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ORIGINAL PAPER

Implementing Family-Based Musical Interventions in Family Therapy: A Mixed-Methods Research

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Abstract
Although rarely used by family therapists, musical interventions have the potential to become a more common technique in family therapy. Music's unique therapeutic properties engage families, including young children and adolescents, in a meaningful, therapeutic, "here-and-now" creative process. Musical interventions act as catalysts, enable direct communication, and augment authentic communication patterns in a playful atmosphere. The purpose of this explanatory mixed-methods research was to obtain a greater understanding of the clinical applicability, therapeutic value and future implementation of a musical intervention carried out by family therapists in a family therapy context. The study explored the outcomes of 35 participating family therapists who attended a designated workshop on a structured family-based musical intervention, 18 of whom then applied 38 family-based musical sessions focused on family roles in their clinical work. The results illustrate the family-based musical intervention is a noteworthy tool for family clinical assessment and treatment, easily applicable in a variety of private and public settings with diverse populations. Musical instruments used as intermediary objects are potent vehicles for growing family awareness, functioning, and congruence, as well as inducing opportunities for change. The family-based musical intervention manifests the potential of an interdisciplinary, holistic, biopsychosocial approach to promoting individual and family wellbeing. The article also addresses ethical considerations and implications for family therapy training and education programs.

Keywords Family therapy · Music · Family-based music therapy · Technique · Training · Children

Introduction

Music taps into the earliest ways of communicating and making sense of interactions and relationships (Stern 1985). Through our inherent musicality, the musicality of human interactions (Malloch and Trevarthen 2009), and parent–child affect attunement processes (Stern 1985; Volgstern 2012), we develop a sense of identity and make sense of connections with others (Schore 2003; Siegel 2012).

Like other family-based creative arts interventions, musical interventions provide playful experiences that promote mutual family pleasure and cooperation and provide opportunities to express emotions and conflicts creatively (Kerr et al. 2008; Miller 1994). Creative arts are compatible with most schools of family therapy (Armstrong and Simpson 2002; Lantz and Ritz 2003; Malchiodi 2003) acting as catalysts, significantly enhancing and augmenting family dynamics, authenticity, and communication patterns. Art taps into the unconscious, bypasses habitual and conscious censors, affords opportunities for growing insight into family dynamics, and promotes change (Malchiodi 2003; Nemesh 2017b; Satir et al. 1991).

Although the use of creative arts in family therapy is gaining validity, a place for music in those arts has appeared limited. Among the variety of artistic techniques and therapeutic modalities addressed in family therapy research, musical directives and the use of music has been mentioned rarely (Lowenstein 2010). Traditionally, family-music therapy primarily entailed music therapists working in a child-centered orientation with families who have children with special needs (Kirkland 2013; Jacobsen and Thompson 2017). However, those researchers acknowledged family-music therapy

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for its multifold therapeutic benefits as well as music's assessment qualities (Hibben 1992; Miller 1994).

Newer studies by Jacobsen and Killén (2015), Thompson (2012), Nemesh (2017b), and Pasiali (2013) provided rare examples of family-based music therapy, which focuses on the *entire* family as a unit, "engaging all family members to address relationship and communication difficulties" (Pasiali 2013, p. 250). They reinforced and supported the therapeutic benefits and assessment qualities acknowledged over two decades ago.

Despite the inclination towards music therapists implementing family-music therapy, similar potential and therapeutic value may be present when family therapists apply musical interventions in a family therapy context. Musical interventions instigate direct communication and augment authentic communication patterns in a playful atmosphere. Thus, music's unique properties engage families, including young children and adolescents, in a meaningful, therapeutic, "here-and-now" creative process.

Given that potential, the purpose of this study was to obtain a greater understanding of the therapeutic value and clinical applicability of a structured family-based musical intervention developed by the researcher and carried out by family therapists in a family-therapy context. The guiding questions of this study were:

- How do family therapists' initial perspectives on using musical techniques in family therapy change after implementing a family-based musical intervention in a family-therapy setting?
- Based on the family therapists' experiences of implementing the family musical intervention, what are their perspectives on the clinical applicability, future implementation, and therapeutic value of such interventions in family therapy?

Hesitancy Towards Family-Based Musical Interventions

Family-based art therapy gained recognition in the 1970s as a powerful creative process that ultimately enhanced recovery, health, and wellness (Lowenstein 2010). Since then, mental health professionals—including family therapists and counselors—readily adapted art-therapy interventions and assessment approaches in their work. They have "discover[ed] that drawing activities and other expressive media are helpful in assessment and treatment of people of all ages" (Malchiodi 2003, p. xii), thus endorsing a common use of family arts.

Contrasting with the growing use of visual arts in family therapy—and despite their seemingly high potential and prospects—musical interventions are rarely used by family therapists (Nemesh 2017b; Smith and Hertlein 2016). Family-based musical interventions appear absent in family therapy clinical work and from family therapy education and training programs.

Personal, professional, and cultural perceptions and preconceptions about using musical interventions contributed to family therapists' hesitation to implement musical interventions. Foremost, they believed music to be for exclusive use by those with formal musical skills, talent, and music therapists. Family therapists also noted they lacked experience using music and voice as free expression (improvisation) and seemed intimidated by the chaotic nature they attributed to music, underlining a negative cultural attitude towards "making noise" (e.g., unaesthetic musical outcomes) and disturbing others. Furthermore, verbal therapies were professionally considered superior to creative arts, therapists and clinics were unlikely to own or have access to musical instruments in clinical settings, and therapists emphasized they lacked professional training and skills to implement musical interventions in family therapy (Nemesh 2017a).

Family-Based Music Therapy Model: Theoretical Foundation

The researcher assumed that, with suitable training in their use, family therapists could overcome their hesitancy to use musical interventions and incorporate family-based musical interventions as valuable additions in their therapy toolboxes. Thus, the researcher developed a family-based music therapy model that combines musical, verbal, and nonverbal processes suitable for use by therapists who lack formal musical training. As such, "the experience of music becomes the stepping-stone to verbal discussion and insight" (Forinash 2005, p. 49).

Two theoretical models informed the researcher's model—Juliette Alvin's (1977) free improvisation music therapy, complemented by Satir et al.'s (1991) experiential family therapy model—as well as current research in neurobiology clarifying the role of musical interventions in brain development and neuroplasticity.

The researcher's "family roles" musical intervention used in the study was based on Alvin's (1977) model, in which making music and playing musical instruments are perceived as a potential space for free-expression. Musical instruments serve as intermediary objects to reflect internal projections and representations (Alvin 1977; Wigram et al. 2002). The "family roles" intervention followed a structured protocol that required neither the therapists nor the family members to have prior musical backgrounds and minimized the possible chaotic effect of the musical experience. Following a short designated training, the therapists implemented the session in their clinical work, using musical instruments and musical representations

to explore nonmusical therapeutic goals. The projective attributes and representations of the musical instruments and improvisations were the basis for further verbal reflections, which promoted awareness, change, and growth, just as Alvin (1977) described and intended in her work.

Satir et al.'s (1991) experiential family therapy model complemented Alvin's (1977) model. Experiential family therapy implies that the sessions are used to practice and explore new experiences—practicing through actions and not just talking. Kempler (1981) stressed that in experiential family therapy, "the office is the laboratory in which the work is done. The learning is in the experience the family and the therapist have together" (p. 9). The essence of experiential family therapy is in the "interpersonal experience rather than the reliance on technique" (Goldenberg and Goldenberg 2008, p. 207). The here-and-now experience enables exploration and experimentation with any information that comes up in the session.

Elaboration in the vast field of interpersonal neurobiology requires additional attention beyond the scope of this paper. Nonetheless, it is important to acknowledge the impact of neurobiology innovations on the collaboration between family therapy and musical interventions. Interpersonal neuroscience offers a growing understanding of the ways relationships affect brain formations, highlighting the experiential component of the process: "Our experiences are what create the unique connections and mold the basic structure of each individual's brain" (Siegel and Hartzell 2003, p. 22). Congruently connecting and integrating information from different areas of the brain helps promote social and emotional interactions, relationships, behavior, and wellbeing. New experiences can reshape and rechannel neural formations, enabling better integration and new behaviors to emerge (Fishbane 2007).

Using creative arts in experiential family therapy sessions can translate contemporary neurobiological discoveries into applicable interventions, helping reestablish positive relationships, communication, and social behaviors (Siegel 2012). For example, Volgstern (2012) found that musical experiences impact deep brain formations, influencing the body-mind connection and accessing unconscious emotions and memories of pre-verbal experiences. The experiences also promote brain plasticity (Stegemoller 2014), which facilitates social relationships and interpersonal dynamics on many levels of social functioning (Koelsch et al. 2010). Additionally, they contribute to accessing and expressing emotions and to regulating affect (Overy and Molnar-Szakacs 2009; Schore 2003, 2012). Musical interventions enhance energy levels and promote physical movement, vitality, cognition, and empathy, each of which has significant impact on relationships (Altenmuller and Schlaug 2015; Stegemoller 2014).

Early parent–child relationships are based on and shaped by parental attunement processes that formulate secure attachment—a major accomplishment for promoting psychological wellbeing (Malchiodi and Crenshaw 2015; Schore 2012). Early nonverbal experiences form the basis of the "neuronal structure for future plasticity" (Stegemoller 2014, p. 215). Through their inherent communicative musicality (Malloch and Trevarthen 2009), a parent–child affect attunement takes place (Stern 1985). That is, parents unconsciously respond to the infant in the proper (attuned) rhythm, intensity, and movement, and nonverbally communicate feelings. This attuned parent–child dialogue is rhythmic, shares affect, and elicits a growing awareness of the subjective self, the other, and their inter-relatedness.

Thus, music, rhythm, voice, and movement promote parent–child attunement and attachment (Malchiodi and Crenshaw 2015). "The brain is designed to generally take care of the basic foundations of normal development—we just need to provide the interactive and reflective experiences" (Siegel and Hartzell 2003). Family-based musical interventions provide the interactive and reflective experiences that enable families to engage in mutual interactive and reflective experiences, promoting individual and family development and positive change processes using their natural innate resources. The sessions strive to recreate moments of attunement in a safe and playful environment within the natural family atmosphere.

Method

Design

This article presents part of the *sequential explanatory mixed methods* study (Creswell 2014) approved by a university Internal Review Board. The research, which explored family therapists' perceptions of the therapeutic value and clinical application of a family-based musical intervention implemented by family therapists, proceeded in four sequential phases: (a) Pre-intervention data collection, (b) Designated workshop-training for family therapists to implement a musical intervention, (c) Implementation of the family-based musical interventions by the workshop-trained therapists in their clinical practices, and (d) Individual post-intervention interviews with the participating family therapists. The data were collected and analyzed separately for each phase, and then compared and combined to outline the outcomes of the study. This article presents the outcomes of the last two phases (c and d) of the study.

Given that this was a first study on the subject, the researcher strived for mutual complementarity and support from multiple data sources and thus chose an explanatory mixed-methods design. Using quantitative and qualitative

perspectives to paint a more-inclusive picture of the therapists' experiences in applying the musical session would consequently add to the understanding and credibility of the study's findings (Hesse-Biber 2010). The quantitative data analysis evaluated the therapists' experience and satisfaction following each musical session using descriptive statistics. In addition, one question concerning therapists' confidence to implement the intervention compared pre-intervention scores to their scores following their last implemented musical session using inferential statistics. The quantitative analysis was followed by a profound theme analysis of the qualitative data acquired from open-ended questions and interviews. The study's main emphasis was on the qualitative strand, which intended to offer extensive explanation for the quantitative data using rich descriptions of the therapists' core experiences.

Participants

Originally, the study was designed for self-referred therapists who found the research topic attractive and were interested in participating in the study. As it turned out, fewer candidates self-referred for the research than expected, but interest surged from family therapy centers inviting the researcher to implement the research at their centers with their staff. This provided an opportunity to implement the research with participants who were not always interested or open-minded about the use of music in therapy. These participants offered the researcher a broader view of family therapists' perceptions of the use of music.

Initially, 35 family therapists participated in the study. However, following the training, 17 therapists did not implement the intervention because: nine had no suitable clientele (i.e., families) who met the research criteria (e.g., the therapists worked exclusively with couples, dyads, or groups or in supervisory positions); one withdrew for unknown reasons; and seven doubted its appropriateness for them (i.e., it caused them high anxiety, stress, inconvenience, or embarrassment). It is suggested that therapists first need to manage their anxiety, in order to be helpful to their clients (Shamoon et al. 2017). Examining the data revealed that factors other than lack of musical skills appeared to be involved in their anxiety because four of the seven had moderate to significant musical experience. Thus, factors contributing to the anxiety surrounding the use of music remain to be studied.

The results presented in the article derived from the remaining 18 certified family therapists who implemented the intervention in private and public settings in Israel. Despite the researcher's attempts to adhere to multicultural practices, all participants were female and Jewish with graduate degrees. They averaged 52 years of age and 10.6 years of experience working with various populations and settings addressing diverse family objectives. They were affiliated with different schools of family therapy—mainly Systemic, Experiential, and Structural. Five (28%) had additional training as creative arts therapists, although none were trained as music therapists. All participants signed informed consent forms.

Workshop

The researcher conducted five 3- to 4-h workshops, training 35 family therapists in small groups of three to ten participants each workshop. The training introduced a musical intervention borrowed from music therapy as an additional technique in traditional family therapy. The therapists were trained to implement a session focused on *family roles* using a structured musical intervention protocol.

Family roles are the family members' consciously or unconsciously assigned positions. Each role plays a part in the family balance. A functional family strives toward clear and flexible roles that are adaptive and developmentally appropriate. In a dysfunctional family, the roles are rigid, developmentally inappropriate, and restricting (Nichols and Davis 2016). Dysfunctional family roles reflect the family members' low self-esteem and manifest in incongruent family communication stances, functioning, interactions and behavior (Satir 1983).

Family Roles: A Structured Family-Based Musical Intervention

The "family roles" intervention used a structured protocol that did not require the therapists to have prior musical skills; they needed only openness to a new and creative family-therapy technique. The intervention was designed to last 60 min. It encompassed a variety of musical instruments (e.g., percussion, wind, strummed; wooden, metal, plastic; large, small; modern, old) provided by the researcher and a recording device.

The session aimed to: (a) identify family roles and their implications on self-identity, self-fulfillment, self-worth, family functioning, and parental competence; (b) detect habitual behaviors, coalitions, exclusions, family rules, and boundaries; (c) encourage emotional expression and family communication, and (d) open new possibilities for promoting change.

The musical intervention began with the therapist directing the family members to check out the instruments in the room and choose an instrument that reflected their perception of themselves (their roles) in the family. The therapist then invited the family to play an initial *family improvisation* together, which was recorded. Afterward, the family listened to the recording. The therapist used process questions to help the family members reflect and process the musical experience, helping clarify their roles, feelings, stances, self-worth,

and yearnings. The family members explored the meanings and insights they made from the improvisation and how it reflected the family reality. Finally, the family discussed their desires for change. Subsequently, the therapist invited the family to implement the changes or new ideas into a second family musical improvisation (e.g., to change instrument or style of playing), which they performed, recorded, and similarly explored together.

Procedure

Following each family-based musical intervention, the therapist completed a Session Evaluation Questionnaire, which included both quantitative and qualitative data. The questionnaires were completed online and sent directly to the researcher.

Quantitative Data

Twenty-one questions addressed the therapists' perceptions concerning the applicability of the intervention, personal and professional challenges, confidence to apply the intervention, therapeutic benefits of the musical session, family cooperation, professional growth, and outlook for future implementation of family-based musical sessions. For each item, the therapists checked one of five descriptions that best applied to them on a 5-point Likert-type rating scale. The researcher analyzed these quantitative data using descriptive statistics (Table 1 identifies the calculated mean and standard deviation of each item.)

The question "*To what extent do you feel confident to apply the Family-Based Music Therapy session?"* was additionally analyzed using inferential statistics. The researcher checked for statistically significant change in therapists' confidence to implement a musical session with the experience achieved over time.

Qualitative Data

Qualitative explanatory data were gathered from six open-ended questions in the Session Evaluation Questionnaire and from individual interviews. The open-ended questions addressed the (a) handling and use of musical instruments, (b) significant information that emerged in the sessions, (c) strengths identified in the musical session, (d) weaknesses of the musical session, (e) therapists' self-discoveries, and (f) professional and therapeutic value of the session. Therapists were invited to add any other remarks and descriptions concerning the experience.

Table 1 Quantitative results from Session Evaluation Questionnaires

Category	Sub-theme description	*M*	*SD*
Implementation	Sufficient time	3.95	0.92
	Sufficient selection of instruments	4.61	0.55
	Room compatibility	3.92	1.09
	Ease of transporting instruments	3.87	0.88
	Ability to manage recording device	4.00	1.09
	Concerns about safety of instruments	2.89	0.92
Personal professional experience	Confidence to apply a musical session[a]	4.07	0.81
	Significance to the family	4.18	0.87
	Family cooperation	4.37	0.75
	Comfortable before session	3.74	0.76
	Comfortable during session	3.84	0.80
	Comfortable after session	4.03	0.95
	Importance of musical competence	2.00	1.14
	Contribute to professional growth	3.58	0.95
Future implementation	Family interest in future musical session	3.95	1.01
	Considering continuing FBMT session	3.68	1.09
Therapeutic value	Therapeutic opportunities	3.87	0.77
	New information	3.82	0.78
	Validate prior information	4.29	0.80
	Contradict prior information	2.00	0.96
	Overall therapeutic value	4.21	0.84

The questions were rated on a 5-point Likert scale (1—not at all, 2—slightly, 3—moderately, 4—very much, 5—extremely). $N = 38$

[a]This question was repeatedly rated, tracking changes in therapists' confidence

In the concluding phase of the study, the researcher conducted a 1-h interview with the three purposely selected participants with the highest participation rates (each interviewee had implemented three or more musical interventions). The researcher aimed to include participants whose experience could shed additional light and understanding on the therapists' experience using family-based musical interventions. The recorded interviews were transcribed verbatim and analyzed in an iterative fashion, using qualitative analysis guidelines.

The researcher used Atlas.ti qualitative analysis software to organize and analyze the data. In accordance with Creswell's (2014) three-stage analysis recommendations, qualitative analysis of the open-ended questions and interviews followed a strict inductive thematic procedure to identify the main themes. In the first stage, the researcher reviewed all answers to each question separately, assigning codes to quotes that represented a wide range of themes. The second stage included sorting and identifying overlapping codes and merging codes into distinct themes. Finally, the themes were sorted into groups that highlighted similar aspects connected to an overarching category. Each category, and theme within the categories, were accurately defined and named. Quotes were assigned to represent each theme within each category.

The final analysis scanned for consistency and discrepancies between the two (quantitative and qualitative) data strands. The themes that emerged from the qualitative analysis helped explain and give meaning to the quantitative results, offering a broader understanding of the family therapists' experiences using a family-based musical intervention.

Results

The research sought to understand family therapists' experiences regarding the clinical applicability, therapeutic value, and suggestions for future implementation of a musical intervention in their clinical work. Following the workshops, 18 participating family therapists collectively implemented 38 musical sessions over a 6-month period. Survey questions that addressed the therapists' experience of the applicability, challenges, benefits, and outlook of the interventions were compiled. Table 1 presents a summary of those quantitative results. Subsequently, the inductive analytical process of the qualitative data generated numerous themes, which were arranged within four broad categories: clinical applicability, future implications, confidence to implement, and therapeutic value of the musical intervention. The categories and themes discussed below with exemplary quotes corroborate, support, and help explain the numeric quantitative scores.

Clinical Applicability

The three themes that related to the category of clinical applicability included technical aspects (e.g., musical instruments, rooms etc.), external challenges (concerns related to family cooperation, professional recognition, and acquiring skills using creative arts), and therapist issues (therapists' concerns about their lack of musical skills, inexperience with free expression, and fear of noise and chaos).

Theme: Technical Aspects

Contrary to many participants' initial concerns about logistical challenges and rooms unsuitable for musical interventions, as well as their fear of making noise, the therapists subsequently perceived the musical intervention as practical in diverse clinical settings. They noted the eclectic selection of musical instruments as suitable for the session and easy to transport, and found the rooms suitable for the intervention. Although they mentioned concerns about making noise and disturbing other rooms or their own small rooms, none of those difficulties prevented them from carrying out the sessions as planned. Only acquiring musical instruments and storage solutions remained technical challenges.

Theme: External Challenges

Family Cooperation Participants initially addressed many external factors they thought would influence the applicability of the session, including family cooperation. However, after implementing the intervention, the therapists reported no significant challenges with the families' cooperation. On the contrary, instead of inconvenience or resistance, they found only excitement and joy. The therapists' experiences can be grasped from the following typical response: "What I loved about music was the element of [the family's] surprise and the excitement in their eyes." Participants noted only two instances in which parents had some difficulty engaging with the musical instruments. In both cases, the therapist and children motivated the parents to cooperate successfully.

Professional Recognition Another external factor participants reported might affect application of the musical session was that clients, other professionals, and the cultural and professional atmosphere deemed music—along with other creative arts—"less academic, less intellectual" compared to verbal therapies. For example, participants noted that clinics, mental health professionals, and health insurance providers did not always accept creative arts as valid therapy. One explained, "Public clinics do not readily legitimize the use of creative arts." Creative arts therapists are ascribed a lower professional status in contrast to "verbal"

therapists. Thus, therapists mentioned they were more likely to "practice art therapies behind closed doors." Music, which could be heard outside the room, might be even less tolerated or accepted and, as such, less practiced. A participant said, "In public clinical settings… musical interventions are neither welcome nor implemented."

Training Aligned with concerns about their lack of training and familiarity with family-based musical interventions specifically, participants also highlighted their lack of training and professional skills using *any* creative art as a major reason for not using musical interventions. They unanimously noted they had no training or education using musical interventions in family therapy and most had no training using any creative art other than some techniques from play therapy. This exemplary quote described, "In my family therapy education, I received three classes about play therapy. There was some reference to drawing. There were no other arts such as drama [or] music… only box games and cards."

Theme: Therapist Issues

Musical Skills As previously discussed, family therapists perceived their own lack of musical skills as the main impediment to implementing a musical intervention. A representative participant stated, "You need to be a musician in order to use music in therapy." Initially, almost all participants were concerned to some degree that their musical experience and skills would interfere with their ability to implement musical interventions. Post-intervention, however, they reported their lack of musical skills had only a minor impact on their ability to use the intervention and on the outcomes of the musical sessions. Therapists rated the extent to which their own musical competence was an important factor in the session as the lowest single item score in the questionnaire ($M = 2.00$; $SD = 1.14$). They reported that both the therapists and the families connected with the playful musical activity in a natural family experience. This raised questions such as, "Why wasn't it natural to use music like we use games or a sandbox?" Another participant pointed out, "This intervention needed only the basic understanding [of music] we all have. I did not feel threatened by the music."

Free Expression Another hesitation to implementing musical interventions linked to therapists' inexperience using free musical expression. They reported that throughout their education and school years, they had less access to musical instruments than to visual art materials. Further, their experiences reflected musical outcomes judged by aesthetics and conformity to musical rules. A therapist who practiced music shared, "Whenever I needed to play, I only played using musical notes. I didn't just sit at the piano and improvise." Encountering criticism about their musicality at a young age resulted in avoiding free and natural experimentation with musical instruments and voice. A participant who had encountered early criticisms concerning her musical talent explained, "This led me to avoid *any* personal expression using music." However, despite their personal experiences, many therapists observed that in the musical session they were able to "become flexible, feel comfortable, and enjoy the use of the new instruments." Using a structured intervention enabled them to feel safe enough to "jump into the water and even enjoy it," overcoming their childhood fears.

Noise and Chaos Several therapists initially reported they felt anxious and intimidated by the noise and chaotic nature they expected from the musical media. They were concerned it could cause excessive anxiety and embarrassment to clients and therapists alike. These participants associated free musical expression with "making noise" and as an interruption to others, which was culturally criticized. Subsequently, they overcame these perceptions by their personal abilities to withstand the noise and chaos in the room, but noted that musical interventions are not suitable for all therapists: "There is a certain chaos in the room. It is noisy… I think a therapist needs to be able to withstand a lot of freedom, not stick to do's and don'ts; rather, enable the chaos." Another participant explained, "This chaos in the room created uncertainty that you don't know how it will develop and you need to be able to endure this." Most therapists noted that through the musical intervention, they learned they could "tolerate the disharmony and noise in the room, allowing the family the time they need to become organized."

Future Implications

Two emergent themes related to the category future implementation of the intervention—therapists' increased openness to using musical activities in future clinical work and interest in additional training in musical interventions.

Theme: Increased Openness

Subsequent to the musical experience, all participants noted they were more open to using musical activities in their clinical work than they had initially reported. Several therapists continued with musical interventions at the families' requests. They mentioned that many families were excited about the musical experience and continued using musical instruments at home. When referring to the future of family-based musical interventions, the participants were positive about the model's potential. One explained, "I am very optimistic about the future development of this field; the world is progressing toward this direction.

There is much more openness." Therapists expressed their openness to implementing additional musical sessions, one noting, "I am already adding music and new ideas into my sessions and I have your protocol in my head."

Theme: Additional Training

Addressing the issue of training, the participants expressed several opinions and recommendations. Some believed using creative arts in family therapy should be an academic course and part of the basic training program. Others preferred only to sample the use of creative arts in the basic training and then attend advanced training or workshops as experienced therapists. However, all participants agreed there should be some training, practicum, and supervision using arts—including music—in all basic family-therapy training. For example, one stated, "Like there is a course about play therapy, there needs to be a course about using expressive arts. Within this course, one could choose various workshops such as drama in family therapy, family-art therapy, sandbox, music in family therapy."

Confidence to Implement the Musical Intervention

Greatest among the therapists' initial hesitations was their belief that music was for exclusive use by those with musical skill, talent, and training. Thus, the study quantitatively tracked the therapists' confidence to apply a musical session, comparing pre-intervention scores to their scores following each intervention, concluding with the score of their final implemented musical session. On a Likert 5-point scale, the initial confidence score showed a mean of 3.44 with standard deviation of 0.25 compared with scores from the final musical sessions with a mean of 4.07 with standard deviation 0.81. Further, inferential data analysis using Wilcoxon signed-rank test indicated a statistically significant difference existed between the pre- and post-implementation scores ($p = .012$). Moreover, confidence levels were not linked to therapists' demographic characteristics, musical skills, affiliation to a particular school of family therapy, or education as expressive arts therapists.

The qualitative data corroborated the participants' growing confidence along the research, as in these example quotes: "I learned I can adopt new therapeutic tools in a very short time," and, "I have more curiosity and courage to go beyond my comfort zone and experiment with the new intervention." Yet another participant described, "From one musical session to another, I learned to let go, intervene less, and trust the instruments and setting do the work."

Therapeutic Value

Four themes were grouped into the category of therapeutic value, reflecting use of the intervention as a tool for clinical assessment, its contributions to the therapeutic process as well as to promote family functioning, and the appeal of its nonverbal quality.

Theme: Clinical Assessment

The session's assessment quality was by far the leading therapeutic benefit the therapists mentioned. Specifically, they perceived the session as an accurate tool for family clinical assessment. One participant noted, "The session clarified the family roles each member adopted with an understanding that they can also be changed." Other therapists mentioned the session helped clarify family structures, coalitions, dynamics, boundaries, roles, and similar informative data. They appreciated the immediacy and precision in which the musical representations exposed those dynamics, conflicts, and communication stances. One participant shared, "I was surprised at how fast and clearly it exposed the family dynamics… I could see things that I could not see through their words. I could see the family processes and dynamics in a deeper and more accurate way." Therapists mentioned the authenticity of the musical interactions, which cannot be faked or manipulated as they might with words. One stated, "Here, the participants had the true experience."

Theme: Therapeutic Process

A most noteworthy outcome from the musical session was its contribution to the psychotherapeutic process. Participants perceived the session as a potent intervention to promote change. These representative quotes sums up the therapists' experiences: "Through music, you learn faster. It is a more profound learning and it is followed by fast changes," and "I was surprised by the magnitude of the experience. It was powerful, impressive, and effective." In another typical example, a participant noted, "With music, they are able to apply the change to the family. Even if it is not discussed, it is already embodied."

Theme: Family Functioning

Numerous therapists stated the intervention contributed to family functioning in many domains. For example, it offered an opportunity to express individual voices in the family within a playful and less critical interaction; share personal views; and express personal needs, perceptions, feelings, longings, and desires for personal and family change. As one therapist stated, "The family listened to the unique expression of each member, their sound and rhythm as it

was expressed in the family. They were able to communicate with one another in harmony and share their feelings and emotions through the musical instruments." Participants perceived the intervention as an opportunity to engage the family in an hour of mutual enjoyment and fun family activity. They mentioned additional benefits, such as increasing family cooperation and conflict solving, encouraging open communication, and promoting parental competencies and attunement. Illustratively, one therapist declared, "I could see how the father listened to her [his daughter], how he is accurately attuned to her needs. It is not something you can explain using words."

Theme: Nonverbal Quality

Some participants had addressed their lack of skills working with young children and their desire for additional nonverbal family-based interventions. One explained, "Family therapists lack the skills and confidence to work with children in the room and they don't have the tools." Therefore, the therapists appreciated the nonverbal quality of the research intervention as extremely appropriate when working with young children. As a participant stated, "With such young children, the musical session enabled a significant experience without the need for verbalization." Another remarked, "The symbolic projection was suitable for the young children without the need to verbalize their difficulties."

Illustrations from the Family Therapy Room

The importance of the research outcomes is in the common positive experiences for therapists and families using a fresh, experiential, creative approach in family therapy. Comprehending the ease in which significant therapeutic progress can be achieved within one musical session may be appreciated through the following vignettes, as described by three participating therapists in their own words.

Vignette 1: Tammy

Four of five family members participated in the session: Mom, Dad, and two daughters, 12 and 16 years old. The older son was absent. The family was surprised and happy to find the musical instruments in the room and readily cooperated with my instructions. The first improvisation proceeded pretty much in order. Dad "dictated" the rhythm using a *hammer* (i.e., a children's instrument that squeaks when thumped). Dad explained, "I chose this instrument as it is the only one I know how to handle." The rest of the family joined his lead. Mom chose *Tibetan cymbals*, which, in her words, reflected "balance," and explained it is important for her that the house is in balance. The younger daughter chose a *rectangle*, which for her represented the three siblings: "We have a good connection between us. like the three sides, with a slight gap." Her older sister chose the *rainstick*, which for her reflected her fluctuating temper, from quiet to stormy.

Prior to their second musical improvisation, Dad suggested one of them should be the concert "conductor." The young daughter volunteered, assigning a place for each one to play individually and then joining them to play together. Following this experience, the daughters noted that to sound even better, the parents should first play together with more coordination and harmony between them [hinting that the parents' relationship first needs to be attuned], and the girls join them with their playing.

The final improvisation was conducted by the older daughter. She invited the family to play together her pick of a nursery rhyme. They fully cooperated with her request. When I asked them what in their opinion enabled the successful family improvisations, they mentioned it was planning and having clear directives, listening to each other, and the coordination and cooperation between them. They noted that although each [family member] had a unique sound, each made an effort to achieve the best outcome for them as a family.

The musical experience highlighted numerous nonmusical family issues. Mom [to the older daughter], "Why did you choose this rhyme? You always do what you want." This developed into a family discussion about family communication. The young daughter explained, "Sometimes I feel I don't exist in this family. You [parents] do not hear me enough. Like now [turning to Mom]… you are only referring to her lead [sister] and not to me."

Many aspects (such as Mom's aggressive talk) did not surprise me. On the other hand, I was surprised by her ability to cooperate and let others lead. Dad surprised me in his ability to take responsibility, his maturity and containment of the girls (empowering and stating their important roles in the family). He was also supportive of Mom.

It was an opportunity for me to observe a good and functional parental system as well as positive interactions between siblings that were not evident previously. I was amazed by the verbal and emotional communication of the girls, who asked their Mom to listen to them because, in their words, "she never has time." They literally invited her to practice different and better communication, like they achieved when using musical instruments. In summary, this musical session was a meaningful and important session that will clearly reverberate in our subsequent meetings.

Vignette 2: Judy

This family included Mom, Dad, and three children aged 10, 7 and 3 [years]. The youngest boy was diagnosed with Autism Spectrum Disorder (ASD). The middle boy was diagnosed with diverse learning disabilities.

Right from the start, the older girl and middle boy competed about choosing the same instrument. This reflected their constant "fighting about everything" (as the parents indicated). While the parents did not intervene, I suggested they take turns with the instrument, a suggestion [they] readily accepted.

The first family improvisation sounded like a complete "cacophony." This was as I expected—there would be no cooperation or mutual listening. I asked them, "Who did you hear?" They jointly answered, "Only me and [the youngest boy] banging delightfully on a pair of children's cymbals." The young boy surprised me with his ability to grasp how to hold and use the cymbals and to vary his playing by banging on the wall, the floor, etcetera. This first musical intervention conveyed how each member functioned in the family. Mom and Dad became disconnected from everything going on around them. The older sister endlessly praised herself: "I listened only to myself because I am the best in the whole world." The middle boy was constantly shifting from one instrument to another and collecting them around him: "I am afraid that in the end I won't have what I want".

Only the youngest boy seemed to enjoy himself.

Before the second improvisation, [the family] managed to have a discussion; deciding each one will begin by playing solo and only then the others will join in. This improvisation marked a significant change. The daughter applauded. "This worked so much better; I was listened to and I could express myself."

The session brought forth a discussion about listening to each other in the family.

Daughter	"I try to talk to you and I feel no one is listening."
Middle boy	"I didn't go to the shower when you asked me because I was troubled by a fight I had in school and I didn't want to tell Dad about it."
Mom	"You are lying! You are always making up stories."

This sparked an argument. Then, Dad picked up the triangle and suggested, "The triangle can move between us. Only the one holding it will speak. That way, the rest can listen".

Finally, there was some order as well as significant parental leadership that enabled the family to communicate with listening. Overall, the family had fun together. New and important information that we can put to use in our future sessions emerged.

Vignette 3: Vicky

This family of five included Mom, Dad, a 22-year-old son, a 12-year-old son diagnosed with ASD, and a 10-year-old daughter.

Unintentionally, the session took place on the older boy's birthday. Mom brought a cake to celebrate, and they were sure I arranged the musical instruments for the celebration. Following the first family improvisation, each member explained their choice of musical instrument, their experience, and what they learned about themselves and the family, as well as what they wanted to change.

All their answers were touching. The daughter, who is usually very shy and passive in the sessions, participated and offered unique and interesting operative suggestions towards their second improvisation, which the family readily accepted and implemented. Mom noted her presence in the family needed to be less ambiguous. Dad explained he chose an instrument that enabled him to play and listen to others, as "someone needs to conduct this orchestra."

Nonetheless, the boy diagnosed with ASD shared an outstanding reflection. He insisted on choosing the microphone and singing a prayer praising and congratulating his brother on this special day. He explained that the other instruments accompanied him, and helped raise the prayer to the sky.

This tribute brought tears to their eyes. The family members were surprised with the depth of the boy's understanding, the sensitivity he displayed towards his brother, and his creative expression.

At the end of the session, they expressed their enjoyment, gratitude and excitement from the musical experience and the outcomes.

Discussion

This study aimed to illuminate the gray area between family therapy and creative arts, contributing to the knowledge concerning the applicability and clinical value of using creative arts by family therapists. The study spotlighted musical interventions, which contain unique inherent acoustic qualities and personal challenges. Therapists who were unfamiliar with using music in therapy trained to implement a structured musical intervention in their clinical work. The intervention, borrowed from music therapy, created a fun and relaxed environment focused on being in the moment. It elicited spontaneous musical expressions and improvisations that accurately reflected the family reality and challenges and brought forth nonmusical discussions.

Foremost, therapists underlined their surprise at the ease of applying the musical session. It challenged their fears of the unfamiliar musical media and their lack of musical skills. It contradicted their concerns of encountering family resistance, musical chaos, noise, and the unpredictability of the musical session. It crumbled their dread of disturbing others, unsuitable rooms, and raised eyebrows.

For many, the discrepancy between fear of using music and ease of implementing the musical session reflected

their lack of skills and experience using creative arts and specifically music in therapy. The majority of therapists had no training using any creative arts interventions in family therapy; none had training in using musical interventions.

Learning to use and trust the musical creative process was a new experience for most family therapists in the study. It required becoming playful and intuitive, letting go of habitual interventions such as giving advice and interpretations, and trusting the process of making music to elicit information and solutions. One participant summed up the clinical applicability: "Contrary to my earlier thoughts, [the session] was very practical, easy, and not such a big challenge."

From a professional viewpoint, the musical session added a potent experiential technique to the therapists' toolboxes. It promoted therapists' professional intervention skills suited for many families, diverse clinical challenges, and children of all ages, including those with special needs, applicable in varied private and public settings. The research created an opportunity for therapists to experience musical interventions and challenge and transform their own hesitance into a new open-mindedness. Using creative arts in therapy contributed to the participants' professional growth and development. This opportunity aligned with McNiff's (1998) illustration of creative processes, wherein "the most consistent obstacle to creative discovery is the average person's reluctance to become involved in free experimentation" (p. 4).

Contributing to the prevailing hesitance to use music in family therapy sessions was the key belief, "You must be a musician to use music in therapy." In fact, the outcomes underlined that the therapists' lack of musical skills was no barrier to implementing the musical session. The nonverbal acoustic qualities of the musical experience were harnessed to encourage and support the family therapists' work. This finding is in line with Ruud's (2010) claim that there is no reason family therapists should not use music as a technique. That is, the musical intervention used in the family therapy sessions was based on the participants' subjective projections and reflections rather than their musical interpretations or expertise, in accord with the foundations of Alvin's (1977) free improvisation model.

This study demonstrated that, despite initial inclinations and hesitations of family therapists to use musical interventions, all participants who implemented the intervention experienced it as a positive, successful, and valuable experience. They were surprised they could feel the unique power and impact of music in their own clinical work without necessarily having musical skills. They learned to appreciate and value the nonverbal media and trust the natural family-musical process, as represented in the comment: "I learned to let go, intervene less, and trust the instruments and setting do the work." Interestingly, it seemed the first stepping-stone in the process of gaining confidence was getting permission to use music in therapy.

The outcomes of this study provide grounds to establish and develop a professional niche of family-based musical interventions as part of family-based interventions using all modalities of creative arts. It is an imperative addition to the field, adding experiential techniques in family therapy, which calls for advanced competencies and clinical skills borrowed from creative arts. However, the researcher found no training options related to family-based musical interventions within existing family therapy education programs. Acquiring skills and expertise using family-based arts interventions can be a practical, valuable, and low-cost addition in family therapy education. It provides family therapists with a wide range of creative, "hands-on" interventions that can be suited to the therapists' personal preferences and the families' therapeutic goals. This is in line with the suggestion to provide family therapy trainees with the opportunities to integrate varied models and intervention in their clinical work (D'Aniello 2015).

The use of musical interventions by family therapists raises ethical and professional questions regarding the extent that clinicians who are not trained or certified as music therapists can or should provide musical interventions. Ruud (2010) noted music therapists tend to prevent others from using music in therapy and stressed the importance of establishing clear borders between "traditional music therapy and other health musicking or music educational practices" (p. 6). With this in mind, therapists must understand the necessity to comply with healthcare guidelines and ensure ethical considerations when teaching, using musical interventions, and establishing guidelines for using music in other clinical fields. The family-based music therapy intervention used in this study is based on natural human musicality and therapeutic qualities of *music*, rather than of a *profession*. As such, it does not provide family therapists with a music therapist's professional competence.

From a clinical viewpoint, the study results demonstrate the powerful treatment and assessment prospects of the musical intervention. These qualities were previously recognized in family-musical interventions implemented by music therapists (Oldfield et al. 2012; Pasiali 2012) and in a family therapy context (Nemesh 2017b; Smith and Hertlein 2016). This study demonstrates that musical interventions implemented by family therapists present similar benefits as when implemented by music therapists. The musical and experiential aspects of the sessions enable families to overcome habitual coping stances and behaviors, bringing new and heightened awareness to the family challenges. Therapists witnessed how musical representations allow family members to voice their internal needs and express their yearnings concerning nonmusical family goals. Music offers therapists fresh opportunities to work towards positive

change and improve family congruence within the here-and-now playful musical experience.

Using process questions, family members reflected on the subjective meaning they made of the musical experience. The family's verbal reflections and processing of the emerging musical information integrated musical, nonverbal and verbal processes. This formed a coherent congruent experience, similar to those mentioned in earlier studies (Miller 1994; Nemesh 2017b; Oldfield and Flower 2008). The results show that musical media offers new ways to explore and promote family relationships, functioning, and communication. As one therapist reported, "When the family stopped using words, it was the exact moment when they were able to listen to each other, be more communicative, and cooperate."

Correspondingly, the accurate assessment quality, which was induced in the session was mentioned by most therapists. Frequently, the intervention brought to light family dynamics, interactions, communication patterns and family roles in a clear and precise manner. Using music therapy interventions as a family assessment tool is a relatively new and developing division in music therapy. Following the development of a validated parent–child music therapy assessment tools (Jacobsen and Killén 2015; Oldfield 2006) this study informs the potential for family-based musical interventions as a family assessment tool. Observing family-musical interactions may provide easy, accurate, and rapid family assessments in an array of family therapy and music therapy settings and as part of an interdisciplinary team.

On a different note, the family-based musical sessions' nonverbal quality is highly effective for families with children, including young children and children with special needs. Despite many valuable reasons to include children in family therapy (Ackerman 1970), the literature describes a growing tendency to exclude children from the family therapy room (Armstrong and Simpson 2002; Ruble 1999). One reason was the therapists' lack of training and techniques suitable for working with children. Thus, the participants in this study experienced the musical intervention as a significant contribution to their skills for working with families and children. This finding aligns with a growing awareness of the value of using creative arts in family therapy, especially when families with children are involved (Lowenstein 2010). Oldfield et al. (2012) contended, "In many cases involving music therapy work with families, nonverbal, improvised music-making and playful musical exchanges seem to be key components in facilitating family interactions" (p. 250). With this in mind, family-based musical interventions offer family therapists an opportunity to include children in family therapy using a playful family experience.

Once therapists became familiar with the session, they felt comfortable and confident to use it with families outside the research. Despite personal and professional challenges, participating therapists unanimously agreed that family-based musical sessions offer a positive experience for them and for the families. The majority asserted their intention to continue applying musical interventions stressing their desire for additional training and acquiring musical interventions.

Lastly, the goal of this study is to illuminate and clarify the value and challenges of using family-based musical interventions in family therapy. It does not explain how the musical intervention makes this happen. As noted previously, contemporary neuroscientific theories could help explain what makes family-based musical interventions work so impressively. Unfortunately, in this paper, there is not enough space to cover this aspect. The musical interventions performed in this study seem to create new, alternative opportunities and paths that induce awareness and motivate change in ways which are unique to this media. This is in line with neuroscientific studies which explain how the musical experience induce individual and relational changes (Koelsch et al. 2010; Stegemoller 2014). Music's acoustic and nonverbal qualities along with verbal processing, were found to affect the family interaction, emotional expression, understanding and communication, just as described by neuroscientists (Overy and Molnar-Szakacs 2009; Stegemoller 2014). In the future, neuro-musical theories may offer accurate explanations as to how family-based musical interventions influence the brain, stimulate unique ways to promote awareness, and promote change within families and individuals.

This study concludes that family-based musical interventions are acquired in short designated training and are easy to implement. They enable a process of increased awareness and a process of individual and family change in a 'here and now' non-threatening experience, which bypasses habitual choices. This therapeutic experience is in accordance with the goals of family therapy—to encourage healthy functioning and promote individual and family congruence. Nonetheless, adding or changing any curriculum requires substantial evidence and proof of the benefit and importance to the field. It also requires verbal therapists to support non-verbal interventions, and perhaps raise the professional status of creative arts in the field of mental health. With the accumulating evidence of the power of creative arts in therapy, there may be reason to believe that in a near future, training programs may begin adding creative arts interventions as part of family therapy skills.

Critique, Limitations, and Validity

Within this research, a *family* was defined as at least three persons related in any way—emotionally, biologically, or legally—with commitment and a relationship with each other and connected by past and future histories. At present,

many family therapy centers tend to focus on working with parents and minimize their work with children, denoting fewer families suited the research criteria. More so, this research excluded parent–child dyads (e.g., families with a single parent and a child). These exclusions limited the number of therapists in the study sample who could apply the intervention.

Additionally, this intervention is suited for Western cultural conceptualizations of therapy, family units, and use of music. Using family-based musical interventions in other cultures remains to be explored. Further, therapists in this study worked with family members who were not musicians. The use of music in family therapy with family members who are musicians may have yielded different results.

Moreover, the study is based on the unique expertise of the researcher using a family-based music therapy model. The researcher trained other family therapists to implement this model, and then collected and analyzed the data. Because personal bias and subjectivity may be unavoidable, the researcher used several methods to minimize and critically evaluate personal bias and preconception about data interpretation. Specifically, the researcher engaged in regular discussions and consultations with a professional supervisor throughout the study. Furthermore, an additional coder—a Master's level creative-arts and family therapist—independently reviewed the transcriptions and individually coded the data. The majority of categories and themes were initially in mutual agreement. The researcher and reviewer discussed, debated, and then revised until all differences were fully resolved. Finally, an external audit creative arts therapist and a supervisor reviewed the methods, research findings, interpretations, and conclusions.

Finally, the sample size of this study was tailored to fit the research aims and resources (time, money, etc.). Following sample size guidelines (Teddie and Yu 2007), the research placed more emphasis on the saturation of the qualitative data than on the representativeness and generalizability of the conclusions to a wider population. Illustrative quotes were used for in depth explanation of the quantitative data. They captured the experience of the majority of the participants. Thorough combing of the descriptive data elicited rare instances and uncommon experiences. This data was described and reported in the outcomes. Although they enabled a broader view of the therapist's experience, understanding the complete picture may need further exploration.

Recommendations for Future Research

The research outcomes warrant further substantiation, such as replicating the study questions concerning the therapeutic value and applicability of family-based musical interventions with larger, more diverse samples and expanding the research to other family-based musical interventions. Future studies may compare musical interventions with verbal or other interventions to develop a quantitative comparison.

Based on the noteworthy assessment quality elicited in the musical intervention, it is worthwhile to utilize this quality and develop a valid family-based music therapy assessment tool. The multifaceted experiences in a family improvisation are manifested in complex verbal, nonverbal, and musical representations. Therefore, it calls for wisely choosing musical elements to carefully analyze and validate.

Conclusion

The study outcomes substantiate the potential for clinical applicability and therapeutic value of family-based musical interventions in family therapy provided by family therapists. The goal of a family-based musical intervention is not to musically perform, but to improve family functioning. When music is introduced into family therapy, it stimulates family dynamics, interactions, communication, and behavior by providing an enhanced learning environment. The research aspired to communicate the potential for interventions borrowed from music therapy into family therapy.

Family therapy training and education programs should consider the advantages and importance of including creative arts interventions in their curriculum. As mentioned earlier, acquiring extensive skills using experiential interventions corresponds with contemporary knowledge that experience helps shape our behavior. Connecting and integrating information from different areas of the brain (musical, nonverbal, verbal, cognitive, experiential, and physical) promotes personal and interpersonal congruence and healthy functioning. Musical interventions, like other creative arts, can enable additional pathways for change to emerge.

Our rapidly growing and changing world requires more cooperation among the various therapy disciplines. Similar to a family, strength comes from learning from each other, sharing knowledge, acknowledging the unique value of each field, and growing together to form a solid integrated field of creative arts and family therapy. It is commonsense that the therapy fields are ready for collaboration—a collaboration of family and music therapy—that offers an interdisciplinary connection to promote individual and family congruence and wellbeing.

Compliance with Ethical Standards

Conflict of interest There is no conflict of interest that influence this work.

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