Low-Intensity Interventions and EMDR Therapy

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Unlike high-intensity treatment, in which clients have face-to-face contact with a mental health special-ist, clients in low-intensity treatment have limited or no contact with a specialist. Instead, their treatment is usually provided through self-help procedures, which are delivered via (guided) computer programs, books, or "mHealth" apps. Other treatments sometimes considered low-intensity are brief treatments, group therapy, and interventions delivered by nonspecialists. Advantages include effectiveness, accessi-bility, efficiency, and affordability. Concerns related to safety, engagement, and adherence to self-help programs may be addressed by (asynchronous) therapist guidance. This article describes low-intensity treatments and their relevance for eye movement desensitization and reprocessing (EMDR) therapy. Hun-dreds of randomized controlled trials (RCTs) have found self-help interventions to be efficacious, with many producing the same level of results as the traditional face-to-face procedure. Guided self-help cog-nitive behavioral therapy is recommended for the treatment of posttraumatic stress disorder in the guide-lines of both the National Institute for Health and Care Excellence and International Society of Traumatic Stress Studies. Only three self-help-EMDR RCTs have been conducted. This author advocates for recon-ceptualizing EMDR group therapy as "guided self-help-EMDR therapy," because it is a highly manualized, heavily scripted treatment in which the client works independently on their own material. In this respect, it offers an excellent template for the future development of efficacious low-intensity EMDR interven-tions. Developing safe, easy-to-use, affordable, and readily available low-intensity interventions will make effective EMDR treatment available to many millions of people around the world.

Keywords: eye movement desensitization and reprocessing (EMDR) therapy; low-intensity interventions; mobile health (mHealth) apps; group therapy; computerized treatment; self-help

Eye movement desensitization and reprocessing (EMDR) therapy is a high-intensity interven-tion. It was designed to be provided by expe-rienced and well-trained clinicians (Shapiro, 1995). Training in EMDR therapy is available only to licensed mental health professionals, and many hours of class time and consultation/supervision are required to establish competency. National and international EMDR associations have established credentialing programs, with the goal of assuring competency and advancing professionalism in EMDR practice, to ensure that the highest possible standards are met and that clients receive safe and high-quality treatment (See Madere et al., 2020).

While high-intensity treatment is administered through face-to-face contact with a mental health specialist, low-intensity interventions provide only limited or no contact with specialists. Instead, treat-ment is facilitated through self-help procedures or by a supervised nonspecialist. Many low-intensity proto-cols have been developed for posttraumatic stress dis-order (PTSD), depression, and other disorders. This article discusses the nature and value of low-intensity treatments and their potential place in the EMDR ther-apy repertoire.

High-and Low-Intensity Psychotherapy Interventions

High-intensity psychological treatments are defined as face-to-face psychotherapy, provided by a men-tal health specialist, often over extended periods of time. Examples of high-intensity psychothera-pies are EMDR therapy, cognitive behavior therapies

(CBTs), psychodynamic therapy, and interpersonal therapy.

Low-intensity interventions have been defined as treatments with low usage of specialist therapist time (Bennet-Levy et al., 2010; Sijbrandij et al., 2020). The most common and researched interventions are therapist-supported/unsupported self-help procedures that are delivered via computer programs, books, and smartphone apps. Other treatments sometimes considered low-intensity are brief versions of evidence-based approaches (i.e., maximum six sessions), group therapy, and scalable task-shifting interventions delivered by nonspecialists. Low-intensity interventions are less resource-intensive, less expensive, and more accessible than high-intensity interventions.

Research has shown that low-intensity treatments can be effective, producing moderate to large treatment effects. Self-help computerized interventions with therapist support tend to produce the same level of results as the original face-to-face procedure (e.g., Carlbring et al., 2018; Mavranezouli et al., 2020). Computerized trauma-focused CBT (TF-CBT) is recommended for the treatment of PTSD in the guidelines of both the National Institute for Health and Care Excellence [NICE], (2018) and the (International Society of Traumatic Stress Studies [ISTSS], 2018).

The terms high-ntensity and low-intensity were coined in the United Kingdom to describe treatments provided in their stepped-care approach, which has been used effectively for many years (Clark et al., 2009; Haaga, 2000). In their depression treatment guidelines, the U.K.'s National Institute for Health and Care Excellence (NICE, 2009) recommends a stepped approach. The three treatments recommended for mild and moderate symptoms of depression are "individual guided self-help based on CBT principles, computerized CBT, and structured group physical activity" (NICE, 2009, p. 9).

In a stepped-care approach, patients receive thorough assessments before, during, and after treatment. Low-intensity treatment is provided for those with mild/moderate symptoms, and it is expected that this level of treatment will be sufficient for most clients. Specialized high-intensity treatment is reserved for those with severe symptoms or who do not respond to low-intensity care. Stepped care is common practice for physical health complaints. For example, a person suffering from knee pain is often advised to ice the knee and rest it, and then to strengthen it with exercise, before being referred to a specialist (Cornish, 2020).

Stepped care is not a phased treatment model, which moves the client through increasingly intense levels of treatment. Instead, in stepped care it is expected that low-intensity assistance is effective and sufficient and that most clients receiving it will recover and not require additional high-intensity care. Low-intensity interventions also provide a screening function, identifying those who need high-intensity treatment.

Overview of Low-Intensity Psychotherapy Interventions

The content and focus of a low-intensity intervention are related to the targeted problem. For example, low-intensity TF-CBT applications for PTSD use the same modules that are used in high-intensity treatment, including imaginal and in vivo exposure, and cognitive restructuring (e.g., Ivarrson et al., 2014; Lewis et al., 2017). TF-CBT computerized treatment, with brief asynchronous support from therapists, tends to produce the same level of results as face-to-face TF-CBT (Mavranezouli et al., 2020).

Self-Help Guided and Unguided Interventions

The primary form of low-intensity treatment is self-help. In these types of interventions, the client receives instruction from a book or computerized format, through audiovisual media, smart phone apps, or face-to-face with a therapist. They then work independently to complete tasks or exercises. Some clients may lack confidence and motivation to work on their own, or they may be uncertain of how to proceed with self-applications (Bendelin et al., 2011). To address these deficiencies, self-help interventions are often "guided" by a practitioner.

The terms "guided," "assisted," and "supported" all refer to self-help interventions in which a therapist provides encouragement, support, and guidance, usually in an asynchronous manner. The extent and purpose of therapist guidance varies greatly, from simply monitoring and encouraging progress with an email, text, or 10-minute phone call to a bimonthly, 30-minute session during which the practitioner discusses progress, work content, and process issues, and facilitates problem-solving (Bennet-Levy et al., 2010). Supportive therapists may be mental health specialists or trained supervised paraprofessionals/medical professionals.

The terms "pure self-help," "unsupported," and "self-guided" refer to interventions that are done without any therapist support. In these self-applications,

the client engages in treatment without assistance, guidance, or support.

Computerized Treatments

"Computerized treatment" is a self-help intervention in which a recorded program is viewed by the client who engages independently in tasks and homework exercises. Computerized treatments are also called "Internet-based" and "Internet-delivered." The program consists of recorded psychoeducation and instructions, supplemented with multimedia material. Computerized self-help may be a "guided intervention," in which a therapist provides brief asynchronous guidance, support, and feedback; or a "pure self-help" intervention, in which the individual works alone without assistance.

There are many hundreds of randomized controlled trials (RCTs) which have evaluated computerized self-help treatments for a range of diagnoses and presenting problems (Carlbring et al., 2018). Computerized interventions are based on effective face-to-face therapies and are similar in in content and length. Carlbring et al. conducted a meta-analysis of RCTs in which the face-to-face CBT and computerized treatments were directly compared. They found that computerized self-help and face-to-face CBT treatments produced equivalent efficacious results.

Randomized controlled trials have resulted in moderate to large effect sizes for guided computerized interventions for PTSD (Mavranezouli et al., 2020), depression, anxiety, eating disorders, and obsessive compulsive disorder (Farrand & Woodward, 2013). It should be noted that methodological deficits and high heterogeneity across studies increase uncertainty in the results. Low-intensity treatments are more commonly prescribed for mild or moderate symptoms, but some research shows efficacy with severe symptoms (see Farrand & Woodford).

App-Based Self-Help Interventions

App-based programs that assess, monitor, and improve health are becoming ubiquitous. Not only are these used for physical health parameters (e.g., heart rate, step counts, sleep), but also for mental health symptoms (e.g., anxiety, depression, PTSD). Hundreds of mobile health "mHealth" apps or "e-mental health" interventions are available from Apple and Google Play. Reflecting the maze of unregulated health information on the Internet, a vast assortment of programs are available. Many of these

have never been tested with research or subject to any external evaluation.

Due to the wide diversity in app content, research shows great heterogeneity. Although a meta-analysis of mHealth apps for anxiety (Firth et al., 2017) reported small to moderate effect sizes, a meta-analysis of depression-related apps (Hrynyschyn & Dockweiler, 2021) stated that study outcomes were contradictory and that more research was needed. They also called for "participatory technology development . . . to address current problems in mobile health intervention" applications (p. e24703). Similarly, Schellong et al. (2019) have proposed a blueprint for the development of mHealth apps for PTSD using standardized procedures.

Self-Help Books

The self-help market contains many thousands of books advising consumers how to improve their lives by employing strategies derived from efficacious treatments. Although this is an unregulated field, self-help books can be used to decrease symptoms and increase mastery. Evidence-based self-help books and manuals can be used as guided interventions, prescribed by clinicians for individual treatment or in group therapies.

Other Types of Low-Intensity Treatment

Group Applications. Group treatment might be considered a low-intensity intervention, because of lower therapist time per client. However, there are different types of group treatments. Some are structured interventions in which participants have little or no interaction with each other and work independently on personal material with instruction from the therapist. This type of structured group might be considered a form of "guided self-help." There are other group treatments such as the Yalom-style interpersonal process psychotherapy group, in which interaction is encouraged and considered an essential treatment component. Cornish (2020) suggests that such group therapy might be considered a high-intensity treatment, requiring therapists with specialized training.

Stabilization. Stabilization (e.g., relaxation, affect regulation) is sometimes referred to as "low intensity." Stabilization is often included as a preparation phase in phased treatment programs, in which clients move through increasingly intense levels of treatment. Many trauma-focused treatments, such as TF-CBT and EMDR therapy, include a stabilization

phase. However, stabilization is not an efficacious stand-alone treatment, but is preparatory for the subsequent planned high-intensity intervention. Consequently, it is very different from low-intensity treatments, which are efficacious and sufficient to resolve the presenting problems of most patients.

Scalable Treatments

Scalable treatments are low-intensity interventions. The World Health Organization (WHO, 2017b) has called for "scalable" treatments that can be provided in low- and middle-income countries as well as for populations with outstanding mental health needs, such as refugees. The term "scaling up" means to increase size, and here it refers to increasing capacity, increasing resources, and increasing the number of people who receive treatment. Scaling up can be achieved through self-help or "task-shifting," defined as the delegation of tasks, where appropriate, to less specialized health workers (WHO, 2007). However, due to the high costs of training, housing, and supervising nonspecialists, recommendations are being made for other less expensive and more accessible interventions, such as mHealth apps developed for specific populations (Sijbrandij et al., 2017).

The WHO (2017b) recommends the following scalable interventions:

- Brief, basic, nonspecialist-delivered versions of existing evidence-based psychological treatments (e.g., basic versions of CBT, interpersonal therapy)
- Self-help materials drawing from evidence-based psychological treatment principles, in the form of self-help books, self-help audiovisual materials, and online or app-based self-help interventions
- Guided self-help in the form of individual or group programs, providing people with guidance in using the above mentioned self-help materials. (WHO, 2017)

The WHO (2021) has been developing transdiagnostic, effective, and scalable treatments that can be provided by peer-supporters and volunteer lay helpers or through mHealth apps. These culturally acceptable interventions focus on positives (e.g., resources and skills) instead of mental health problems, and are being developed for use in countries and populations with significant mental health stigma (Sijbrandij et al., 2017). They may also be suitable for individuals with low literacy and limited education.

Advantages of Low-Intensity Treatment

The advantages of low-intensity treatment are that it is

- effective
- client-centric
- accessible
- inexpensive
- efficient
- diverse in form, structure, and content

Low-intensity interventions can make efficacious treatments widely available. Their advantages include accessibility, affordability, and best use of limited resources. Clients appreciate ease of access, low financial cost, and limited time commitment. Agencies can ensure that those with less severe presentations receive evidence-based treatment in a cost-effective manner, while reserving the time of expert professionals for those in greatest need (see Bennett-Levy et al., 2010).

Self-help internet-delivered interventions allow access in underserviced areas and may overcome barriers that can limit accessibility, such as scheduling limitations, challenges with transportation, and the stigma attached to mental health treatment (Lewis et al., 2017; Lewis et al., 2018). Clients are also not required to commit to months of weekly face-to-face sessions (Simon et al., 2019). Nevertheless, it should be noted that most self-help interventions require literacy and some education.

It is important to acknowledge that most individuals suffering with mental health problems have limited or no access to high-intensity treatment. Advocating for a client-centric stepped-care system, Norcross wrote, "according to every reputable metric, the vast majority of people suffering from behavioral disorders do not receive any specialized mental health care at all. . . . The system . . . proves to be inaccessible, inequitable, inefficient, and ineffective (unless you are wealthy and receiving services in the private sector)" (2020, p. v). The WHO (2017a) reports that the median number of mental health workers is fewer than one worker per 100,000 population in low-income countries and 72 workers in high-income countries. However, even in high-income countries access to psychotherapy can be limited. Many people cannot afford private therapy, and access to government-run programs can be limited. For example, in Canada's largest province, a 2020 report on waitlists for children and youth found that the average wait-time for treatment was 92 days, and that some children may wait as long as 2.5 years to receive mental health care (Canadian Mental Health Association, 2020).

Concerns About the Implementation of Computerized and App-Based Treatments

Concerns about the implementation of computerized and app-based treatments focus on safety, acceptability, engagement, retention, and privacy. Simon et al. (2019) looked at treatment uptake, retention, and adherence in a mixed-methods systematic review of 10 RCTs of computerized CBT for 720 adults with PTSD. Participant-rated acceptability appeared high, with positive client satisfaction ratings, strong therapeutic alliance scores, and good program usage. However, dropout rates showed high heterogeneity, ranging from 8.7% to 62.5% across the studies.

Safety

Before starting guided computerized treatment of PTSD, clients should be assessed for suitability, and only those with mild/moderate symptoms should receive the intervention. The NICE (2020) guidelines state that it should not be used for those with "severe PTSD symptoms, in particular dissociative symptoms" (p. 5), or by those at risk of harm to self or others. The NICE guidelines also say that the intervention should provide "guidance and support from a trained practitioner to . . . review progress and outcomes" (p. 5). Therapist monitoring ensures that the client is receiving appropriate care and responding as expected, or if the client should be referred for high-intensity individual treatment. Other safety strategies include the embedding of stop-measures in computerized programs, such as was done in the EMDR computerized program of Moench and Billsten (2021).

Adherence and Engagement

For treatment to be effective, clients must engage with the material. The Mobile App Rating Scale (Messner et al., 2020) was developed for mobile health apps, but its elements also apply to computerized treatment. The scale evaluates quality in seven domains: Is the treatment is engaging, fun, and interesting? Does it have individual adaptability and interactivity? Is it functional in terms of performance, usability, navigation, gestural design? How aesthetically attractive are layout, graphics, and visual appeal? Is the information of high quality; is it accurate, credible, and evidence-based, with visual content? (Sander et al., 2020).

Therapist guidance is usually recommended in computerized self-help treatment to encourage motivation and engagement. The various meta-analyses examining the effects of (types of) guidance found mixed results: While Gellatly et al. (2007) showed therapist guidance to be the largest moderator of outcome, Farrand and Woodford (2013) found no differences in outcome for guided CBT, CBT with minimal contact, and CBT with no support. While Zarski et al. (2016) found no difference between content-related guidance (e.g., individualized feedback) and briefer, more cost-effective adherence-related guidance (e.g., email reminders), both were better than no guidance. Ali et al. (2014) reported that therapist-effect contributed only 0%–1.3% of the variance in computerized treatment. Some findings suggest that the optimal level of support may vary according to the presenting problem (Farrand & Woodford).

Retention

Although dropout rates are often thought to represent treatment failure, Szafranski et al. (2017) found that 36%–56% of dropouts had clinically significant improvement and/or met good end-state criteria (see also Cornish, 2020). They suggested that such individuals might be better defined as "early treatment responders" and noted that they may represent a younger demographic. The dropout rates in computerized TF-CBT programs for PTSD were found to vary greatly, from 8.7% to 62.5% (Simon et al., 2019). These rates are similar or greater than those in face-to-face PTSD treatment, where the mean dropout rate is about 21% (Varker et al., 2021). Studies rarely provide reasons for dropout. Recorded reasons for dropout included technical problems, lack of privacy to use the program, lack of time to dedicate to the program, finding the program difficult, and feeling symptoms had improved (Simon et al., 2019).

One concern about computerized treatments is that clients who drop out may be lost to care and not receive needed treatment. An important component of therapist guidance is the monitoring of client progress and adherence, and a stepped-care process that makes referrals to high-intensity treatment for those requiring greater care.

Privacy

There are concerns about privacy with any web-based client-clinician contact or treatment, whether it is provided through email, Zoom, a smartphone app, or an online platform. There are many laws and regulations that govern electronic storage and transmission of client/patient data and information. The American Psychological Association Guidelines for the Practice of Telepsychology (American Psychological

Association [APA], 2021) state that in addition to providing secure storage and data transmission, psychologists must inform clients of the risks to confidentiality and privacy inherent in telecommunication. Although confidential treatment can be provided in the United States by using a Health Insurance Portability and Accountability Act (HIPAA)-compliant platform, protection may not be provided in many app-based interventions (Marotta-Walters et al., 2018). Leaders in the field are calling for global standards for data storage, use, and sharing, and transparent policies (e.g., Torous et al., 2019). In addition, governments may need to establish oversight responsibility for the safety and privacy of data collected by smartphone apps.

Low-Intensity Psychotherapy Interventions for PTSD

Mavranezouli et al. (2020) reported on the network meta-analysis of PTSD treatments that was used in the NICE treatment guidelines. Self-help with support was among the four most efficacious treatments for PTSD. The study reported large pre–post effect sizes (mean standardized difference): 2.07 for EMDR therapy, 1.46 for TF-CBT, and 1.46 for self-help with support. With one exception, the self-help with support interventions provided guided computerized TF-CBT. The self-help without support computerized interventions were also effective treatments, but with a smaller—but large—effect size of 0.91. These self-help studies had high heterogeneity and low methodological quality.

Computerized Self-Help TF-CBT for PTSD

Guided computerized Self-Help TF-CBT treatment is a recommended intervention in both the NICE (2018) and ISTSS (2018) treatment guidelines for PTSD. In the ISTTS guidelines it is called "guided Internet-based CBT with a trauma focus" and given a standard recommendation. In the NICE guidelines, it is called "supported trauma-focused computerized CBT" and "self-help with support." NICE recommends guided computerized TF-CBT if the client prefers this to face-to-face TF-CBT or EMDR. To ensure safety, they recommend that it not be used by those with "severe PTSD symptoms, in particular dissociative symptoms" (NICE, 2020, p. 5), and by those at risk of harm to self or others.

The NICE guidelines state that computerized self-help TF-CBT for PTSD should:

- be based on a validated program
- typically be provided over eight to 10 sessions
- involve elaboration and processing of the trauma memories; processing trauma-related emotions; restructuring trauma-related meanings for the individual; helping to overcome avoidance; and re-establishing adaptive functioning (e.g., work and social relationships)
- include guidance and support from a trained practitioner to encourage people to complete the intervention, give feedback on homework assignments, and review progress and outcomes (NICE, 2020, p. 5)

Guided computerized self-help TF-CBT produces the same large effect size as face-to-face high-intensity TF-CBT and is effective at achieving remission from PTSD (Mavranezouli et al., 2020). It is a brief, complete version of an established efficacious treatment. In the studies showing its effectiveness, the types of traumas varied, and included sexual assault (rape), childhood trauma, war-related traumas in refugees, and mixed traumas.

It is provided through multi-media methods, such as a video of a therapist explaining treatment. Modules may include grounding exercises, relaxation, behavior activation, imaginal exposure, in vivo exposure, cognitive restructuring, and relapse prevention (e.g., Ivarrson et al., 2014; Lewis et al., 2017; Lewis et al., 2018). Typically, each module requires a written homework assignment or report, which is sent to the therapist, who then provides brief written or verbal support and/or feedback. Other computerized protocols focus on tasks relate to structured writing therapy (Van Emmerik et al., 2008) and cognitive therapy (Littleton et al., 2016).

App-Based Interventions for PTSD and Computerized Treatment Without Support

Sander et al. (2020) identified 555 mHealth apps for PTSD, and included 69 in their quality analysis, which used the Mobile App Rating Scale (Messner et al., 2020). Their analysis examined app quality, not treatment outcome. Eleven of the 12 apps in the upper quartile, with highest quality, provided complete treatment instructions for resolving PTSD; none of the best apps had any EMDR content. Many apps, such as PTSD Coach (U.S. Department of Veterans Affairs, 2013), focus only on psychoeducation, self-assessment, coping skills, and symptom management.

The NICE (2018) PTSD treatment guidelines evaluated treatment outcome in RCTs which investigated "self-help without support." This category was composed of various self-help treatments without any therapeutic support, and included mHealth apps, unsupported computerized interventions, and bibliotherapy. Although effect sizes were in the large range, study quality was very low. This treatment was not recommended for PTSD treatment.

EMDR as a Low-Intensity Intervention

High-intensity face-to-face EMDR therapy and CBT are successfully used for depression, PTSD, and other presenting problems. They tend to produce equivalent outcomes, as can be seen in dozens of RCTs and meta-analyses (e.g., Mavranezouli et al., 2020). However, while there are many CBT-based low-intensity self-administered approaches capable of effectively reducing symptoms of various disorders, very few low-intensity EMDR interventions have been developed.

EMDR Group Treatments

As described in more detail in the Discussion and Recommendations section, this author is proposing that EMDR group interventions can be conceptualized as "guided self-help" interventions, with the potential for task-shifting in scalable interventions. The group participants work quietly and independently on their own material, following instructions from the group leader to all participants. There is little or no interaction between clients and between clients and therapist during the group intervention. These short-term treatments are highly manualized and heavily scripted.

Group treatments can be considered low-intensity interventions, as they require less specialist contact time than individual face-to-face therapy. This is especially true for EMDR group therapy which is often delivered in two to six sessions.

EMDR group therapy is an efficacious intervention, typically producing large effect sizes. Although the methodology in most studies has been poor (Kaptan et al., 2021), the acceptability of the treatment is shown by widespread use around the world. Originally developed for rapid use in disaster settings and recent traumas, EMDR group treatment is now being successfully used for historical traumas (e.g., with refugees) and for traumas which have "ongoing" triggers or traumatic stressors (e.g., patients with cancer).

Some new single-session EMDR group protocols have been developed for remote access (e.g., on

HIPAA platforms) and proven effective in RCTs (e.g., Becker et al., 2021; Johanson et al., 2021; Smyth-Dent et al., 2021). Another RCT showed successful use of a computerized format of a group treatment (Moench & Billsten, 2021). It is described in the following section.

Computerized EMDR Interventions

There are two published studies that evaluated computerized EMDR (i.e., Internet-based, Internet delivered) in which EMDR was delivered via a recorded program on the Internet. Both have methodological limitations, but their results suggest the value of future development and implementation.

Moench (2020) created a computerized self-help version of G-TEP, called the Self Care Traumatic Episode Protocol (STEP), in consultation with Elan Shapiro, developer of G-TEP (E. Shapiro & Moench, 2015). STEP was evaluated in an RCT (Moench & Billsten, 2021), which compared immediate treatment to waitlist/delayed treatment for 33 mental health clinicians impacted by COVD-19. Results showed significant improvements on the Depression and Anxiety Stress Scale (with large effect size) and the Generalized Self-Efficacy Scale (with moderate effect size). Ninety-four percent of participants stated that they would recommend the STEP program to a colleague. The intervention was a 90-minute videorecorded single-session treatment, derived from G-TEP. Following psychoeducation and stabilization procedures, the program led clients through G-TEP procedures to process a disturbing COVID-related memory. The procedure included several safety checks. Before starting treatment, client suitability was assessed through a telephone interview and assessment inventories. The program itself contained stop-devices, by which clients could not proceed to the next phase if scores on the subjective units of disturbance scale had not decreased during the intervention. Clients could ask for referrals for additional treatment if needed. No adverse effects were reported.

In 2013, Spence et al. provided a six-session guided computerized TF-CBT+EMDR protocol, for 15 participants diagnosed with PTSD. Childhood abuse was the primary target for 73% and the mean number of lifetime traumas was 9.2. Participants worked alone on traumatic memories using web-based instructions, with telephone guidance from the therapist. As is common in EMDR treatment, about half of participants reported an increase in re-experiencing symptoms during treatment. Four participants (26.7%) dropped out of the study, which is higher than the

mean 18.9% found in EMDR studies (Varker et al., 2021). Large pre-follow-up effect sizes were found on clinician-assessed and self-reported measures of PTSD, anxiety, and distress, with moderate effect sizes on measures of depression and disability. At follow-up, 55% no longer met diagnostic criteria for PTSD, comorbid diagnoses were reduced by half, and eight of the 11 completers (82%) said that they would recommend the treatment to a friend. The authors describe the protocol as "moderately tolerated," stating that it would require improvements before further use. It should be noted that this study may be an inadequate test of computerized-EMDR because the protocol did not follow EMDR standard procedures: participants were not instructed in (provided with) phases 5–7 until the second last week of treatment. Also, six sessions are not the treatment dosage recommended for clients with childhood-onset trauma (e.g., Van der Kolk et al., 2007).

EMDR App-Based Self-Help Interventions

No research has been done to evaluate the effectiveness of any EMDR smartphone mHealth app. However, three recent reviews examined smartphone apps that purported to provide EMDR-type treatment. Waterman and Cooper (2020) identified 11 Apple and eight Android apps claiming to offer tools for self-administered EMDR therapy. Of the 12 apps identified by Marotta-Walters et al. (2018), they recommended six for synchronous use by trained and licensed clinicians with their clients, and none for self-administration.

Sander et al.'s (2020) evaluation of the quality of 69 mHealth apps for PTSD included nine EMDR apps. They used the Mobile Application Rating Scale German Version (Messner et al., 2020) to assess quality in seven domains: engagement, functionality, aesthetics, information quality, therapeutic gain, subjective quality, and perceived impact. The measure used a 5-point scale: 1 = inadequate, 2 = poor, 3 = acceptable, 4 = good, 5 = excellent. Scores for the nine EMDR-related mHealth apps ranged from 2.01 to 3.56, with a mean of 2.91 and a median of 3.05. No EMDR app was in the top quartile. It is important to note that this evaluation did not evaluate treatment outcome in terms of symptom reduction and remission of diagnosis. The evaluation assessed only the quality of the mHealth apps.

EMDR Self-Help Books

Only one research study (Karadag et al., 2021) has been conducted to evaluate the effectiveness of an EMDR-related self-help book. Similar to the positive-focused, culturally acceptable interventions recommended by the WHO (2021), this intervention aimed to strengthen coping skills as a way to reduce symptoms of depression, anxiety, and PTSD related to COVID-19. The intervention consisted of three exercises, which were modifications of EMDR's safe-place technique, resource installation, and the future template. Children self-administered tapping with the butterfly hug. The book provided a 20-minute intervention, which children repeated three times in one week with their parents' assistance. The RCT compared waitlist to the effects of the book intervention for Turkish children (ages 8–10 years). Outcomes were measured using the State-Trait Anxiety Inventory for Children and the Childhood Posttraumatic Stress Reaction Index. At pretreatment, the children's scores indicated high PTSD symptoms. There was high attrition in both treatment and waitlist groups, with no differences in dropout between the two groups. The treatment resulted in significant decreases on all measures except state anxiety.

There are many EMDR self-help books. One, written by EMDR creator Francine Shapiro (2012), focuses on symptom management and preparation for subsequent EMDR treatment with a mental health specialist. In addition to information about EMDR, the book gives instructions for identifying memories, negative cognitions, and triggers, and teaches generic affect management strategies as well as EMDR's safe/calm place and future template. The book does not provide any instruction in processing memories with EMDR.

Brief EMDR Therapy

As mentioned previously, although brief treatments might meet many criteria for low-intensity treatment, such as being affordable, efficient, and effective, they might still be considered high-intensity treatment because they are provided by a mental health specialist. There are some brief efficacious EMDR protocols that are provided in one or two sessions and which effectively eliminate presenting symptoms, and which appear to prevent the development of future disorders and problems.

Many of these brief EMDR interventions were developed as early interventions to provide rapid relief from symptoms of a recent trauma (see E. Shapiro & Maxfield, 2019). Other brief treatments were used for new mothers following a difficult birth (Chiorino et al., 2016), for acute pain (Maroufi et al., 2016), in an emergency room setting (Gil-Jardine et al., 2018), and for test anxiety (Maxfield & Melnyk, 2000).

Scalable EMDR Interventions With Task-Shifting

There are anecdotal reports from low-middle-income countries reporting that task-shifting has been used during disaster response (Luber, 2014). However, as far as this author could determine, there are only two published studies in which EMDR with task-shifting was evaluated. These two RCTs evaluated EMDR group treatment provided by supervised paraprofessionals, and showed successful and safe outcomes (Jarero et al., 2017; Smyth-Dent et al., 2019). As previously mentioned, EMDR group therapy can be considered a guided self-help intervention. Therefore, it may not be inappropriate to consider that therapist guidance in that modality can be provided through task-shifting, as long as specialist supervision is provided.

Discussion and Recommendations

Unlike high-intensity treatment, in which clients have face-to-face contact with a mental health specialist, clients in low-intensity treatment have limited or no contact with a specialist. Instead, their treatment is usually provided through self-help procedures, which are delivered via (guided) computer programs, books, or mHealth apps. Other treatments sometimes considered low-intensity are brief treatments, group therapy, and task-shifting interventions delivered by non-specialists.

Most efficacious high-intensity treatments are now available in low-intensity self-help versions, so that clients are provided with a range of options for effective treatment. This allows accessibility and affordability, and may overcome barriers associated with scheduling limitations, transportation challenges, and mental health stigma. Concerns related to safety, engagement, and adherence in self-help programs can be addressed, to some extent, by (asynchronous) therapist guidance.

Many hundreds of non-EMDR computerized therapies and mHealth apps have been found effective in research trials. EMDR therapy is not an option for the many millions of clients who are being prescribed, or seeking, low-intensity treatment. This is not because EMDR is not effective, or not accessible, or not acceptable, or not efficient. It is simply because no one has developed these treatments.

The EMDR International Association (2021) states that it "does not condone or support indiscriminate uses of EMDR therapy such as 'do-it-yourself' virtual therapy." This statement is appropriate, given the fact that until now, only one single self-administered EMDR treatment had been tested in research (Spence et al., 2013). Even though there are now two additional published studies (Karadag et al., 2021; Moench & Billsten, 2021), these provide only very preliminary evidence. They are suggestive of the possibility that effective safe EMDR self-help treatments can be developed.

In this author's opinion, the possibility that guided self-help EMDR treatment is feasible and effective is best seen in the EMDR group studies. During EMDR group therapy, the group participants work quietly and independently on their own material, with therapists' guidance provided in a highly scripted manner. Research has consistently shown that EMDR group treatment produces significant decreases in symptoms of PTSD and often depression (Karadag et al., 2021).

If we extrapolate from the group treatment research findings and consider that these effects were achieved in "guided self-help EMDR treatment," then there is already large body of evidence suggesting that EMDR self-help may have the potential to be an effective and safe treatment. It is also important to note that this treatment has been provided with high acceptability, across many countries and populations for many years.

This conceptualization views the EMDR group therapist as an instructor, providing scripted directions. It suggests that the same instruction could be provided (1) in a computerized format or (2) with task-shifting, by a nonspecialist. The first is supported by Moench and Bellsten's (2021) RCT, which successfully provided a computerized version of G-TEP; the second by two RCTs in which paraprofessionals effectively and safely administered group therapy (Jarero et al., 2017; Smyth-Dent et al., 2019). Future research is needed to evaluate whether this is indeed a realistic safe option.

Can safe self-help computerized EMDR treatments for mild/moderate PTSD be developed that draw on the procedures used in group treatment? Moench and Billsten (2021) stated that they are working on developing other versions of their computerized EMDR treatment, STEP, that may make it available for other populations. It is recommended that they add asynchronous therapist guidance to make the program more accessible and to enhance retention for clients with mild/moderate PTSD. Could the other group EMDR treatments also use their procedures as a template to develop safe guided computerized versions for PTSD?

Other future possibilities for EMDR low-intensity and self-help treatment include those that focus on

lowering anxiety, decreasing depression, reducing pain, eliminating insomnia, and relieving stress. Such interventions could be provided via mHealth apps or computerized treatment. Some treatments could use the relaxing effects of bilateral tones and/or tapping. Others could use the powerful desensitization effects of working memory taxation. There are many possibilities when we consider how EMDR could be used in safe, brief, and effective ways.

The WHO has been developing culturally sensitive treatments and mHealth apps for low-middle-income countries which focus on problem management and enhancing strengths, instead of addressing mental health disorders (Sijbrandij et al., 2020). Surely EMDR therapy has much to offer in this area. For example, Karadag et al.'s self-help book for children (2021) focused on positive elements such as resourcing, safe place, and future template, and significantly reduced children's symptoms of anxiety, depression, and PTSD. This is an exciting new area for exploration by the EMDR community, requiring future research and development.

All future developments must carefully build in client safety mechanisms and stop-measures, and must ensure privacy and confidentiality, as previously outlined in this article and in the APA (2021) guidelines. All proposed protocols should be tested in rigorous research studies to ensure that they are efficacious, safe, and well-tolerated before being offered to the public.

It is also recommended that developers of computer programs and mHealth apps carefully consider the vital importance of quality production. As noted in the Mobile App Rating Scale (Messner et al., 2020), computerized treatments and mHealth apps should be engaging, fun, and interesting, with individual adaptability and interactivity, and with visual appealing attractive layouts and graphics. They need to be functional in performance, usability, navigation, and design. The information that they provide must be easily understood, high quality, accurate, credible, and evidence-based (Sander et al., 2020). Individuals interested in creating mHealth apps may benefit from the instructions provided by Schellong et al. (2019) and Torous et al. (2019).

Conclusion

EMDR therapy is as effective as its CBT-type counterparts, but it is not as available or accessible or well-known. Whereas hundreds of RCTs have found CBT low-intensity and self-help interventions to be efficacious, only three EMDR RCTs have been conducted. Developing safe, low-intensity, efficacious EMDR interventions that are easy to use and readily available will make effective EMDR treatment available to many millions of people around the world.

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