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Taglialatela, Lauren and Circus Arts Institute, "Circus Arts Therapy Shows Clinical Benefits" (2018).
Faculty Publications. 4598.

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Circus Arts Therapy[®] Fitness and Play Therapy Program Shows Positive Clinical Results

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The goals of this article include introducing Circus Arts Therapy fitness and play therapy program, designed for children ages 4–17, which combines both directed structured activities with nondirective approaches implemented within a circus-based context (e.g., juggling, trapeze, tight wire), and to evaluate the physical and emotional benefits of participating in this type of therapy. Parental report data were collected about 15 children who participated in two 8-week sessions of the program, and results indicate significant benefits in physicality, ability to function as a team, and ability to follow directions. As one of the first studies to empirically evaluate the efficacy of circus arts as a therapeutic tool, these results are encouraging and speak to the need for additional more broad-based evaluations.

Keywords: play therapy, social circus, intervention, research study, child-centered

The Association for Play Therapy (APT) defines *play therapy* as “the systematic use of a theoretical model to establish an interpersonal process wherein trained play therapists use the therapeutic powers of play to help clients prevent or resolve psychosocial difficulties and achieve optimal growth and development.” This definition encompasses several treatment methods from both the directive and nondirective approach. The goals of these treatments may include development of problem-solving and communication skills, emotional control, learning ways to relate to other people, and behavior modification (APT, n.d.). Toys, games, and art materials used in play therapy typically include manipulatives and art materials such as clay, sand, paint, and crayons, traditional and counseling board games, expressives such as puppets and/or dolls, and the therapist determines how to implement these materials to facilitate the therapeutic benefits of play (Schaefer, 1993).

In any given year, 13–20% of children in the United States will suffer from a mental health disturbance and that prevalence rates appear to be increasing (Perou et al., 2013); It has become a national priority to identify proven therapeutic interventions to prevent the development of more severe and costly mental health problems (U.S. Public Health Service, 2000). Therefore, it seems critical to develop and then to evaluate the effectiveness of innovative types of play therapy (Mellin, 2009). The Circus Arts Therapy fitness and play therapy program, designed for children ages 4–17, combines both directed structured activities with nondirective approaches implemented within a circus-based context (e.g., juggling, trapeze, tight wire). The therapeutic use of circus activities in the play therapy room is an emerging field. Consequently, at this time there is little literature about this topic and the potential efficacy of this type of play therapy remains unknown. The goals of this article are to introduce Circus Arts Therapy fitness and play therapy and to evaluate the program’s potential to positively impact children’s emotional control, physicality, sociability, and ability to work as part of a team and to follow directions.

Play Therapy Modalities

Nondirective therapy principles come originally from Carl Rogers’ (1942) person-centered

This article was published Online First February 1, 2018.

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therapy. Nondirective is “based on the theory that the child’s behavior is at all times caused by the drive for complete self-realization” (Landreth, 2002, p. 35). Virginia Axline, a student of Carl Rogers, successfully applied the principles of nondirective therapy to children in play therapy. She describes in detail her nondirective approach to working with children “based on the assumption that the individual has within himself, not only the ability to solve his own problems satisfactorily, but also this growth impulse that makes mature behavior more satisfying than immature behavior” (Axline, 1947, p. 15). Garry Landreth extended Axline’s work in his nondirective approach called *child-centered play therapy* (CCPT; Landreth, 2002).

Ray, Schottelkorb, and Tsai (2007) found that children’s symptoms of attention-deficit/hyperactivity disorder (ADHD) as well as emotional instability, anxiety, and withdrawal decreased after participating in CCPT. Similarly, Muro, Ray, Schottelkorb, Smith, and Blanco (2006) reported that long term CCPT was effective in addressing emotional and behavioral concerns. In 2009, Ray, Blanco, Sullivan, and Holliman found that, compared to a control group, children who experienced CCPT had a meaningful decrease in aggressive behaviors. Aggression was also studied in addition to other disruptive behaviors of children by Bratton et al. (2013) where they found that the children who participated in CCPT, compared to those who participated in reading mentoring, showed a clinically significant decrease in disruptive behaviors. This established CCPT as an early mental health intervention for at-risk children in Head Start (Bratton et al., 2013).

Directive approaches differ from nondirective approaches in that they are centered around the therapist giving directions rather than following the lead of the client. Examples of other directive approaches include: psychoeducation, the therapist assigning roles for role playing, and other direct influence techniques such as advice and direction. There are directive aspects of Circus Arts Therapy, for example, when a new circus trick is explained to a child specifically to enhance the child’s skill level and confidence in moving their bodies in a particular way. As will be discussed, Circus Arts Therapy contains nondirective aspects, as well.

Lastly, a meta-analysis of 93 studies indicated that both humanistic nondirective and

nonhumanistic directive approaches showed positive impact, with effect sizes of .92 and .71, respectively (Bratton, Ray, Rhine, & Jones, 2005). As will be detailed later in this article, Circus Arts Therapy incorporates both directive and nondirective facets.

Evaluation of Social Circus

Cirque Du Soleil is a leader in the development and implementation of circus arts for prosocial and individual growth. They have created a Social Circus program called Cirque du Monde that targets at-risk youth. It combines circus techniques with educational social interventions (Cirque du Soleil, 2015). The program entails primarily directive techniques including the learning of specific circus skills (like Circus Arts Therapy does) combined with another directive technique of specific game playing, such as ‘getting to know you’ games, as well as other socialization games for the purpose of social intervention. There are reports that indicate participating in a social-circus program is, or at least could be, potentially beneficial.

Reg Bolton, who combined careers as a teacher, clown, arts center director, actor and community artist established over 25 local circuses in three countries. In “Circus in a Suitcase” Bolton (1988) discusses many of his experiences with school circus projects. Acknowledging the lack of literature relating to circus programs, Bolton (1999) argues for the benefits of circus in his 1999 article “Circus as Education.” Bolton focuses on three areas: physical education, social education, and emotion. He points out one of the main differences between traditional sports and circus. Rather than having traditional winners and losers (as many children’s sports have), circus is about what a child can make happen on his or her own and while cooperating with others, not competing against them. Winning and losing are not part of the experience; rather, the experience has value, in part, because of its cooperative rather than competitive foundation. Bolton also likens the philosophy and practice of circus to emotional archetypal factors in a Jungian sense, specifying that children need to dream, take risks, learn trust, and show off. Bolton further argues that passage through these four stages would promote emotional growth and would provide foundation for the child to become an emotionally healthy teenager and well-adjusted,

loving adult. Based on long-lived and rich personal experiences in a variety of venues, Bolton argues for the potential of circus to be catalyst for physical, emotional, and social learning.

Using a program evaluation model, Maglio and McKinstry (2008) provided support for the idea that involvement in circus can foster several areas of learning. They evaluated the “Circus in Schools” program in context of the Victorian Essential Learning Standards (VELS) criteria. Based on observations by the project manager, in conjunction with qualitative perspectives from the students and school representatives, Maglio and McKinstry (2008) found that circus-related activities including warm-up games, manipulation (hula hooping, juggling), acrobatics, balance-based activities, and performance in the Circus in Schools program are designed to meet criteria that are congruent with VELS criteria and with occupational therapy practice. Specifically, these circus-type activities are intended to promote physical health, balance, and coordination, as well as improve social connectedness, teamwork, a sense of belonging, and can provide calming rhythmic activities.

Seymour (2012) discussed the therapeutic benefits of circus arts based on interviews with circus trainers, physiotherapists, occupational therapists, and other professionals. According to an interview with circus trainer Jessica Radvan, circus provides an opportunity “to develop balance and coordination through the use of their bodies in a direct, physical way—it’s their hands that hold onto the bar and keep them from falling, it’s their feet that step onto the trampoline and first make contact with the mat once they’ve jumped” (p. 43). Kaye Dixon, a physiotherapist, reported to Seymour that she starts “with the sensory systems and then the coordination systems: tactile, vestibular-balance, proprioception—knowing where your body is in the space—kinaesthetic patterns, and audio and visual. And by assessing these areas I could find out which area was failing for them and then target that area with specific exercises but always with this goal in mind . . . which is juggling” (p. 43). And Fiona Jones, an occupational therapist, indicated she perceived physical benefits from circus arts including improved muscle tone, motor coordination, and posture and well as social and emotional changes including improved ability to participate in social interactions, elevated motivation, and improved

self-perception. These observations by professionals using circus arts in therapeutic settings are certainly promising, and call for the need for systematic evaluation of the potential benefits of circus arts in a therapeutic setting.

Spiegel, Parent, Lockhart, Taylor, and Yassi (2014) evaluated the impact of participating in a social circus program. More specifically, they collected survey data from 56 attendees of the Rassemblement, a gathering of participants from all Quebec’s social circus programs, held in Quebec in May, 2014. Results indicate that participants felt significantly better about several aspects of their personal growth, social inclusion/engagement after having participated in a social circus program. Although Spiegel et al. (2014) did not directly assess ability to work as a member of a team, they did find significant improvement in comfort interacting with people who are different than you, going out of the way to help others, and feeling like part of a community/group. They also found significant improvement in attitudes toward participating in fitness activities.

Although this study is one of only a very few that evaluates the impact of participating in a social circus, we should be conservative about the interpretation of the results for several reasons. First, no effect sizes were provided, therefore robustness of the significant differences remains unknown. Second, although over 20 *t* tests were calculated and presented, there appears to be no correction for experiment-wise error and it is unclear how many of the significant results would remain statistically significant with such a correction. Third, participants did not complete surveys before they began their involvement in social circus; rather, the study was a post-pre design in which participants completed a survey to report current levels and then retrospectively evaluated levels of those same factors before beginning social circus. Lastly, as indicated (Spiegel et al., 2014, p. 18) only people 18 and over were invited to answer the questions; therefore, the results may or may not generalize to a younger/youth population.

Circus Arts Therapy Fitness and Therapy Program

The methodology behind Circus Arts Therapy fitness and play therapy program (developed by Carrie Heller, LCSW, RPT) comes from the use of specific techniques to teach

circus arts combined with clinical skills typically found in a play therapy setting. There are two theoretical models that guide this therapy. A major part of the core theoretical principals originated with the counseling model developed by Rogers (1951) and then adapted by Axline (1947, 1964) for children and further codified by Landreth (2002) as CCPT. The theoretical basis of CCPT (which was first referred to as *client-centered play therapy*), comes directly from Rogers's person-centered theory. Rogers came to see therapeutic presence as an overarching concept. The goal of the Circus Arts Therapy program is to establish a safe place for change to occur, a place of trust, and the room and all that is present in the room is consistent with CCPT (Landreth, 2002). The therapy includes a variety of techniques such as TEEL indicating Tracking, Empathy, Encouragement, and Limit Setting (Draper, White, & Wynn, 2009; Landreth, 2002; Wynne & White, 2009). Parents are also taught how to use TEEL with their child outside of the therapeutic setting. In addition, several nondirective techniques are used to foster a safe relationship, listen actively, and use subtle guiding.

The second theoretical model that guides the Circus Arts Therapy program's room is Adlerian play therapy. The parent interview provides information about the child's lifestyle and personality (Kottman, 2001) and the therapist will follow through in the room with a prosocial statement (Kottman, 2001) that is suggestive of what it would look like to be a team working together. Consistent with CCPT, in Circus Arts Therapy the child truly changes and moves through his or her challenges when they are ready to (Landreth, 2002). When reflecting for a client the therapist uses the following philosophy: "alert to recognize the feelings the child is expressing and I reflect those feelings back to him in such a manner that he gains insight into his behavior," (Axline, 1947, p. 73). For example, "I can hear you growling and it sound like you are angry." Similarly, Adlerian play therapy helps the child gain insight into his or her own issues, and those cognitions can help lead to change (Kottman, 2001).

To understand the role that the Circus Arts Therapy fitness and play therapy program plays in the wider creative arts therapy field, it will be helpful to look at the dance/movement therapy field. The American Dance Therapy Associa-

tion defines *dance/movement therapy* as "the psychotherapeutic use of movement as a process which furthers the emotional, social, cognitive, and physical integration of the individual" (Chaiklin & Wengrower, 2009, p. 146). The Circus Arts Therapy program naturally draws from dance/movement therapy with its strong emphasis on physical movement, the metaphors and psychotherapeutic gains that can be drawn from these experiences. An exercise in Chapter 6 of *The Art and Science of Dance/Movement Therapy* describes a "tightrope" themed session that uses imagery and verbal discussion to guide a client through the emotions and feelings that might surface if someone were balancing on a wire (Chaiklin & Wengrower, 2009). This exercise could be (and is) replicated on an actual tight wire in the Circus Arts Therapy program. When the client is done with the walk, he or she is asked about what it was like. Typically, the answer indicates they have become more centered and calm while walking and even after walking the wire. Furthermore, the child is asked to visualize him/herself walking the wire before a math test, for example, to help calm himself/herself (emotional control). This is just one example of how clinical work, dance/movement therapy, play therapy and the Circus Arts Therapy program can inform each other.

The Circus Arts room is about 1,300 square feet. Half of the room has ceilings that are about 12 feet high and the other half about 18 feet high. Most therapy clients start in the low area, and in time progress to the high area. Therapy groups typically use both spaces. There is a variety of ground and aerial equipment, including but not limited to balance boards, jump ropes, hula hoops, hammocks, low, medium and high trapeze, low and high Spanish Web (soft rope for climbing and aerial tricks), circus rings, tight wire, and triple trapeze. Most of the equipment usage is accompanied by detailed skill progressions. The skill progressions are broken down into the most basic of moves that combine to form tricks and then combinations of tricks. These progressions are included in the *Aerial Circus Training and Safety Manual* (Heller, 2004).

Before joining the group, each child has come to the circus studio with their parent(s) for an initial consultation. The initial consultation is for not only gathering information about the

nuclear family using a genogram and but also gathering information about the child's ecosystem. (Fishman & Minuchin, 1981). This time is also for examining the family from the Adlerian perspective in terms of personality priorities (comfort, pleasing, control, superiority) sense of belonging, as well as looking at the child's "Crucial C's," which include counting, connecting, courage, and capability (Kottman, 2001). The child's complex world is so important, therefore, parents are asked about socializing with friends and family, as well as engagement in clubs, organizations, or afterschool programs. This is a time for learning about the child's world inside the family system and outside in terms of community around them; their school and peers. This mechanism helps in the understanding of the social aspects of this child's life. Does this child socially connect with others (Harpine et al., 2010) and in what ways can this child be helped in terms of, for example; learning about being a part of group cohesion? (Kottman, 2001). This information helps to inform the therapist about the social aspects of the child's life including teamwork, following directions, and verbal communication skills.

Group sessions are structured to include an opening circle with a group warm up and work on emotional regulation and socialization skills. Emotion cards are used as well as such books as *The Social Skills Picture Book* (Baker, 2001) to help children with their emotional regulation and control. Here the children are learning about emotional intelligence. This includes the identification of emotions and their intensity, managing emotional expression of their own feelings, and recognizing the emotional expression of another person and empathizing with the other person. The use of the cards followed by the Gestalt technique of role playing (Oaklander, 1969) to act out the cards, in conjunction with other social situations and scenarios that are created based on the constitution of the group, together work to improve critical social skills (Siu, 2014) such as emotional regulation, turn taking, following directions, and listening to others.

Later in the group experience, when the children rotate around in circus stations, the children have the opportunity to experience these emotions first hand; for example, if they do not get to go first and maybe disappointed or jealous. It is through this experience of then work-

ing through who will go first and who will go second on the trapeze, that the new emotional regulation is realized. The children's new responses are then encouraged (Draper et al., 2009; Landreth, 2002; Wynne & White, 2009). This new response further helps the child understand the ramifications of this new emotional regulation.

After the opening circle, next the children rotate around the room in groups to their "stations" participating in various circus activities and exercises together. Here the children are working on the physical skills of balance, coordination, flexibility and strength, in addition to having the opportunity to practice new social skills learned as the children play together.

Specific goals are outlined for the children. One of the main goals is to help teach children activities and exercises that will not only improve their physicality (see Ratey & Hagerman, 2008), but that will also help regulate them and to help them to identify their own engine states or arousal state and what might help their engines get "just right" (Shellenberger & Williams, 1992). Children are prompted to think and then are assisted in identifying what makes their body feel more regulated. For example, a client may find that climbing the Spanish Web (which requires mental focus, strength, and coordination) helps them to be calm on the inside. This is one of the key mechanisms used in the Circus Arts Therapy fitness and play therapy program to help children not only identify their emotional state, but then learn what helps to regulate their emotions; the term often used is called an *engine helper* (Shellenberger & Williams, 1992). Group sessions are structured to end with a cool down and closing circle where more social and emotional issues are addressed as time allows.

Case Illustrations

To better describe aspects of the program, a few case illustrations are provided below. When "Grant," developmentally age 4, first came to the Circus Arts Therapy fitness and play therapy program's group session, he tended to be non-verbal when playing with peer and always wanted to go first. He has had the most success with the triple trapeze (where multiple children are on the trapeze at one time) not only learning many new tricks but also cooperating and com-

municating with his peers. When Grant does activities such as the triple trapeze and Buddy Walkers (you must walk with a buddy together on this apparatus), he is naturally being put in a position to have to communicate verbally with his peers. Although he did not communicate much at first, he started to pursue conversations with the other children and became much more interested in what other children were doing in the room after two 8-week sessions. Working through every turn taking experience using the techniques outlined previously allowed him to avoid “meltdowns” when he was not chosen to go first. It was through this experience of teamwork and being put in a position to learn more frustration tolerance while waiting for his turn, coupled with dialogue about what it means to be fair in turn taking, that allowed him to increase emotional control and teamwork skills. Grant’s mom also reports that his confidence in increased since starting the Circus Arts Therapy program, and that he has made new friends.

One client, a five-and-a-half year-old named “Bree,” came to therapy because of sensory processing problems. She showed signs of growth after just 6 weeks of the Circus Arts Therapy Program. Her parents stated, “We’re seeing her become a more active listener, her behavior more even keeled” and verbalizing things that “we didn’t even know she had the ability to do” (personal communication, Mittleman, May 3, 2010).

This research evaluates the potential benefits for children participating in the Circus Arts Therapy group program. Although the Circus Arts Therapy program is designed to encourage and enhance a number of facets such as self-esteem, crossing the midline abilities, ability to overcome fears and to increase focus and attention; in this article the focus is on the potential impact the program has on the participants’ ability to follow directions and to effectively work as a member of a team, to better socialize with peers and adults, to increase emotional control as evidenced by a reduction of ‘meltdowns’ of different varieties (crying, passive aggressive and aggressive behaviors), and to increase overall physicality (strength, balance, flexibility). There is anecdotal evidence indicating that circus arts may be effective at bolstering these aspects. In addition, some empirical studies are available. However, taken together, the body of literature concerning the potential

efficacy of circus arts as a viable type of play therapy is lacking in scientific rigor. Recognizing opportunities to build upon existing literature and to extend the traction of the results about circus arts as a play therapy technique, our goal is to provide a data-driven report with conclusions based on the outcome of appropriate inferential statistical analyses.

Method

Participants

Parental report data were collected from the parents of 15 (8 boys; 7 girls) children ranging in age from 4 to 12 years ($M = 6.53$, $SD = 1.96$) who completed two 8-week sessions of the Circus Arts Therapy group program. Prior to data collection, the research was approved by Kennesaw State University’s Institutional Review Board, and parental consent and assent were obtained for each participant.

Materials and Procedure

Parental report data were collected via online survey at three time points: beginning of the first session of Circus Arts Therapy, end of the first 8-week session, and again at the end of the second 8-week session. We selected a parental-report method because a meta-analysis of 93 empirical play therapy studies designed to assess the impact of the source of information/data of the outcome measure and the play therapy outcome found no reliable differences among parent, teacher, trained observers, participant’s performance, or participant’s report (Bratton et al., 2005). In addition, Bratton et al. (2005) reported that 58.5% of the included studies used parental report (two times as high as the next highest method) as the outcome measure.

The survey contained questions designed to evaluate teamwork, ability to follow directions, sociability, emotional control, and physicality. Ability to function as a part of a team and ability to follow stated directions were scored on a 10-point Likert-type scale with higher scores indicating higher proficiency. Sociability was a composite factor composed of two questions, one geared toward interactions with parents and the other focused on interactions with peers. Both of these questions were scored on a 10-point Likert-type scale with higher scores indicating higher profi-

ciency. Emotional control was scored on a ratio scale as the number of parental-reported “meltdowns” per week. Physicality was a composite factor composed of three survey items (strength, flexibility, and coordination), all scored on a 10-point Likert-type scale with lower scores indicating lower proficiency and higher scores indicating higher proficiency.

Results

Teamwork

A one-way analysis of variance (ANOVA) for repeated measures indicates that teamwork differs as a function of participation in the Circus Arts Therapy program, $F(2, 26) = 6.69, p = .005, \eta^2 = .340$. Specifically, pairwise least significant difference (LSD) post hoc analysis indicated that teamwork was significantly better after one session of CAT ($M = 5.71, SD = 2.37$) than at baseline ($M = 4.64, SD = 2.56$), $p = .029$. In addition, teamwork remained significantly higher than baseline after two sessions of CAT ($M = 6.29, SD = 2.23$), $p = .004$. The difference in teamwork between one and two sessions of CAT was not statistically significant, $p = .230$.

Sociability With Parent(s) and Peers

Although scores did improve after participating in the CAT program ($14.92 \rightarrow 16.83 \rightarrow 15.67$), a one-way ANOVA for repeated measures indicated that sociability with parent(s) and peers did not differ significantly as a function of participation in the CAT program, $F(2, 22) = 2.25, p = .129, \eta^2 = .170$.

Following Directions

The omnibus one-way ANOVA comparing ability to follow directions after participating in the CAT program was not statistically significant, $F(2, 28) = 2.92, p = .07, \eta^2 = .110$. However, LSD pairwise comparisons indicated that ability to follow directions after participating in two sessions of CAT ($M = 5.27, SD = 1.98$) was significantly improved compared to baseline ($M = 4.20, SD = 1.78$), $p = .044$.

Emotional Control

Group analysis: Although reported emotional meltdowns per week did decrease across the test-

ing timeframe ($2.71 \rightarrow 2.21 \rightarrow 2.14$), emotional control did not significantly differ as a function of participating in the CAT program, $F(2, 26) = .671, p = .520$.

Physicality

A one-way ANOVA for repeated measures indicates that physicality increases as a function of participation in the CAT program, $F(2, 22) = 8.12, p = .002, \eta^2 = .425$. Specifically, a pairwise LSD post hoc analysis indicate that physicality was significantly improved after one session of CAT ($M = 26.67, SD = 6.56$) than at baseline ($M = 23.33, SD = 7.13$), $p = .015$. In addition, physicality remained significantly higher than baseline after two sessions of CAT ($M = 28.08, SD = 5.35$), $p = .006$. The difference in physicality between one and two sessions of CAT was not statistically significant, $p = .215$.

Discussion

Given the prevalence of childhood mental health challenges and the fact that prevalence rates appear to be increasing (Perou et al., 2013), it seems increasingly critical to develop and to evaluate the effectiveness of innovative types of play therapy (Mellin, 2009). To this end, we introduced the Circus Arts Therapy fitness and play therapy program, which is based upon traditional facets of Roger’s counseling model, as well as Adlerian and CCPT theoretical models, and evaluated its ability to improve aspects of physical and mental well-being. Results indicate that participation in the program has significant benefits in physicality, teamwork, and following directions. In addition, participation in the program increased sociability and emotional control, however these improvements were not statistically significant.

Although there are personal accounts and testimonials from experts in the field of play therapy, as well as anecdotal evidence from practitioners who incorporate aspects of circus arts in therapeutic and/or social settings (see Bolton, 1999; Maglio & McKinstry, 2008, and interviews in Seymour, 2012) that argue for the utility of circus arts in a play therapy setting, the current study provides data-driven, longitudinal evidence that circus arts is a viable and effective type of play therapy. That statistically significant findings of this study validate previous testaments that circus

activities can improve physicality, teamwork, and following directions.

Spiegel et al. (2014) conducted one of the first data-driven studies designed to evaluate the potential benefits of participating in a social circus. Although their study contained methodological limitations, the current study works to validate their findings. Specifically, the current study found significant increases in sociability and teamwork after participating in the circus arts therapy program, and Spiegel et al. (2014) found similar benefits in an older population after participating in social circus. Taken together, previous literature and the current data-driven study indicate that aspects of circus can be interwoven into a therapeutic setting and have significant benefits for clients across physical and emotional realms.

Limitations and Future Directions

Although the results of this study certainly contribute to our knowledge about the efficacy of circus arts as a therapeutic tool, some limitations should be acknowledged. This research was conducted in context of an individually owned independent practice, which naturally limited the number and potentially the type of participants. The sample size was relatively small, and it would certainly be worthwhile to recruit larger samples and/or to evaluate the use of circus arts in therapeutic settings in different clinical practices to increase the generalizability of the results.

In this study, the variables of interests were measured uniquely by parental report. Although parental report seems to offer similar results as other evaluative methods and has been the primary data collection tool for play therapy (Bratton et al., 2005), to increase convergent validity, other methods of evaluation could be incorporated in future studies. For example, it may be worthwhile to collect actual performance measures for the physicality factor. This could easily be accomplished by have clients complete a few activities at the beginning and end of each session that would reflect changes in strength, flexibility, and coordination. The circus arts environment provides numerous and relatively simple ways to measure these variables. Example indices for strength evaluation could include whether or not (or for how long) a child can hang from the trapeze with his or her feet off of the ground or if/how long a child can hold a plank position on the floor. Incorpora-

tion of these performance measures would provide information about the level of agreement between parental perception and actual performance change.

This study provides information about the benefits of circus arts therapy across two 8-week sessions. Because the ultimate goal of any type of play therapy is to help facilitate continued growth and adjustment, it would be worthwhile to reevaluate clients several weeks, months, and possibly years after transitioning out of the program. Such long-term evaluation would provide insight into the level of traction the benefits evidenced at the end of two 8-week sessions may have as the children progress developmentally.

Conclusion

This study provides empirical evidence indicating that the Circus Arts Therapy fitness and play therapy program is effective as a therapeutic tool, with significant benefits evidenced in both physical and emotional domains. In addition, these findings help validate previous claims and anecdotal evidence about the potential benefits of circus-based techniques. This study can function as a point of departure for the expanded, empirical evaluation of circus arts as a viable tool to help cultivate personal growth in a play therapy setting.

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Received June 29, 2017

Revision received December 1, 2017

Accepted December 9, 2017 ■