

JOURNAL
OF SANDPLAY
THERAPY®
Volume 31
Number 1
2022

R E S E A R C H

SANDPLAY THERAPY:
AN EVIDENCE-BASED TREATMENT

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Sandplay is a powerful therapeutic modality that we need to share with the professional world. Trying to advocate for an unconscious process places us in a paradoxical situation; we must show facts, studies, and more research.

— Lucia Chambers
2004 STA Research Roundtable

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Is sandplay therapy evidence-based? In an era where high value is placed on scientifically-proven psychotherapies, this question is often asked by sandplay therapists, clients, collaborating professionals, payers, and policy makers alike. People want to know if sandplay therapy works, and if so, who benefits. Although it can be difficult to capture the essence of an unconscious process through research, there is a substantial and growing body of evidence demonstrating the efficacy and effectiveness of sandplay therapy in the treatment of children and adults with a wide variety of clinical presentations. The research comes from many countries and includes case studies, qualitative, quantitative, and mixed-method designs. This article briefly defines evidence-based treatment and highlights the research base for sandplay therapy in this context. First, it is important to clarify what is meant by sandplay therapy.

SANDPLAY THERAPY

There are many ways to use sand and miniatures in psychotherapy. Sandplay therapy (also known as Jungian Sandplay Therapy, Kalfian Sandplay Therapy, or sandplay) was founded by Swiss psychoanalyst Dora Kalff. Sandplay emphasizes self-directed creative expression by the client and an observing, empathic stance by the therapist to tap into conscious and unconscious processes and to activate the psyche's natural healing capacities (Kalff, 1966/2020). As a cross-cultural, trauma-sensitive, multi-sensory therapeutic method that does

not depend on verbal language, sandplay is practiced throughout the world with children and adults with a range of mental health concerns. Sandplay may be used as a short-term or long-term intervention, and may be conducted in an individual or group format in a variety of settings including outpatient clinics, community-based settings, schools, and hospitals. With strong theoretical roots in the depth psychology of C. G. Jung, therapeutic play, and Eastern contemplative practices (Kalff, 1966/2020), general support for sandplay draws from the research base for psychodynamic methods, play therapy, expressive art therapies, trauma-informed care, and mindfulness-based practices (Freedle, 2017; Wiersma, et al., 2022).

EVIDENCE-BASED TREATMENT

Evidence-based treatment is nested in a broader context of evidence-based practice. According to the American Psychological Association (2006), evidence-based practice involves, “the integration of the best available research with clinical expertise in the context of patient characteristics, culture and preferences” (p.273). The sandplay therapist seeks education, training, and consultation to enhance their professional competence (STA, 2018). They collaborate with their clients and adapt their approach to meet client needs. Sandplay therapists are also mindful that the research focus of evidence-based practice is not limited to the treatment method itself, but rather extends to research on the treatment process, the therapeutic relationship, and the intersection of client characteristics, identities, and circumstance.

Evidence-based treatments (also known as ESTs, empirically-supported treatments) are those with scientific evidence of treatment outcomes. Multiple studies with different research designs contribute to the breadth and quality of evidence depending on the question at hand. For example, to understand how particular clients experience sandplay therapy, descriptive case studies or qualitative research designs may be most helpful. To measure the effectiveness of sandplay therapy with different populations and under certain conditions, quantitative studies using experimental research designs are needed, including those that take place in the actual settings where sandplay therapy is conducted.

Research quality is determined by the strength of conclusions that can be drawn about treatment efficacy– the systematic and scientific evaluation of whether a treatment works. The highest quality studies, such as randomized controlled trials (RCT’s) best control threats to internal validity and are considered the most reliable and credible. There is general consensus regarding the strength of a hierarchy of scientific evidence when drawing conclusions about treatment efficacy (APA, 2006). For the purposes of this discussion, the evidence will be clustered into three broad categories in ascending order toward those that provide the most scientific evidence for treatment outcomes (Figure 1).

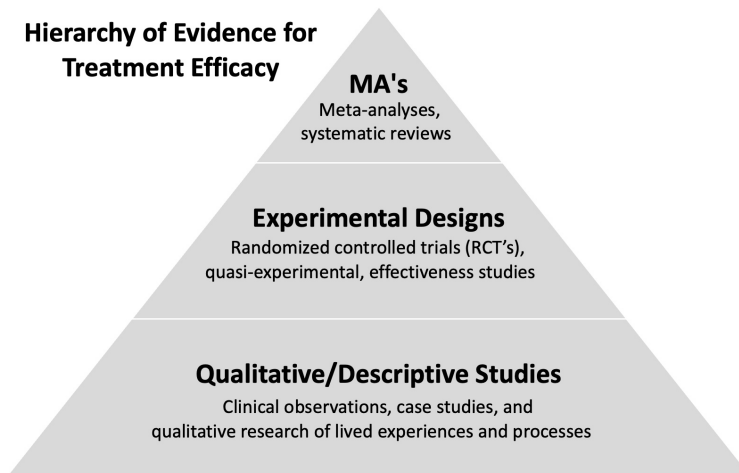


Figure 1. Hierarchy of evidence for treatment efficacy

QUALITATIVE/DESCRIPTIVE STUDIES

This tier of evidence consists of clinical observations, case studies, and qualitative research, and also includes studies that synthesize qualitative/descriptive research. These types of studies may best capture the lived experiences of people engaging in sandplay therapy, the treatment process, and the factors that contribute to change, and can be used to generate questions to guide further study.

For decades, sandplay practice has been informed by research focused on theoretical and qualitative explorations, including case study and multiple case study designs. In the classic book, *Sandplay: A Psychotherapeutic Approach to the Psyche*, Dora Kalff introduces her original approach and invites readers into her consulting room with nine illustrative case studies (Kalff, 1966/2020). She calls upon the therapist to offer a “free and protected space” for healing (p.16), emphasizes the importance of touching and releasing the transformative energies of the sacred Self to further psychological development, and reviews the cases children and adults with problems such as anxiety, bedwetting, learning challenges, mother bonds, and the need for stronger ego development (Kalff, 1966/2020).

Rie Rogers Mitchell and Harriet Friedman (1994) explore the history of sandplay therapy and survey the available empirical research from 1970 to the early 1990s. In addition to case studies approved for inclusion in the archives of the International Society for Sandplay Therapy (ISST), research

during this time period focused mostly on the qualities, themes, and symbolic content of sandplay scenes based on age, developmental level, and mental health considerations.

For the past thirty-one years the *Journal of Sandplay Therapy* has provided rich case studies with vivid photos that provide insight and deep understanding about the use of sandplay therapy with a wide variety of people— from young children to the elderly. A broad spectrum of issues is addressed that includes, but is not limited to attachment, abuse, trauma, physical illness, identity development, racial and cultural challenges, grief and loss, mental health concerns, school/work problems, addiction, phase of life, spiritual growth, and preparation for death. Abstracts of these studies can be easily searched and accessed by author or key words (<https://www.sandplay.org/journal/abstracts/>).

Qualitative studies exploring the process of sandplay therapy suggest that, along with the therapeutic relationship, the multi-sensory aspects of sandplay are an essential and underlying mechanism of change (Freedle, 2007), and that sandplay therapy, with emphasis on symbolic expression can facilitate access to feelings and experiences that can be difficult to address through verbal therapy alone (Freedle, 2007; Lagutina, et al., 2011).

A synthesis of findings from qualitative studies (including the qualitative component of mixed-method studies) published in the *Journal of Sandplay Therapy* that examined how people experienced sandplay therapy is presented in Table 1. The participants included adolescents and adults who sought sandplay therapy for personal growth, mental health concerns, trauma, addiction, traumatic brain injury, and/or severe mental illness.

How do people experience sandplay therapy?

(Freedle, 2007; Freedle, et al., 2015, 2020; Loue, 2019; Stănescu, 2021)

Calming, relaxing, safe, peaceful
 Playful, enjoyable, fun
 Brings up/releases deep emotions and memories, intense
 Able to express myself without words, tell my story, make my world
 Able to go deeper, be more complete, my whole self
 Able to see what's happening and work through my feelings/problems
 Sensory experience, able to connect to my body and my feelings
 Able to use my imagination, creativity, "like dreaming with toys"
 Improves awareness, mindfulness stance, able to be an observer
 Leads to insights, self-discoveries, epiphanies, and new perspectives
 Therapist's role is important, provides safety and support
 First sand trays can be different, challenging, anxiety-provoking
 Very helpful, beneficial

Table 1. Synthesis of findings from qualitative research published in the *Journal of Sandplay Therapy*

EXPERIMENTAL DESIGNS

This tier of research consists of studies that use experimental designs to determine treatment efficacy. Over the past twelve years there has been a sharp increase in studies demonstrating the efficacy of sandplay utilizing pre-post and quasi-experimental research designs, as well as a significant number of studies that utilize randomized controlled trials (Ahn, et al., 2020; Roesler, 2019; Wiersma, 2019). A summary of experimental research will be discussed in the next section which presents systematic reviews and meta-analyses of sandplay therapy. A list of studies included in the reviews can be found in Roesler (2019) and Wiersma, et al. (2022).

Over the past four years neuroimaging studies showing the positive effects of sandplay therapy on cortical and subcortical brain functioning have also emerged (Akimoto, et al., 2018, 2021; Foo, et al., 2020; Foo & Pratiwi, 2021). Using near infrared spectroscopy in a single case design, findings showed that sandplay facilitated dynamic coupling of the prefrontal and temporal regions (frontotemporal network), suggesting how sandplay facilitates the retrieval and reprocessing of memories with an optimal amount of cognitive control (Akimoto, et al., 2018). Moreover, inter brain synchronization was found between therapist and client during sandplay possibly representing the neural foundation of empathy in sandplay (Akimoto, et al., 2021). Using magnetic resonance spectroscopy and outcome measures, clinical improvement in anxiety symptoms were found in patients with generalized anxiety disorder (GAD) and were associated with improved brain functioning in the limbic system and prefrontal cortex (Foo, et al., 2019, 2021).

META-ANALYSES AND SYSTEMATIC REVIEWS

This “top tier” of scientific evidence for treatment efficacy consists of meta-analytic studies and systematic reviews. A meta-analysis systematically examines results from a number of independent experimental studies of the same subject and uses statistical analysis to investigate treatment effects across studies. A systematic review involves a structured search, appraisal and summary of literature for a specific topic.

Systematic literature reviews of the evidence base for sandplay therapy indicate that sandplay has been found to be effective in treating a wide range of problems in children and adults including anxiety, depression, trauma, addictive behaviors, attention-deficit/hyperactivity disorder (ADHD), borderline personality disorder, autism, disabilities, migration, as well as other emotional, behavioral, somatic, and social issues (Roesler, 2019; Wen, et al., 2019). Moreover, sandplay’s nonverbal approach and use of play changed the focus of therapy away from solely verbal communication or cognitive insight, appeared to lower the threshold for the initiation of psychotherapy, and was determined to have particular implications for the treatment of clients with traumatic stress, disabilities or language problems, which are difficult to treat with conventional psychotherapy methods (Roesler, 2019).

An international meta-analysis of sandplay therapy was recently published (Wiersma, et al., 2022) that examined emotional and behavioral outcomes with children and adults. During this review 1715 potential records from over sixteen countries were identified and screened, and ultimately, forty studies from eight countries (including a total of 1284 participants) were analyzed that met quality standards and inclusion criterion. The overall effect size for sandplay therapy was large (Hedges' $g= 1.10$) and maintained for internalizing, externalizing and ADHD symptoms. Both individual and group sandplay (each person in the group works in their own sand tray) were found effective, with improved effect sizes associated with individual treatment over the group format. Sandplay therapy also appeared to improve outcomes when added to treatment as usual. The results from this meta-analysis were consistent with a meta-analysis conducted by Lee & Jang (2015) that reviewed studies in South Korea on cognitive, emotional and behavioral outcomes in children and adolescents and also found a large effect size (Hedges' $g= 1.098$) for sandplay therapy. It is also important to note that the effect sizes found for sandplay therapy in these meta-analytic studies are similar to that of more well-known evidence-based psychotherapies such as cognitive behavioral therapy.

In conclusion, there is a significant and growing body of qualitative and quantitative research that establishes sandplay therapy as an evidence-based treatment for children and adults with a variety of emotional and behavioral problems. Further research is needed and welcome.

REFERENCES

- Ahn, S., Lee, Y., Lee, S., & Jang, M. (2020). A study on the research trends in sandplay therapy in Korea (2009-2018). *Journal of Symbols and Sandplay Therapy*, 11(1) 39-97. <https://doi.org/10.12964/jsst.20002>
- Akimoto, M., Furukawa, K., & Ito, J. (2018). Exploring the sandplayer's brain: A single case study. *Archives of Sandplay Therapy*, 30(3), 73-84.
- Akimoto, M., Tanaka, T., Ito, J., Kubota, Y., & Seiyama, A. (2021). Inter-brain synchronization during sandplay therapy: Individual analyses. *Frontiers in Psychology*. 12:723211. doi: 10.3389/fpsyg.2021.723211. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.723211/full>
- American Psychological Association (2006). Evidence-Based Practice in Psychology. *American Psychologist*, 61(4), 271-285. DOI: 10.1037/0003-066X.61.4.271 <https://www.apa.org/pubs/journals/features/evidence-based-statement.pdf>
- Chambers, L. (2004, October). *Free and protected space: Looking deeper*. [Paper presentation, STA Research Panel]. Sandplay Therapists of America National Conference, Monterey, CA.
- Foo, M., Freedle, L.R., Sani, R. & Fonda, G. (2020). The effect of sandplay therapy on the thalamus in the treatment of generalized anxiety disorder: A case report. *International Journal of Play Therapy*, 29(4), 191-200. DOI: <https://psycnet.apa.org/doi/10.1037/pla0000137>

- Foo, M. & Pratiwi, A. (2021). The effectiveness of sandplay therapy in treating patients with generalized anxiety disorder and childhood trauma using magnetic resonance spectroscopy to examine choline level in the dorsolateral prefrontal cortex and centrum semiovale. *International Journal of Play Therapy* <https://psycnet.apa.org/doi/10.1037/pla0000162>
- Freedle, L. R. (2007). Sandplay therapy with brain injured adults: An exploratory qualitative study. *Journal of Sandplay Therapy*, 16(2), 115-133. <https://www.sandplay.org/journal/abstracts/>
- Freedle, L. R. (2017). Healing trauma through sandplay therapy: A neuropsychological perspective. In B. Turner, (Ed.), (pp. 190- 206). *The Routledge International Handbook of Sandplay Therapy*. Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315656748-12/healing-trauma-sandplay-therapy-lorraine-razzi-freedle>
- Freedle, L.R., Altschul, D.B., & Freedle, A.M. (2015). The role of sandplay therapy in the treatment of adolescents and young adults with co-occurring substance use disorders and trauma. *Journal of Sandplay Therapy*, 24(2), 127-145. <https://www.sandplay.org/journal/research-articles/>
- Freedle, L.R., Goodwin-Downs, D., Souza, J. & Cipponeri, A. (2020). The added value of sandplay therapy with emerging adults in an outdoor behavioral healthcare program. *Journal of Sandplay Therapy*, 29(1), 129-144. <https://www.sandplay.org/journal/research-articles/>
- Kalff, D. M. (2020). *Sandplay: A psychotherapeutic approach to the psyche*. (B. Matthews, Trans.). Analytical Psychology Press. (Original work published in 1966).
- Lagutina, L., Sperlinger, D., & Esterhuyzen, A. (2011). Addressing psychological aspects of physical problems through sandplay: A grounded theory study of therapists' views. *Psychology and Psychotherapy: Theory, Research and Practice*, 86(1), 105–124. <https://doi.org/10.1111/j.2044-8341.2011.02042.x>
- Lee, J.-S., & Jang, D.-H. (2015). The effectiveness of sandplay treatment meta-analysis. *Korean Journal of Child Psychological Therapy*, 10(1), 1-26.
- Loue, S. (2019). Using sandplay therapy with severely mentally ill adults in a residential therapeutic community. *Journal of Sandplay Therapy*, 28(2), 127-145. <https://www.sandplay.org/journal/abstracts/>
- Mitchell, R., & Friedman, H. (1994). *Sandplay: Past, present and future*. Routledge.
- Roesler, C. (2019). Sandplay therapy: An overview of theory, applications and evidence base. *The Arts in Psychotherapy*, 64, 84-94. <https://doi.org/10.1016/j.aip.2019.04.001>
- Sandplay Therapists of America (2018). *STA Standards for Professional Conduct*. <https://www.sandplay.org/membership/ethics/>
- Stănescu, D. F. (2021). How do adults experience sandplay therapy: An interpretive phenomenological analysis. *Journal of Sandplay Therapy*, 30(1), 131-145. <https://www.sandplay.org/journal/research-articles/>
- Wen, L., Li, Q., & Zhang, X. (2019). Sandplay therapy for mental disorders. *International Medicine and Health Guidance*, 25(2), 201-203.
- Wiersma, J. K. (2019). New frontiers in sandplay therapy. *Journal of Sandplay Therapy*, 28(1), 135-139. <https://www.sandplay.org/journal/abstracts/>
- Wiersma, J. K., Freedle, L. R., McRoberts, R., and Solberg, K. B. (2022). A meta-analysis of sandplay therapy treatment outcomes. *International Journal of Play Therapy*. Advance online publication. <https://doi.org/10.1037/pla0000180>