events of therapeutic sessions. Additionally, participants engaged in three weekly online training sessions (DP or TAU).

Hypotheses were formulated based on existent literature. The quality of empathic interventions was evaluated using the *Measure of Expressed Empathy* (MEE) scale (Watson, 1999). First, it was hypothesized (H1) that by the end of the study, participants in the DP group would show a significant improvement in the quality of empathic interventions compared to the TAU group. Second (H2), it was hypothesized that participants within the DP group would progressively improve the quality of empathic interventions with each weekly training session. Third (H3), it was hypothesized that participants in the TAU group would initially improve the quality of empathic

interventions and then stabilize. Lastly, it was hypothesized (H4) that the quantity of solitary practice in the DP condition would positively affect the quality of empathic interventions. The current study contributes to the still scarce scientific evidence regarding the application of DP in psychotherapy, specifically within the population of psychology students. Additionally, it ponders the possibility of incorporating DP into the academic context, considering the difficulties young therapists face in transferring theoretical knowledge to clinical practice.

## Method

### Overview and Design

The present study is a randomized controlled trial (RCT), in which participants were randomly assigned to either a control group ("training as usual"/TAU) or an intervention group (deliberate practice/ DP). Data were collected at four different time points using the *Theravue* platform (November–December 2020), with each collection spaced one week apart. The multiple time points allowed for tracking participants' progress over time. Participants' responses were rated independently by two master's students, who were blind to the study's conditions. To ensure interrater reliability, intraclass correlation coefficients (ICC) were calculated. The average ICC for the eight videos was .817, with a 95% confidence interval [CI: .772, .854] ( $F(1,34) = 5.471, p < .001$ ). According to Koo and Li (2016), ICC values between 0.75 and 0.9 indicate good reliability, confirming that there was strong agreement between raters regarding the participants' empathy scores.

### Participants

All participants held a bachelor's degree in psychology, and at the time of the study they were completing a master's degree in clinical psychology, or they had just finished the program in the 2019/2020 academic year. Participants were recruited from three Portuguese universities. The initial sample consisted of 42 participants, aged 21 to 43 years

( $M = 24.16$ ,  $SD = 3.766$ ). The majority were female (39 women, 3 men) and Caucasian (97.6%). Of these participants, 32 (76.2%) were pursuing a master's degree in clinical psychology, and 10 (23.8%) had already completed that degree. Additionally, 24 participants (57.1%) were in a curricular internship (a variable-length placement that occurs during the final year of the master's program), and two participants (4.8%) were in a professional internship (a one-year post-master's internship required to enter the Ordem dos Psicólogos Portugueses, OPP). During the study, seven participants dropped out, leaving a final sample of 35. One possible explanation for this attrition is the discovery of a missing fourth evaluation point, which was essential to assess the effect of the final training session. Once the issue was identified, two more videos were added to *Theravue*, and participants were informed about the adjustment. This study was approved by the Research Ethics Committee from Instituto Universitário de Ciências Psicológicas, Sociais e da Vida (ISPA).

## Materials

The informed consent form, sociodemographic survey, and 'logbook' were administered using Qualtrics software, XM (November, 2020). This study utilized *Theravue*, an online DP platform for interpersonal skill training designed for psychotherapy instructors and students and based on DP research aimed at improving therapists' effectiveness and clinical outcomes. In *Theravue*, participants first watch a brief pre-recorded video in which an actor plays the role of a patient and simulates therapeutic sessions scenarios. Participants then record their responses as psychologists, using a webcam, with the option to re-record their responses (Theravue, 2021). For this study, participants were specifically instructed to provide empathic interventions. Once finalized, the responses were submitted directly on the platform to be later evaluated by a course instructor or teaching assistant (Theravue, 2021).

In this study, eight pre-recorded videos were used on *Theravue*. *Video A* (47 seconds) depicted a male client expressing frustration in

his relationship with his sister. *Video B* (68 seconds) featured a male client describing his anxiety symptoms, which were affecting his daily activities. *Video C* (22 seconds) presented a female client concerned about her family's opinions on her. *Video D* (100 seconds) featured a female client who felt discouraged in activities, such as sports and school, which once brought her joy. *Video E* (59 seconds) involved a female client suffering from post-traumatic stress and feeling misunderstood by her husband. *Video F* (69 seconds), *Video G* (68 seconds) and *Video H* (17 seconds) portrayed female clients dissatisfied with their psychotherapeutic processes, each for distinct reasons.

The scale used to rate participants' empathic responses was *Measure of Expressed Empathy* (MEE) (Watson, 1999). The MEE is an observer-rated measure that assesses therapists' verbal and non-verbal empathic behaviors by examining how consistently they exhibit them. It was designed for 5-minute segments, comprising 10 items rated on a 9-point Likert scale (0 = Never; 8 = All the time). For example, item 1 asks, "Does the therapist's voice convey concern?" If concern is expressed in the therapist's voice 50% of the time, it is rated as a 4. The final empathy score is the mean of the ratings from all 10 items. The scale's internal consistency ( $\alpha = .88$ ) is high, and its construct validity ( $r = 0.66$ ,  $p < 0.01$ ), as measured by Barrett-Lennard Relationship Inventory (BLRI; Barrett-Lennard, 1962), is significant (Malin, 2016). In this study, item 5 was excluded because dyadic interaction could not be assessed. After excluding item 5, internal consistency was calculated for each video, yielding  $\alpha$  values between .93 and .97, indicating high reliability based on Pestana and Gageiro's (2008) criteria.

## Procedure

Data collection occurred during one month in the first semester of the 2020/2021 academic year. The study was advertised as an opportunity for clinical psychology students to learn about an intervention highly associated with positive clinical outcomes and to use an

online platform specifically designed for training psychotherapists. Participation was voluntary, and no rewards were offered. After registrations closed, participants were invited to a mandatory online meeting. The meeting began with a brief lecture on the importance of empathy for clinical outcomes. The study schedule was then explained, emphasizing the need for participants to respond to two weekly videos on *Theravue* and attend weekly online training sessions. Over the course of one month, participants recorded themselves and submitted responses for eight videos. They also attended three 90-minute online training sessions. Additionally, participants were informed they had to fill a logbook whenever they completed any homework that was given in training sessions. Detailed instructions on using *Theravue* and completing the informed consent and sociodemographic survey were provided. Participants were blinded to their type of training (e.g., DP).

After the meeting, participants received an email with credentials to access *Theravue*, along with instructions to self-record and submit responses to the first two videos before the initial training session. Participants were randomly assigned to groups, and no information was provided about the differences between them to maintain internal validity.

Training sessions for the DP group occurred via Zoom, with small groups of five to six participants to ensure personalized feedback. Sessions were undertaken by a certified DP coach. In these meetings, the coach invited participants to share their previously submitted responses, and then provided individual, tailored, and detailed feedback to each participant. Then, the coach assigned personal exercises that were beyond the participant's current abilities and designed to improve the given empathic interventions. Exercises addressed key therapist components such as attitude, voice, responsiveness and comprehension of the client's situation. It was also stressed that outside of the training sessions, the aforementioned exercises should be repeated at least three times for each video (solitary practice), and the experience registered

in a logbook. This solitary practice happened before submitting answers to two new videos. Sessions were built according to Rousmaniere (2017) criteria, with the exception of continuously assessing performance via client-reported outcome, given the study's specificities.

In the TAU group, Zoom sessions were led by a university lecturer who was also an experienced therapist with more than five years' experience. The aim of these sessions was to create an environment that would resemble the setting of traditional trainings. To achieve this, there was only one group of 19 participants and expositive methods were prioritized. During the sessions, the instructor shared literature about the concept of empathy and its importance in regard to clinical outcomes, approaching the therapist components also discussed in DP groups. Simultaneously, participants were encouraged to engage in debates, and further reading was recommended as homework. These reading add-ons should happen outside the sessions and the experiences recorded in the logbook before answering to two new videos on *Theravue*. In both groups, participants received weekly emails outlining key tasks, including video submissions, training sessions, and logbook completion.

The logbook was a brief questionnaire developed for two purposes: to encourage participants to reflect on the homework and to monitor engagement with the assigned tasks. In the DP group, questions revolved around practical exercises ("How satisfied were you with this training?"), while in the TAU condition, the focus was on the reading experience ("How important do you think this text is for the theme 'empathy in psychotherapy'?").

## Results

Analyses were conducted in SPSS Statistical Package version 27.

### Responses' Empathic Interventions Quality Between Groups

A repeated measures ANCOVA was conducted

to compare the effect of the type of training (DP or TAU) in the quality of empathic interventions (video 3, 5, and 7), while controlling the covariate “baseline level of empathy (video 1).” Levene’s test and normality checks were carried out and the assumptions met. There was a significant difference in the quality of empathic interventions [ $F(1, 32) = 5.90, p = 0.021$ ] between types of training, while adjusting for the baseline level of empathy. The Partial Eta Squared value ( $\eta^2 = 0.156$ ) indicated a small effect and suggests that 15.6% of the variance in the quality of empathic interventions was explained by the type of training. These results fully support the first hypothesis of this study, since participants in the DP group ( $M = 4.323, SD = 0.151$ ) showed a significant improvement on the quality of empathic interventions, when compared to TAU ( $M = 3.767, SD = 0.165$ ).

Another repeated measures ANCOVA was conducted to compare the effect of the type of training in the quality of empathic interventions (video 4, 6, and 8), while controlling the covariate “baseline level of empathy (video 2).” All assumptions were met, with the exception of the assumption of homogeneity for video 4 ( $p = 0.029$ ) and video 8 ( $p = 0.014$ ). There was a significant difference in the quality of empathic interventions [ $F(1, 32) = 4.35, p = 0.045$ ] between types of training, while adjusting for the baseline level of empathy. The Partial Eta Squared value ( $\eta^2 = 0.120$ ) represented a small effect, indicating that 12% of the variance in the quality of empathic interventions is explained by the type of training. These results further support the first hypothesis.

### Responses’ Empathic Interventions Quality Within Groups

A one-way within subjects (or repeated measures) ANOVA was conducted to compare the effect of DP in the quality of empathic interventions in video 1 ( $M = 3.99, SD = 0.68$ ), video 2 ( $M = 4.53, SD = 0.93$ ), video 3 ( $M = 4.26, SD = 0.95$ ), video 4 ( $M = 4.20, SD = 1.17$ ), video 5 ( $M = 4.75, SD = 0.95$ ), video 6 ( $M = 3.88, SD = 1.19$ ), video 7 ( $M = 4.29, SD = 0.99$ ), and video 8 ( $M = 4.07, SD = 1.04$ ) conditions.

There was not a significant effect of DP, Wilks’ Lambda = 0.45,  $F(7, 12) = 2.11, p = 0.122$ . These results suggest that there were no statistically significant differences in the quality of empathic interventions between the different evaluation moments within the DP group. These results did not support the second hypothesis of the study.

A one-way within subjects ANOVA was conducted to compare the effect of TAU in the quality of empathic interventions in video 1 ( $M = 3.74, SD = 0.90$ ), video 2 ( $M = 4.17, SD = 1.11$ ), video 3 ( $M = 3.45, SD = 0.81$ ), video 4 ( $M = 3.40, SD = 0.66$ ), video 5 ( $M = 4.16, SD = 1.06$ ), video 6 ( $M = 3.26, SD = 0.98$ ), video 7 ( $M = 3.48, SD = 0.88$ ) and video 8 ( $M = 3.03, SD = 0.50$ ) conditions. After verifying that the sphericity assumption had been violated, a Greenhouse-Geisser correction was applied. There was a significant effect of TAU, Greenhouse-Geisser =  $F(3.87, 58.10) = 6.42, p = 0.001$ . A post hoc analysis was conducted afterwards, revealing that there was a significant difference specifically in scores for video 3 ( $M = 3.45, SD = 0.20$ ) and video 5 ( $M = 4.16, SD = 0.27$ ) conditions ( $p = 0.033$ ); for video 5 ( $M = 4.16, SD = 0.27$ ) and video 6 ( $M = 3.26, SD = 0.25$ ) conditions ( $p = 0.012$ ); and for video 5 ( $M = 4.16, SD = 0.27$ ) and video 8 ( $M = 3.03, SD = 0.12$ ) conditions ( $p = 0.006$ ).

These last results suggest that the TAU condition had a significant effect on the four evaluation moments. More specifically, between video 3 and video 5 participants’ empathic interventions had an increase in quality, and between video 5 and video 6, and also between video 5 and video 8, the quality significantly decreased. The third hypothesis of this study was partially supported by these results, since initially the quality of empathic interventions increased in the TAU group, but then, instead of stabilizing, it decreased until the last evaluation moment.

### Solitary Practice Effect on the Quality of Empathic Interventions

A Pearson correlation was conducted to assess the relationship between the time participants spent in solitary practice, and the quality of

empathic interventions. Solitary practice for participants in the DP group happened in three different moments: before submitting answers to video 3 and 4; before answering video 5 and 6; and before responding to video 7 and 8. There was no correlation between the two variables, in regard to video 3 [ $r = -0.209$ ,  $n = 23$ ,  $p = 0.339$ ] and video 4 [ $r = 0.030$ ,  $n = 23$ ,  $p = 0.893$ ]. There was also no correlation between the two variables, in regard to video 5 [ $r = -0.213$ ,  $n = 23$ ,  $p = 0.330$ ] and video 6 [ $r = 0.022$ ,  $n = 23$ ,  $p = 0.920$ ]. Lastly, there was a positive correlation between the two variables, in regard to video 7 [ $r = 0.473$ ,  $n = 23$ ,  $p = 0.023$ ], and video 8 [ $r = 0.468$ ,  $n = 23$ ,  $p = 0.024$ ]. Overall, there was only a positive correlation between solitary practice and the quality of empathic interventions for the last evaluation moment (video 7 and 8).

## Discussion

The present study targeted clinical psychology master's students and aimed to analyze the effect of deliberate practice (DP) training on the quality of empathic interventions compared to traditional training ("training as usual"– TAU). A randomized controlled trial was conducted with an experimental (DP) and a control group (TAU) over four weeks. In addition to weekly online training sessions, participants recorded empathic responses to eight videos in *Theravue* at four different evaluation moments. As hypothesized, participants in the DP group showed a significant improvement in the quality of empathic interventions compared to those in the TAU group, while controlling for baseline empathy levels. Thus, the current study provides further evidence that DP may be more beneficial than TAU in developing essential clinical skills.

Although DP had a positive effect, results regarding the second hypothesis revealed that, contrary to expectations, there was no significant improvement in empathic interventions within the DP group across evaluation moments. Despite participants having higher empathic skills by the end of the study, no notable progression was observed after each training session. Two possible

explanations are offered for this. First, DP literature indicates that this training method is not associated with immediate results (Ericsson et al., 1993; Ericsson, 2006; Ericsson & Pool, 2016), emphasizing the importance of long-term engagement for its benefits to manifest (Ericsson et al., 1993). Additionally, DP requires continuous effort to improve performance (Miller et al., 2018; Rousmaniere, 2017; Vaz & Rousmaniere, 2021), suggesting that identifying incremental improvements in empathic interventions may require longer than the four-week period of the current study.

Second, the videos progressively increased in difficulty, as they became more confrontational towards the therapist and the therapeutic process, creating a more challenging environment for demonstrating empathy. Additionally, the content of the videos varied, which prevented practice effects and increased confidence that the results were due to the experimental manipulation rather than the repetition of the same activities (American Psychological Association, 2020). Participants faced new challenges in each video, which could not be solved by simply repeating previous responses. Although DP training provided participants with specific, individualized tools to improve empathic interventions, the novelty of the videos, coupled with the lack of standardized responses, may have hindered the display of significant differences in participants' performance between videos. However, these challenges more closely reflect real-world client-therapist interactions, engaging learners in more representative situations.

The findings partially supported the third hypothesis. Participants in the TAU group initially improved their empathic interventions as expected but then, instead of stabilizing the performance, there was a significant decline starting with video 5. This decline may also be attributed to the increasing difficulty of the videos and the inability to achieve successful responses through repetition. However, participants in the DP group, who faced the same challenges, did not show a similar decline. This suggests that DP and TAU have distinct

effects on the transfer of theoretical knowledge into clinical practice. While in the DP group, participants received individual feedback during the weekly training sessions, which allowed them to improve empathic interventions and be somewhat more prepared to face new challenges even with the increase of difficulty, participants in the TAU group did not receive that preparation.

The TAU condition was designed to closely resemble traditional training settings, which are a key component of continuing education (CE). CE is an ongoing process that allows psychologists to remain updated in terms of theoretical knowledge, but also to refresh clinical skills (American Psychological Association, 2015). However, CE frequently prioritizes theoretical knowledge and typically follows a passive learning format consisting of lectures, videos and discussions (Rousmaniere, 2017; Rousmaniere et al., 2017). Moreover, CE does not provide opportunities for personalized feedback or for participants to immediately practice what they have learned (Ericsson & Pool, 2016; Rousmaniere, 2017). While this format is effective for acquiring knowledge, its benefits for skill development and performance improvement remain uncertain (Rousmaniere et al., 2017; Taylor & Neimeyer, 2015). Comparing longitudinal analyses within each group (DP and TAU), the DP group showed no statistically significant differences in empathic interventions across evaluation moments, whereas the TAU group exhibited an initial increase followed by a decline. These results further emphasize the effectiveness of DP training over traditional methods, suggesting DP might hold promise for use in CE.

Regarding the final hypothesis, as expected the time participants in the DP group spent on solitary practice had a positive effect on the quality of empathic interventions, but only in the last evaluation moment (video 7 and 8). Solitary practice took place between training sessions, where participants completed tailored exercises assigned by the DP coach. This concept is inherent to the DP method, and very different in nature to what is usually done in traditional trainings (Vaz & Rousmaniere,

2021). For instance, as participants are alone, without the presence of the coach or peers, they need higher levels of effort to achieve motivation and discipline (Rousmaniere, 2017). Therefore, it is possible that participants struggled to properly perform solitary practice at the beginning of the study and later improved as they became familiarized with it. Additionally, DP is known for long-term rather than immediate effects. These aspects might explain why there was a positive effect only at the end of the study.

While DP has been widely applied in other professions for years (Chow et al., 2015), it has only recently gained relevance in psychotherapy. Despite growing interest, research on DP in psychotherapy remains limited (Clements-Hickman & Reese, 2020). The majority of studies published so far were accomplished with a sample of therapists, and results show that not only an engagement in DP leads to positive clinical outcomes (Chow et al., 2015; Goldberg et al., 2016; Hill et al., 2020), but also that studies in which participants are assigned to DP training groups present significant improvements in the competences under study when compared to the effects of traditional trainings (Shukla et al., 2020; Westra et al., 2021). These results align with the present study, supporting the idea that DP can be decisive in developing essential therapeutic skills, having a more positive effect in comparison to traditional trainings.

As seen previously, the scarce investigation of DP in psychotherapy primarily focuses on therapists (Pascual-Leone et al., 2015), making research on DP directed towards psychology students even more limited. This issue prompted the execution of the present study, and the results demonstrated that DP positively affected the improvement of empathic interventions. A similar result has been found in two other studies, where the samples consisted of both therapists and psychology students. Both studies compared a DP group with traditional training, finding that DP had a significant effect on the selected skills (Di Bartolomeo et al., 2020; Perlman et al., 2020). Specifically, Perlman et al. (2020) aimed to analyze whether DP



positively influenced facilitative interpersonal skills, and results indicated that it did for empathy, alliance bond capacity, and alliance rupture-repair responsiveness.

Additionally, a study by Barata (2020) evaluated the effect of DP and TAU training on the quality of empathic interventions for undergraduate psychology students. Similar to the findings of the present study, participants in the DP group exhibited a higher quality of empathic interventions compared to those in the TAU group. However, participants in the DP showed significant improvement between evaluation moments, unlike the outcomes of the current investigation. Barata (2020) suggested that since the sample consisted of undergraduate students, who typically experience expository rather than practical learning, the results might have been enhanced by a novelty effect. This phenomenon was less likely to occur in the present study since the participants had more practice opportunities during their master's degree. Finally, participants in the TAU condition initially performed better but then stabilized. This result only partially aligns with the present study, as the TAU group here showed a decline in performance at the end. This difference could be attributed to the video content, as Barata's study repeated videos, increasing the likelihood of a practice effect.

As participants in the DP group exhibited a higher quality of empathic interventions in comparison to TAU, the current study suggests that DP is effective when delivered in group format. A similar result was found in Westra et al. (2021), where DP was also administered in groups. The results indicated significant improvements in selected skills in this condition. While DP is generally conceived as a solitary activity (Chow, 2017; Rousmaniere, 2017; Westra et al., 2021), these preliminary results suggest a new path for implementing this training method. Group implementation of DP could help overcome some of the barriers to its application, such as financial costs, the significant time commitment, and the availability of coaches (Ericsson et al., 1993; Rousmaniere, 2017; Westra et al., 2021). Reducing the aforementioned obstacles could

also pave the way for integrating DP into psychology education, particularly as an element of continuing education, thereby countering its predominantly theoretical nature.

Westra et al. (2021) also highlighted that a group format could offer some advantages: an opportunity for participants to learn by observing their peers and potentially enhanced engagement during video analysis due to the sense of group. It is important to note, however, that group training sessions must meet certain requirements in order to succeed. First, as participants have to share their personal responses in front of colleagues during training sessions, it is crucial to ensure a safe, supportive and non-judgmental environment (Ericsson et al., 1993; Ericsson & Pool, 2016; Rousmaniere, 2017). An environment that elicits feelings such as anxiety, embarrassment or shame is not compatible with the emotional vulnerability that DP requires (Rousmaniere, 2017). Second, groups should be kept small to ensure that DP training is delivered effectively, by assuring everyone receives individualized feedback. Although results from Westra et al. (2021) and the current study are promising, further research is needed to assess the effect of group-based DP and its direct comparison to solitary DP.

### Limitations and Future Research

Although the present study holds promise regarding DP's appliance to clinical psychology students, it has limitations that warrant mention regarding internal validity. First, as mentioned previously, only six videos were available in *Theravue* at the beginning of the study, which may have contributed to subject loss. Second, in the first evaluation moment, two participants submitted responses to all videos. Although the extra responses were promptly deleted, those participants gained knowledge that could influence the remaining evaluation moments. Third, as participants were aware that submitted responses would be evaluated, feelings of judgement could arise, compromising the responses' potential. In future replications of this study, it will be important to ensure that all necessary videos are uploaded to the platform and made available to participants gradually.

Since the effects of DP are better observed with long-term practice, future research could explore whether the frequency and timing of evaluations influences the outcomes.

Additionally, this study may have been subject to experimenter effect, as both the DP coach and TAU instructor were aware of the participants' conditions and the outlined research hypotheses (American Psychological Association, 2020; Rosenthal, 1963). Furthermore, the sample consisted of clinical psychology students either currently enrolled in or recently graduated from a master's program, so it is unclear whether they had prior knowledge or experience with the concept of DP. Lastly, one major difference between DP and TAU training sessions was the inclusion of individualized feedback in the former. As a result, the improvement in the DP group's empathic interventions may have been due exclusively to feedback, rather than other key components of DP. However, the logbook allowed a compliance check that participants engaged in other central DP activities, such as solitary practice outside training sessions. Future research could also use the logbook for a qualitative analysis, as it included a section where participants could openly express their thoughts and feelings about the solitary practice experience.

In terms of external validity, the sample size was small, and while participants came from different universities, the majority was from Instituto Universitário de Ciências Psicológicas, Sociais e da Vida (ISPA). Therefore, future studies should encompass larger and more diverse samples to broadly evaluate the effect of DP trainings in the development of critical competences for clinical psychology students. Moreover, the chosen scale to rate empathic interventions, *Measure of Expressed Empathy* (Watson, 1999), is a non-published scale, raising doubts about its validity. In addition, the scale was built to examine five-minute segments and, for the most part, responses submitted to *Theravue* were much shorter. Lastly, this scale was developed for therapy excerpts where the therapist-patient interaction can be seen, and in the current experiment, there was access only to

the therapist viewpoint. As a consequence, even with the exclusion of item 5, some items were harder to rate. Future studies should create an adaptation of the scale only to the therapist perspective. In conclusion, there should be caution when generalizing the results beyond the scope of the present study.

## Conclusions

The present findings support the importance that DP trainings might have in developing skills with great effect in clinical outcomes, such as facilitative interpersonal skills, for clinical psychology students. Specifically, the results demonstrated that participants in the DP group showed higher-quality empathic interventions in comparison to TAU. Contrary to expectations, there was no significant evolution of empathic skills within the DP group across evaluation moments. Additionally, the time spent in solitary practice within the DP condition positively influenced the quality of empathic interventions for the last evaluation moment. In the TAU condition, participants initially improved their empathic interventions but later experienced a decline. These findings are consistent with those of Di Bartolomeo et al. (2020), Perlman et al. (2020), Newman et al. (2022) and Barata (2020) regarding the positive effect of DP training on key clinical skills for psychology students when compared to traditional trainings. Results further supplement Westra et al. (2021) observations in terms of DP being effective in a group format. The practice implication for clinical psychology students, is that an engagement in DP with the aim of developing essential clinical skills might create a bridge in the process of transferring theoretical knowledge to clinical practice, allowing young psychologists to be better prepared in their first contact with clinical practice.

## Authors' Declarations

The authors declare that there are no personal or financial conflicts of interest regarding the research in this article.

The authors declare that the research reported in this article was conducted in accordance with

the Ethical Principles of the Journal of Expertise.

The authors declare that they are not able to make the dataset publicly available but are able to provide it upon request.

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## References

- American Psychological Association. (2015). *Standards and criteria for approval of sponsors of continuing education for psychologists*. <https://www.apa.org/about/policy/approval-standards.pdf>
- American Psychological Association. (2020). *APA dictionary of psychology*. <https://dictionary.apa.org/experimenter-effect>.
- American Psychological Association. (2020). *APA dictionary of psychology*. <https://dictionary.apa.org/practice-effect>
- Anderson, T., Ogles, B. M., Patterson, C. L., Lambert, M. J., & Vermeersch, D. A. (2009). Therapist effects: Facilitative interpersonal skills as a predictor of therapist success. *Journal of Clinical Psychology, 65*(7), 755–768. <https://doi.org/10.1002/jclp.20583>
- Anderson, T., Perlman, M. R., McCarrick, S. M., & McClintock, A. S. (2019). Modeling therapist responses with structured practice enhances facilitative interpersonal skills. *Journal of Clinical Psychology, 76*(1), 1–17. <https://doi.org/10.1002/jclp.22911>
- Barata, M. (2020). *The application of a deliberate practice training in the improvement of students' and in-training psychotherapists' empathic skills* [master's thesis, ISPA – Instituto Universitário de Ciências Psicológicas, Sociais e da Vida]. Repositório do ISPA. <http://hdl.handle.net/10400.12/7746>
- Barrett-Naylor, R., Malins, S., Levene, J., Biswas, S., Mays, C., & Main, G. (2020). Brief training in psychological assessment and interventions skills for cancer care staff: A mixed methods evaluation of deliberate practice techniques. *Psycho-Oncology, 29*(1), 1–8. <https://doi.org/10.1002/pon.5393>
- Chow, D. L. (2017). The practice and the practical: Pushing your clinical performance to the next level. In D. S. Prescott, C. L. Maeschalck, & S. D. Miller (Eds.), *Feedback-Informed Treatment in Clinical Practice: Reaching for Excellence* (pp. 323–355). American Psychological Association. <http://dx.doi.org/10.1037/0000039-017>
- Chow, D. L. (2018). *The first kiss: Undoing the intake model and igniting the first sessions in psychotherapy*. Correlate Press.
- Chow, D. L., Miller, S. D., Seidel, J. A., Kane, R. T., & Thornton, J. A. (2015). The role of deliberate practice in the development of highly effective psychotherapists. *Psychotherapy, 52*(3), 337–345. <http://dx.doi.org/10.1037/pst0000015>
- Clements-Hickman, A. L., & Reese, R. J. (2020). Improving therapists' effectiveness: Can deliberate practice help? *Professional Psychology: Research and Practice, 51*(6), 606–612. <https://doi.org/10.1037/pro0000318>
- Di Bartolomeo, A. A., Shukla, S., Westra, H. A., Ghashghaei, N. S., & Olson, D. A. (2020). Rolling with resistance: A client language analysis of deliberate practice in continuing education for psychotherapists. *Counselling and Psychotherapy Research, 1*–9. <https://doi.org/10.1002/capr.12335>

- Ericsson, K. A. (2006). The influence of experience and deliberate practice on the development of superior expert performance. In K. A. Ericsson, N. Charness, P. J. Feltovich, & R. R. Hoffman (Eds.), *The Cambridge Handbook of Expertise and Expert Performance* (p. 683–703). Cambridge University Press.  
<https://doi.org/10.1017/CBO9780511816796.038>
- Ericsson, K. A., & Lehmann, A. C. (1996). Expert and exceptional performance: Evidence of maximal adaptation to task constraints. *Annual Review of Psychology*, *47*, 273–305.  
<https://doi.org/10.1146/annurev.psych.47.1.273>
- Ericsson, K. A., & Pool, R. (2016). *Peak: Secrets from the new science of expertise*. Houghton Mifflin Harcourt.
- Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, *100*(3), 363–406.  
<https://doi.org/10.1037/0033-295X.100.3.363>
- Goldberg, S. B., Babins-Wagner, R., Rousmaniere, T., Berzins, S., Hoyt, W. T., Whipple, J. L., Miller, S. D., & Wampold, B. E. (2016). Creating a climate for therapist improvement: A case study of an agency focused on outcomes and deliberate practice. *Psychotherapy*, *53*(3), 367–375.  
<http://dx.doi.org/10.1037/pst0000060>
- Hill, C. E., Kivlighan, D. M. III, Rousmaniere, T., Kivlighan, D. M., Jr., Gerstenblith, J. A., & Hillman, J. W. (2020). Deliberate practice for the skill of immediacy: A multiple case study of doctoral student therapists and clients. *Psychotherapy*, *57*(4), 587–597.  
<https://doi.org/10.1037/pst0000247>
- Hill, C. E., Roffman, M., Stahl, J., Friedman, S., Hummel, A., & Wallace, C. (2008). Helping skills training for undergraduates: Outcomes and prediction of outcomes. *Journal of Counseling Psychology*, *55*(3), 359–370.  
<https://doi.org/10.1037/0022-0167.55.3.359>
- Koo, T. K., & Li, M. Y. (2016). A guideline for selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine*, *15*(2), 155–163.  
<https://doi.org/10.1016/j.jcm.2016.02.012>
- Macnamara, B. N., Hambrick, D. Z., & Oswald, F. L. (2014). Deliberate practice and performance in music, games, sports, education, and professions: A meta-analysis. *Psychological Science*, *25*(8), 1608–1618.  
<https://doi.org/10.1177/0956797614535810>
- Malin, J. A. (2016). *Therapist expressed empathy across experiential treatment for depression: Its growth and relationship to other psychotherapy processes* [Unpublished doctoral dissertation]. The York University.
- McLeod, J. (2021). How students use deliberate practice during the first stage of counsellor training. *Counselling and Psychotherapy Research*, 1–12.  
<https://doi.org/10.1002/capr.12397>
- Miller, S. D., Chow, D., Wampold, B. E., Hubble, M. A., Del Re, A. C., Maeschalck, C., & Bargmann, S. (2020a). To be or not to be (an expert)? Revisiting the role of deliberate practice in improving performance. *High Ability Studies*, *31*(1), 5–15.  
<https://doi.org/10.1080/13598139.2018.1519410>
- Miller, S. D., Hubble, M. A., & Chow, D. L. (2018). The question of expertise in psychotherapy. *Journal of Expertise*, *1*(2), 1–9.
- Miller, S. D., Hubble, M. A., & Chow, D. L. (2020b). *Better results: Using deliberate practice to improve therapeutic effectiveness*. American Psychological Association.
- Miller, S. D., Hubble, M. A., & Duncan, B. (2008). Supershinks: What is the secret of their success? *Psychotherapy in Australia*, *14*(4), 14–22.  
<https://doi.org/10.1037/e526322010-003>
- Muran, J. C., Safran, J. D., Eubanks, C. F., & Gorman, B. S. (2018). The effect of alliance-focused training on a cognitive-behavioral therapy for personality disorders. *Journal of Consulting and Clinical Psychology*, *86*(4), 384–397.  
<http://dx.doi.org/10.1037/ccp0000284>
- Newman, D. S., Villarreal, J. N., Gerrard, M. K., McIntire, H., Barrett, C. A., & Kaiser, L. T. (2022). Deliberate practice of consultation communication skills: A randomized controlled trial. *School Psychology*. Advance

- online publication.  
<https://doi.org/10.1037/spq0000494>
- Nikendei, C., Huber, J., Ehrental, J. C., Herzog, W., Schauenburg, H., Schultz, J. -H., & Dinger, U. (2019). Intervention training using peer role-play and standardised patients in psychodynamic psychotherapy trainees. *Counselling and Psychotherapy Research, 19*(2), 508–522.  
<https://doi.org/10.1002/capr.12232>
- Pascual-Leone, A., Andreescu, C. A., & Yeryomenko, N. (2015). Training novice psychotherapists: Comparing undergraduate and graduate students' outcomes. *Counselling and Psychotherapy Research, 15*(2), 137–146.
- Perlman, M. R., Anderson, T., Foley, V. K., Mimnaugh, S., & Safran, J. D. (2020). The impact of alliance-focused and facilitative interpersonal relationship training on therapist skills: An RCT of brief training. *Psychotherapy Research, 30*(7), 871–884.  
<https://doi.org/10.1080/10503307.2020.1722862>
- Pestana, M. H., & Gageiro, J. N. (2008). *Análise de dados para ciências sociais: A complementaridade do SPSS* (5th ed.). Lisboa: Edições Sílabo.
- Rosén, E. (2019). *Learning how to learn: Psychology trainees' self-compassion while implementing deliberate practice, with FIT at a psychotherapy training clinic*. [Master's thesis, Umeå University, Umeå, Sweden]
- Rosenthal, R. (1963). On the social psychology of the psychological experiment: The experimenter's hypothesis as unintended determinant of experimental results. *American Scientist, 51*(2), 268–283.
- Rousmaniere, T. (2017). *Deliberate practice for psychotherapists: A guide to improving clinical effectiveness*. Routledge. s
- Rousmaniere, T., Goodyear, R. K., Miller, S. D., & Wampold, B. E. (2017). Introduction. In T. Rousmaniere, R. K. Goodyear, S. D. Miller, & B. E. Wampold (Eds.), *The Cycle of Excellence: Using Deliberate Practice to Improve Supervision and Training* (1st ed., pp. 3–22). Wiley-Blackwell.  
<https://doi.org/10.1002/9781119165590.ch1>
- Shukla, S., Di Bartolomeo, A. A., Westra, H. A., Olson, D. A., & Ghashghaei, N. S. (2020). The impact of a deliberate practice workshop on therapist demand and support behavior with community volunteers and simulators. *Psychotherapy*. Advance online publication.  
<https://doi.org/10.1037/pst0000333>
- Taylor, J. M., & Neimeyer, G. J. (2015). The assessment of lifelong learning in psychologists. *Professional Psychology: Research and Practice, 46*(6), 385–390.  
<http://dx.doi.org/10.1037/pro0000027>
- Theravue (2021). Theravue.com. Retrieved August 3, 2021, from <https://www.theravue.com>
- Tracey, T. J. G., Wampold, B. E., Lichtenberg, J. W., & Goodyear, R. K. (2014). Expertise in psychotherapy: An elusive goal? *American Psychologist, 69*(3), 218–229.  
<https://doi.org/10.1037/a0035099>
- Vaz, A., & Rousmaniere, T. (2021). *Reaching for expertise: A primer on deliberate practice for psychotherapists*. Deliberate Practice Institute.
- Watson, J. C. (1999). *Measure of expressed empathy*. Unpublished manuscript. Department of Adult Education, Community Development, and Counseling Psychology, OISE, University of Toronto, Ontario, Canada.
- Westra, H. A., Norouzzian, N., Poulin, L., Coyne, A., Constantino, M. J., Hara, K., Olson, D., & Antony, M. M. (2021). Testing a deliberate practice workshop for developing appropriate responsiveness to resistance markers. *Psychotherapy, 58*(2), 175–185.  
<https://doi.org/10.1037/pst0000311>

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