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## ARTICLE

# Music therapy as a protection strategy against toxic stress for Palestinian refugee children in Lebanon: A pilot research study

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## ABSTRACT

This article presents a mixed methods pilot research study evaluating the impact of music therapy on the emotional and social functioning of Palestinian refugee children from Lebanon aged 7-11. The research aim was to verify the hypothesis that music therapy is an effective therapeutic method in lowering anxiety levels in children suffering from the effects of stress and trauma, and in strengthening their self-esteem and sense of agency, thus contributing to the development of their resilience. The specific geo-political and social contexts are explained, comparable studies considered, and data collection strategies outlined. Narrative data from music therapists is analysed thematically, complementing analysis of statistical data captured using standardised clinical evaluation measures. Findings indicating that music therapy had a positive effect on the children's emotional and social functioning are discussed as part of a broader reflection on possible future developments.

## KEYWORDS

clinical music therapy,  
Palestinian refugee  
children,  
toxic stress,  
case series research

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## INTRODUCTION

This research aimed to evaluate the impact of music therapy on the emotional and social functioning of Palestinian refugee children aged 7-11 from Lebanon. The research, a case-series involving 23 children, took place within the context of the international cooperation project “Music and Resilience” (Music and Resilience, n.d.). This project was developed by the Palestinian non-governmental organisation (NGO) National Institution of Social Care and Vocational Training (NISCVT, n.d.), “Beit Atfal Assumoud” (hereafter Assumoud) and the Italian community-based organisation (CBO) Associazione Prima Materia (Associazione Prima Materia, n.d.), in collaboration with Nordoff-Robbins Music Therapy, London UK (Nordoff Robbins, n.d.). Funds were made available by Ta’awon Association Lebanon (Taawon, n.d.).

How to evaluate impact in music therapy is a complex and challenging question, even within systems well geared to such processes. The socio-political context of this study renders even the service provision fragile, and deeply affects the life experiences of the children presenting for therapy. These considerations, coupled with the limited sample size, perhaps call into question the usefulness of “standardised” quantitative evaluation means, which are considered an essential part of “evidence-based research” both by Lebanon’s professional mental health community, and by the funding institution. The study therefore utilised a mixed methods design, complementing quantitative analysis of data collected via standard tools with qualitative analysis of narrative case studies. The narrative data, written by the music therapists, aimed to tell the stories of some of the children treated, thus casting light on elements of the process that goes on within the “black box” of therapy, but which is typically neglected by quantitative evaluation.

Given the importance attached to context and the reluctance to accept that music therapy is a one-size-fits-all intervention, the next section of this article outlines the contextual background in which “Music and Resilience” operates, describing Assumoud’s development of music therapy within its Family Guidance Centres (FGCs), and demonstrating how and why the mental health teams’ clinical attention began to focus on the area addressed in this study. This is followed by a review of existing music therapy literature on work within refugee communities, and a section describing the social profile of the sample group. The concept of toxic stress (which will be used as an analytic tool) is then outlined, followed by the framework of the evaluation project, including the methodology and timeline. The various findings from the data are then presented and discussed, and a concluding discussion reflects on possible future implications and developments of this work.

## CONTEXT

In 1948, as a consequence of the Arab-Israeli War, hundreds of thousands of Palestinians were forced to flee their homeland (Fisk, 2001, pp.12-47). This conflict, known to most of the world as the “Israeli War of Independence,” is defined by the Palestinians as “Al Nakba” (“the catastrophe”). Around

100,000 refugees escaped to Lebanon to find shelter in what were supposed to be temporary, emergency refugee camps set up by the United Nations. Today their descendants are still living as refugees inside these camps, which, in more than 70 years, have become tightly packed, unhealthily overcrowded and under-resourced urban jungles, contained within walls and/or barbed wire fences, patrolled night and day by the Lebanese armed forces, who can close access to and from them at any time. Due to a fatal cocktail of historical events and political idiosyncrasies, the Palestinian refugees of Lebanon (PRL) have never obtained any kind of civil recognition, either internationally, as exiles from their home country without the right to return, or nationally in the host country, as members of civil society. Nor is Lebanon responsible to them as refugees, delegating all provision of primary needs to the United Nations Relief and Works Agency (UNRWA). Thus, this community is constrained to live in “limbo” with permanently denied rights to public health and education, to professional employment, and to permanent ownership of property. As explained by Chaaban et al. (2016),

Palestine refugees in Lebanon face one of the worst socio-economic situations in the region second only to the Gaza Strip, and their conditions have been deteriorating given the country's weakening socio-economic situation and the prolonged Syria crisis. A little short of two thirds of the PRL population is poor and the discriminatory laws against them hinder their ability to improve their living conditions and livelihoods. (Chaaban et al., 2016, p. 24)

Given the inhumanly prolonged state of dependency of the PRL community, exacerbated over the years by significant population expansion, the humanitarian assistance delegated to UNRWA has proved chronically insufficient. It falls to the many local NGOs to fill the gap in missing services.

The Palestinian NGO Assumoud was founded in 1976 in response to the Tel Alzaatar refugee camp massacre by Lebanese armed forces during the Civil War (1975-90) in order to take care of the hundreds of orphaned children. It has grown to become one of the largest institutions in Lebanon, providing services for the Palestinian refugees and other disadvantaged people living in the camps or close to them. Assumoud centres are situated either inside or in proximity to all the camps and develop community-based activities targeting primarily children and youth, with close involvement of their families and the local community. Assumoud was the first organisation to address mental healthcare provision in these contexts: in 1997 the first Family Guidance Centre opened in Beirut and, as resources were secured, four more centres were opened serving other camp locations in the North and the South of the country. Mental Health (MH) teams are headed by child psychiatrists and comprise psychologists, social workers and other therapists (speech, motor, ergonomic, psychotherapists). In 2012, in collaboration with the Italian CBO *Prima Materia*, within the context of the international cooperation project “Music and Resilience” (M&R), music therapy was introduced as a complementary treatment. Training in psychodynamically informed improvisational music therapy was given to a group of 14 social workers, psychologists and other therapists, and this was followed up each year with further training and regular supervision of their clinical work, which was also monitored and discussed in the respective FGC MH teams. Two of the authors of this study, Liliane Younes and Mohamad Orabi<sup>1</sup>, were sponsored to enrol in the Music Therapy Diploma course in Assisi, Italy,

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<sup>1</sup> Mohamad Orabi was sponsored by the Italian NGO “Ulaia ArteSud” (ULAIA ArteSud onlus, n.d.).

graduating in March 2019, thus providing Assumoud with internal professional resources in this discipline.

From the beginning of the programme, the M&R music therapy team supported clinical work with monitoring, evaluation and research, published internally (Parker, 2013, 2015) and presented at MH and music therapy conferences. The clinical population addressed in these studies was highly heterogeneous, with no standardisation of age, clinical profile, or cultural origin. For example, as a consequence of the Syrian crisis, Assumoud's MH clinics were receiving high numbers of newly arrived refugees, and all programmes were adapted to offer an immediate response to the ever-increasing waiting lists. The music therapy programme was no exception, and from 2013-2014 short-term group therapy sessions were set up as a first intervention for these children, whilst maintaining individual treatments for children referred after assessment by MH specialists. Despite the pronounced diversity of cases, detailed data was collected by the music therapists, from other relevant MH specialists and from the children and their families. Clinical observations and evaluation results were considered critically, alongside reflections from the service users and their parents. A high proportion of this very varied data indicated that music therapy had beneficial effects for the children. All professionals involved agreed that further, more controlled, and standardised research needed to be done. This present study represents a first attempt to respond to this need.

## COMPARING NOTES: LITERATURE ON MUSIC THERAPY FOR REFUGEE POPULATIONS

Within the growing literature of the last 20 years regarding music as a medium for social care and change, a small but significant amount of research has addressed music therapy specifically with refugees. Zharinova-Sanderson (2004) and Orth (2005) wrote about their respective music therapy work with adult refugees and asylum seekers, using a variety of approaches, both with groups and individuals. In Orth's study of "S" (a traumatised Liberian refugee), the technique of songwriting was highlighted as a powerful agent of organisation and structure. The significance of songwriting also emerged for some of the young Palestinians in the present research, as the case study narrations of children "P" and "N" will show (see section "Narrative data: Case studies").

Other studies have addressed music therapy with young refugees, through a variety of frameworks. Hunt (2005), for example, presented an action research project of short-term group music therapy within a school setting with adolescent refugees. Tyler (2002) illustrated the Nordoff-Robbins model through a case study of a severely traumatised refugee boy. Pavlicevic (2002) also referenced Nordoff-Robbins' concept of "the music child" (Nordoff & Robbins, 1977) in her evocative study of music therapy work with traumatised children from marginalised communities in South Africa. Although these children were not refugees, strong parallels can be drawn between the refugee camps of Lebanon and the South African townships, which were "developed by the apartheid state as part of the policy of 'separate development,' to be inhabited by black people, and generally lacked basic infrastructures such as electricity, tarred roads and sanitation" (Pavlicevic, 2002, p.113). Similarly, the South African children's plight closely resembles that of the Palestinian children in this study; they were described as lacking "basic nurturing, thanks to fragmented families [...] or poorly resourced community structures that undermine their parents' capacities to be present emotionally" (Pavlicevic,

2002, p.111). Their trauma was understood within a framework of “cumulative build-up of stress” (Pavlicevic, 2002, p.110).

Jones et al. (2004) were concerned with intercultural issues in developing music therapy in Australia for recently arrived Sudanese refugee teenagers and illustrated, through case studies, the efficacy of music in contributing towards protection against emotional, social, behavioural and learning problems.

Lang and McInerney (2002) wrote about the work of the Pavarotti Music Centre in Bosnia-Herzegovina following the break-up of the Yugoslav state (1991-96). Their series of case studies illustrated differing aspects of clinical work with traumatised children, most of whom were refugees within their own country. In 2009, one of the founders of this project, Nigel Osborne presented further research with reference to the framework of post-traumatic stress disorder (PTSD). Osborne developed a biopsychosocial paradigm, borne out of extensive neurobiological research, for music and arts interventions with children suffering the effects of conflict.

Recent research on the island of Chios, Greece, showed that one-off music therapy group sessions for refugee children in transit could support social interaction and stress reduction, providing some protection for the children in this disorientating phase (Akoyunoglou-Christou, 2016), and research on the combination of music therapy and cognitive behavioural therapy in reducing PTSD in Syrian refugee children has been conducted in Jordan (Damrah, 2014).

Two projects, developed specifically within Palestinian communities, are of particular relevance. Project Bethlehem (Coombes, 2011), developed by Music as Therapy International and recently in collaboration with Musicians without Borders (Music as Therapy International, 2021), runs in the West Bank of the Palestinian Occupied Territories, training local staff in schools, refugee camps and care settings in the use of therapeutic techniques in music for vulnerable children and adults. Meanwhile in Lebanon, in collaboration with the same local Palestinian NGO engaged in “Music and Resilience,” Assumoud, the Norwegian Academy of Music has been working since 2002 to develop a robust community music project in “Rashedie” refugee camp in Tyre (Storsve et al., 2010). The results of this very successful project, which show clearly the benefits that music involvement brings to the youth of the camp, were certainly important in influencing the request of Assumoud to Prima Materia to extend music resources to the clinical area in the FGCs.

With few exceptions, these important contributions to understanding how music therapy can support and assist refugees are characterised by qualitative methodologies. It is not surprising that very little quantitative, clinical music therapy research with refugee children has been documented. In order to produce standardised data for quantitative analysis, a certain stability of infrastructure is necessary. “Stability” is not normally an attribute of refugee status, which is associated with transience of life conditions. Many of the environments in which music has been introduced for refugees specifically as a protection factor against the risks of trauma, deprivation and marginalisation, have been characterised by the unpredictability of conflict and forced migration, within a framework of gradual social integration however slow and painful this process may prove to be. Contrastingly, the uniquely “stuck” situation of the Palestinian refugees in Lebanon has created, in 72 years, an “exploitable” panorama of well-established infrastructures such as the Assumoud MH clinics, with reliable medical teams, able to guarantee the necessary support for consistent and articulated data collection, permitting focussed analysis of measurable values.

## THE PERSONAL, SOCIAL AND DEVELOPMENTAL IMPACT OF BEING A REFUGEE WITHIN THE CAMPS

It is easy to write political histories or to document the evolution of services without pausing to consider the personal impact of being a refugee by heritage, as is the case for all the children participating in this study. They are third or fourth generation Palestinian refugees in Lebanon (PRL). Their ancestors fled their homeland in 1948 and their families have lived in or around refugee camps ever since. Unsurprisingly, this significantly limits opportunities for flourishing amongst young people, and is frequently manifested in the form of identifiable mental health conditions (Afifi et al., 2011; Atallah, 2017; Mohamed & Thomas, 2017). Here we illustrate this by means of the presenting stories of the four children whose music therapy processes will be considered later:

P is 7 years old, the second of three children, and lives in a camp with his siblings, parents, a paternal uncle and a paternal aunt. According to P's mother, considerably younger than her husband, the marriage is unhappy, with much strife, and her sister-in-law interferes with the upbringing of the children. Furthermore, she suspects her brother-in-law of being homosexual, causing her great fear for possible abuse of her sons, and resulting in her overprotection of them. At the same time, she seems to project her general dissatisfaction with life onto her second child, who clearly does not live up to her expectations. She complains about his behaviour and describes him only in negative terms; she sees no progress in him and is incessantly demanding of him.

N, a boy of 10 years old, is the youngest of five children, with four older sisters. The children and their mother suffer from chronic domestic violence perpetrated by their alcoholic father. Two of the sisters married extremely young, partly in order to escape this situation, but one has subsequently divorced and returned home. N has become increasingly withdrawn and fearful, isolating himself from his peers and refusing to go to school.

O is 11, in grade five at her local UNRWA school. Her mother suffers from depression and is in treatment with the FGC psychologist, who also assists O's younger brother for learning problems and conduct disorder. O's family had lived for a period in Syria; when the Syrian crisis began, mother and children returned to Lebanon, whilst the father remained in Syria and then disappeared. The family receives no news from him and does not know where he is, or if he is still alive. Back in Lebanon, the family faces extreme financial hardship. O's mother tries to make ends meet, working sporadically in temporary casual jobs, but the family depends on NGO charity sustenance. The family lives in one room, often having to share it with an uncle who has schizophrenia and whose behaviour creates much distress for O.

T is 7 years old, the third child in his family. His father was born in another Arab state and came to Lebanon when he was 20. His attempts to leave Lebanon again during the 1990s failed, due to his status as a Palestinian refugee, causing him ongoing disappointment and frustration. He has never given up trying to

leave Lebanon with his family. Neither of T's parents completed their education. His father finished only primary school, before beginning to work; he hated school and describes himself as "stupid." At 18 years old, T's mother enrolled on a vocational training course, where she met her future husband, whom she describes as "a dreamy fiancé with unrealistic ambitions." Her family agreed to her engagement, relieved that she would not remain single like her aunt. The newly married couple lived for a short period in the Beirut suburbs, but economic hardship forced them to resort to accommodation inside one of the nearby refugee camps. For T's mother, this situation shattered her dreams of a better life and she has resigned herself to "living with a man walking in the void." T's mother speaks of her husband's rough handling of the child, relating this to T's father's own childhood experience of a cruel father: "he speaks to T in the same humiliating way." Her own expectations regarding her son's capacities are however equally negative, summed up as: "I think my child is like his father."

From these stories, it is evident that the referrals to the Assumoud MH teams are far from clinically straightforward: these children's situations cannot be considered without reference to their living conditions and indeed to the social and geo-political circumstances in which they find themselves growing up. Just as identity narratives are crucial to "being Palestinian," so these flow into the work of music therapy and it would seem inappropriate to impose an external model of evaluation which excluded consideration of this. Thus, it was decided to adopt an approach to evaluation which incorporated quantitative elements which corresponded to areas of particular interest and concern to the service itself, whilst also honouring the therapy stories narrated by the music therapists as case studies.

## AN ANALYTIC FRAMEWORK – FROM PTSD TO TOXIC STRESS

It was clear from the outset that data analysis would be aided by the use of a conceptual framework relevant to the situations of these children. Post-traumatic stress disorder (PTSD) was first defined in relation to the psychological state of American military servicemen returning from the horrors of the Vietnam War (1955-75). It has been one of the most commonly used frameworks with reference to Lebanon as a post-conflict zone, perhaps due to Western psychiatry's dependence on DSM and ICD classifications. PTSD refers to a situation caused by a trauma which is no longer ongoing for the person. In 1992, Judith Herman's seminal book "Trauma and Recovery" provided strong clinical evidence that the symptoms described in PTSD were relevant not only to "institutionalised" forms of terror, but also to the domestic and intimate violence of abusive home life. In 2010, Miller and Rasmussen published an article "War exposure, daily stressors, and mental health in conflict and post-conflict settings: bridging the divide between trauma-focussed and psychosocial frameworks," suggesting that "trauma-focussed advocates tend to overemphasise the impact of direct war on mental health and fail to consider the contribution of stressful social and material conditions (daily stressors)" (p.7). Renos Papadopoulos (2007) has also contributed to the epistemology of trauma-focussed intervention with refugees, developing the "Trauma Grid," which enables a more comprehensive and flexible understanding of each person's unique way of reacting to traumatic events.

Subsequent research has confirmed Herman's (1992) exposition of the adverse effects of violence, be they the result of direct armed conflict or of home abuse and insecure, uncaring living conditions, leading to the adoption of terms such as "early childhood adversity and toxic stress" (Shonkoff et al., 2012) and "early life toxic stress" (Johnson et al., 2013). The term "toxic stress" defines the signs and clinical symptoms provoked by prolonged and profound adverse life conditions, as opposed to the stress of past traumatic experiences. It is "toxic," because of its negative biopsychosocial consequences, signalling its salient difference from "healthy" stress, which is defined as a normal, physiological component of developmental problem-solving.

The Adverse Childhood Experiences (ACE) research (Felitti et al., 1998), involving more than 17,000 adults in a retrospective study, indicated adverse childhood experiences to be amongst the most important determinants of health and well-being. Felitti (2002) used the metaphor "turning gold to lead" to express the tragic transformation of "a normal newborn with almost unlimited potential to a diseased, depressed adult" (p. 45). ACE categories, differentiating types of personal abuse (physical; psychological; sexual) and home environment dysfunctions (presence of substance abusers; mentally ill, depressed or suicidal family members; family members imprisoned; mother treated violently; parents separated, divorced or lost), permitted the scoring of participants in order to rate their exposure to adversity. All the children described in this study have an alarmingly high ACE score. ACE effects are played out at a biological level in a critically sensitive period of life, shaping the development and calibration of the neuroendocrine-immune network, with resultant increased vulnerability to a large spectrum of subsequent pathologies (Johnson et al., 2013). More recent research confirms that incidence of conduct disorder, depressive disorder and general anxiety disorder is considerably higher in adolescents with histories of childhood maltreatment than in more securely raised youth (Greger et al., 2015).

These studies provide a clinical framework for addressing the symptoms manifest in the children included in the present research, who are not living in a conflict zone, but are the victims of the "basic fault" (Balint, 1992) induced by conflict and trauma experienced by earlier generations of their families, and who are living in conditions characterised by incumbent and chronic "daily stressors." They are indeed victims of toxic stress, which is situated at the pathological extreme of the stress spectrum.

## RESEARCH METHODOLOGY AND DATA COLLECTION

The research protocol for this study was developed, defined and approved during the early part of 2017, by the three Assumoud mental health (MH) teams of the FGCs involved, located in Beirut, Sidon and Tripoli.

Since Assumoud's mission is to offer any resources available to children in need, the creation of a control group, where access to music therapy would have been denied, could not be ethically justified. Instead, the study was designed as a "case series" (Gold, 2015). The research aim was to monitor the impact of music therapy on the emotional and social functioning of Palestinian refugee children from Lebanon aged 7-11, in order to verify the hypothesis that music therapy is an effective therapeutic method in lowering anxiety levels in children suffering from the effects of stress and trauma, and in strengthening their self-esteem and sense of agency, thus contributing to the development of their resilience.

Two objectives were set for the study:

1. to test the hypothesis through the collection and analysis of controlled, standardised data and narrative data.
2. to develop and consolidate the MH teams' clinical experience, in music therapy intervention to date, with Palestinian refugee children in Lebanon.

The following inclusion criteria were adopted for the research study: children aged 7 to 11 years of age (at closure of the study), without reference to gender; from Palestinian refugee families historically from Lebanon (Palestinian refugee families from Syria were excluded); children with preliminary diagnoses limited to disturbed emotional and social functioning, without comorbid organic conditions; receipt of a Participation Information and Consent Form for each child, signed by both parents, if available, and, if not, by at least one parental figure or guardian.

The first 30 children presenting at the Assumoud FGCs, who met the research criteria and were referred by the mental health teams to music therapy services, were to receive 16 thirty-minute individual sessions each, at weekly intervals. A comprehensive psychiatric and clinical assessment was completed during the week before therapy started and within two weeks of closure of therapy, using both global and categorical scales, following a psychiatric evaluation and diagnosis based on the DSM-5 (American Psychiatric Association, 2013). This included the following elements:

- Child Behaviour Checklist/6-18 (CBCL) (Achenbach & Rescorla, 2001): the CBCL/6-18 (2001 revision, for use with children 6-18 years old) is a component of the Achenbach System of Empirically Based Assessment, for identifying behavioural and emotional difficulties. The evaluation scores eight syndrome scales, addressing mood, mental and attention abilities and behaviour, grouped according to internalising or externalising factors, and referring to relevant DSM diagnostic categories. The checklist, which has inbuilt flexibility with respect to differing cultural/societal norms, charts observations made by one of the child's parental figures in answer to 113 questions, rated on a three-point Likert scale (absent / occurs sometimes / occurs often). Percentage scores are expressed for each syndrome domain, for internalisation and externalisation factors, and as an overall average.
- Children's Global Assessment Scale (CGAS) (Shaffer et al., 1983): CGAS is carried out by a clinician for children between the ages of 6 and 17 and assesses a range of elements indicating social and psychological functioning. The assessment is expressed as a single percentage figure, along a constant spectrum of ten categories, where 1-10% indicates poorest level of functioning and 91-100% the best.
- Visual Analogue Scale (VAS): VAS are psychometric scales used to measure the intensity or frequency of determined signs or symptoms. In this study, it was used to measure indicators of emotional and social functioning, based on DSM-5 relevant criteria (American Psychiatric Association, 2013). FGC psychiatrists chose, for each child, the three, and in one case four, most salient indicators of emotional and social functioning.

The first, second, fifteenth and sixteenth music therapy sessions were video recorded, thus enabling evaluation of a preliminary and a closing session for each child using a specific music therapy tool, the Individualized Music Therapy Assessment Profile (IMTAP) (Baxter et al., 2007). This allows

for the assessment of observable behaviour during improvisational music therapy activity over a range of up to ten functional domains, three of which – emotional, social and musicality – were selected as most relevant for this study. Each domain includes “fundamental” observations, followed by more detailed “subdomain” indicators. Scores are computed in percentages, and expressed for each sub-domain separately, or as overall domain averages.

Complementing this statistical data, the protocol also required brief narrative case studies to be written by the music therapist working with each child, as a means of preserving focus on the process of the therapy itself and providing some insight into the experiences offered by the therapy, as perceived by the therapists involved. The therapists' narratives provide data complementing the structured interviews of the CBCL, which gave voice to the parents' views of their children as they progressed through therapy. Four of the case study narratives were selected randomly, as a sample to be included and analysed thematically.

Data was collected between June 2017 and October 2018. During this period, a high proportion of Palestinian refugee families from Syria were seeking help in the FGCs: their children did not meet the inclusion criteria. In total, full data was collected for only 23 children who met all the inclusion criteria. Both Ramadan and periods of social unrest and instability impeded families attending treatment centres for long periods of time, thus making it impossible for sessions to be held on a weekly basis. These factors prolonged the period of data collection for many of the children in order to maintain the standard 16 music therapy sessions each.

During 2019, the IMTAP video evaluation was carried out “blindly” by an external team of music therapists in Italy. Prior to evaluation, the four members of the team met for training in the use of IMTAP, including repeated test-evaluations, until a satisfactory level of standardisation in evaluation measures had been achieved. By the end of 2019, all statistical data was complete and ready for analysis, which was carried out by the research team at Nordoff-Robbins Music Therapy, London, in the first months of 2020.

## NARRATIVE DATA: CASE STUDIES

### P's music therapy pathway

P was referred for music therapy by the team speech therapist, concerned about his extreme shyness and his difficulties with verbal expression, compounded by stuttering. In the early sessions, P presented as a distinctly hesitant child, reluctant to take initiative, lacking spontaneity, manifesting in transference of his fear of soliciting negative reactions from the therapist. Playing together at the piano, he focused on “his” part of the instrument, his own space, concentrating on his own musical expressions, which were disorganised with no rhythmic structure, not daring to approach or engage with the therapist's space. His response to verbal exchange was limited to short phrases and he needed considerable encouragement. His communication difficulties were manifest in his inability to discriminate or manipulate a simple pulse or rhythm, indicating a state of deregulation of his internal time and space. The therapist mentalised<sup>2</sup> this within the context of the primary relationship lacking

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<sup>2</sup>Within the framework of the music therapy model applied, mentalisation is the process by which the therapist assigns significance to dynamic elements emerging during the therapy process.

in synchronisation and attunement. She limited her actions to supporting and confirming his music, trying to match his uneven tempi and erratic expressions, without judging or making demands. Gradually, his way of playing changed, allowing brief moments of meeting in a common, fleeting musical structure. He began to take initiative, to widen the space between his hands on the keyboard, and to encroach on the therapist's part of the piano, entering her "space"; showing a clear competence of attention and awareness of presence, he began to mirror her phrases. This was interpreted as a first step forward in the therapeutic relationship, an indication of growing trust.

As treatment progressed, P's body movements and his music acquired more freedom within the external space, reflecting a transformation within his internal being. He began to explore higher intensities on the percussion instruments and his playing became more lively and confident. He engaged physically with his music, using intensity and speed to discharge a compressed internal energy, in a kind of "explosion" of physical movement, which he had maybe never been able to explore. The therapist's reception of these expressions evoked an intense need to communicate many repressed feelings and emotions and she responded to his constant need for positive feedback. His repetitive, insistent playing on the keyboard had lost its submissiveness, freely releasing his shyness, his anger and his frustration.

This increased physical relaxation and ease in expression was evident also in his verbal exchanges, indicating the emergence of a functional physical and psychic flow. His music maintained a lack of formal regularity of space and time; he was not able to work within a clear structured frame or to use a melodic line, despite the therapist's attempts to provide these elements. In the concluding sessions, however, P and the therapist managed to invent a song together about his desires; this represented a highly significant achievement, and he was proud of having "produced" something.

### N's music therapy pathway

N was referred to the FGC for psychological and cognitive assessment and diagnosed with moderate depression. Discussion in the MH team meeting confirmed a preference to avoid using medication, and his referral to music therapy was decided, setting three main objectives: providing N with a safe environment; reducing his depressive symptoms; supporting him to express his emotions.

During the early sessions, N behaved paradoxically; on the one hand, he seemed to be physically in a catatonic state, slow, unreactive, with motor coordination difficulties, on the other, as soon as he began to play an instrument, he would stop, as if he had done something wrong, and move to a different instrument. The therapist sensed his transference of fear, guilt, frustration and uncertainty, and felt that N was searching for his identity.

Physically blocked, unable to express or modulate his emotions, N manifested a meaningful "stuckness" in his dissociated way of existing in the music therapy space, reflecting how he had learnt to survive in daily life. Being together in the session consisted of the therapist's support of N's behaviour, without opportunities for authentic "meeting". The therapist hoped that at least N was aware of the safe place for him.

In the fourth session there was a noticeable change in the quality of the musical exchange. Whether playing alone or together with the therapist, N began to reference the other's presence more often through eye-contact; this availability to be in relationship was reinforced by a new tendency to talk about things which were annoying him outside the sessions. Collaborative improvisation now became possible, highlighting N's tendency to a preferred passivity, certainly non-aggressive, cooperating with the therapist by following his lead; for the therapist, this style of being in relationship was evocative of a "shadow".

Having established a trusting working alliance, the therapist began to leave more space for N's musical expression. N was reluctant to take initiative; his own music was ostentatiously formless, a-rhythmic, uncontained, and in "shadowing" the therapist, he seemed to have difficulties with attention and memory, finding it hard to repeat even a short musical idea.

During the final sessions, the therapist embraced N's musical being as it was, and concentrated on investing in the quality of safeness and enjoyment of the music therapy environment. N began to smile more often, and spoke freely and confidently of his preference for the percussive instruments. He also began to use his voice to sing in the final sessions, inventing and developing his own song.

Unfortunately, despite indications that N was reacting well to this treatment, extenuating circumstances prevented its extension. Before ending, the FGC was able to discuss plans with N's parents for enrolment in a special school where he could be followed in order to reinforce his learning capacities and recuperate his school career.

### O's music therapy pathway

O was brought to the FGC by her mother who was concerned about her daughter's behaviour: her overall sadness and withdrawal; her unruliness, both at home and at school; and her frustration, which was expressed through inappropriate behaviour towards her two older sisters (14 and 16 years old), and violence towards her younger brother (8 years old).

O's diagnosis by the FGC psychiatrist defined a moderate depression with impulsive traits and she was referred to music therapy. Her behaviour within this environment was never unruly, oppositional or inappropriate; she was compliant, cooperative and respectful of the musical space and instruments. However, her depression was clearly manifest in her closed posture, her restricted movements and gestures, and her lack of initiative. Her preferred instruments were guitar and piano; in the early sessions, she would play them with a blank expression on her downturned face, finding a rhythmic and melodic pattern of notes in a soft intensity and then repeating it continuously, in a suspended and lethargic way. Despite being receptive to the therapist's invitations to play, her music was in no way interactive at this stage; the therapist limited his response to an unconditional and undemanding support, accompanying her musically as a sign of his presence and availability. After the end of each session, a further ten minutes were dedicated to verbal exchange, offering a space for O to speak about things that caused her discomfort.

From the fourth session onwards, O began to show signs of trusting the music therapy environment and her therapist; it was perhaps significant for a young girl who did not know whether her father was alive or where he might be, that the therapist was male. She began to develop her listening skills in the improvisations, adapting her playing to answer the therapist's phrases, and

learning to take turns. Her musical abilities grew and, with them, her communication skills. Her newly emergent strengths supported a growing capacity and availability to be in an interactive, communicative relationship with the therapist.

These more adaptive behaviours indicated a more serene psychological state, as O's depressive symptoms began to recede. Her mother reported that her behaviour had become much more adaptive and appropriate, both at home and at school, where she was at last making friends and had even been elected as the class representative. This short period of treatment, undoubtedly reinforced by an involved and cooperative mother, impacted positively on O's inner state and supported the emergence of her competence to find more adaptive strategies to her life situation.

### T's music therapy pathway

T's mother brought him to the FGC, complaining about his low school achievement, his agitated behaviour and his aggressiveness. The psychiatrist diagnosed ADHD combined presentation and disruptive disorder; he was referred to music therapy.

T's music therapy pathway was continually threatened by interruptions due to absence for various reasons. The emergent characteristics were his extreme agitation, his need to play continuously and his tendency to transgress any boundary set by the therapist. For many sessions he behaved as if trying to find his own space. In the second session, he used four beaters to build a square on the mat; this was interpreted as a need to define a space that he could not yet integrate, in relation to the therapist. His unending movement inside the musical space and his ubiquitous distraction reflected his emotional distress, his internal anxiety, instability and affective dissociation. Brief moments of communication occurred in the synchronicity of short rhythmical beats; moments of approach emerged through musical exchanges, such as his occasional mirroring of a phrase offered by the therapist, but these did not last for long. He had great difficulty in starting and ending a defined task, even if very short. He moved incessantly in and out of the musical space, reflecting a disintegrated self and a despair with respect to unity. For T, the act of communicating was fraught with dangers, and his astonishment at the new sensations of being "seen, heard and cared for" was evident. The new model offered by the therapist was very different from the reactions he had learnt to expect from his parents; the therapist's presence, her ability to hold him, and not to punish him at each "inappropriate behaviour" slowly encouraged him to risk the new sensation of trusting. He began to explore this relationship, sensitive to the attention dedicated to him, with the discovery that he could manage verbal exchanges well, so that he felt able to share a song which he had learnt at school.

During the course of music therapy, T's "normal" home life continued. He arrived for the third session with both hands bandaged; his father had burned his hands as a punishment for ruining some photographic work. Despite his bandaged and painful hands, he tried to play, but soon gave up, manifesting boredom and lack of interest in the therapist's proposals. Often, he remained silent and non-reactive, forcing the therapist to think for him, observing, without words. He frequently ignored the therapist's music, communicating his need to be seen by sitting on, or stepping on the instruments. He demonstrated that the therapeutic space was not enough for him. On many occasions he could not cope with being in a face-to-face position, sitting laterally to the therapist. Repeatedly the therapist's music met no reaction from the child, despite the therapist's feeling that contact, and trust had been

established.

He arrived at the sixth session with a bandaged head; his brother had thrown a stone at him, causing a visit to emergency services for stitches in his head. In the final session, one of his hands was bandaged again; his mother reported that he had jumped from a high step and broken his hand.

Music therapy perhaps helped T to regain some trust and confidence in a possible caring human relationship, so different from the context of his daily life. This latter situation was clearly a negative factor, which prevented achieving sustained, generalised, positive results. Music therapy represented a single positive intervention within the context of an ongoing, severely problematic environment.

## QUALITATIVE ANALYSIS AND FINDINGS OF NARRATIVE DATA

The descriptions of music therapy pathways were provided by the music therapists, whose ways of thinking, of interacting with each child, of experiencing what happened in sessions, and even of using language to convey their experiences are all likely to be highly associated with their personal, cultural, professional and musical norms, as well as their experiences of training and supervision. As such, this data provides an insight into the processes within the music therapy room from the perspectives of the therapists (one Lebanese and the other a Palestinian refugee themselves). Given the imposition of non-indigenous standardised tools for quantitative data collection and analysis, the local voices telling clinical stories demand to be heard. Nevertheless, it must be accepted that the experiences of the therapists do not necessarily describe or map onto that of the children in each case: rather these must be treated as one-person “insider accounts” of a shared process.

Thematic analysis (Tsiris et al., 2014) of these narrations reveals two main groups of themes: the first concerning the therapeutic process and the second the role of the music therapy room in the process. Themes addressing the therapeutic process include: 1) the characteristics of the children in the early stages of their music therapy pathways; 2) the thinking and strategies adopted by the music therapists; 3) the changes in the children's musical and social behaviour during their therapeutic journeys. Initially, all the children showed an extreme distrust of the world surrounding them, manifesting fear, and anxiety in all their behaviours. Their reactions differed along the “fight-flight-freeze” spectrum, from inhibited, withdrawn, and lethargic behaviour, to unruly, disruptive and challenging acting out. These attitudes, together with cognitive dysfunctions, particularly of attention and memory, were reflected in corresponding difficulties in musical competence, participation and social engagement. The music therapists reflected on what was happening and adopted consistent strategic responses aimed at welcoming and accepting, showing availability and care, neither demanding nor judging, creating a “safe place” for musical meetings and enjoyment, thus modelling a new and healthier relational style for the children. In their turn, the children responded to this new “way of being with another,” manifesting reduced anxiety and increased trust, which emerged in improved motor competence and more regulated hedonic tone, better affective adaptation, improved cognitive skills and musical abilities, and greater relational awareness, motivation, and gratification.

The therapy room was experienced by the therapists as existing in juxtaposition with the outside world. The therapy room was understood not simply as a physical space but also as a location where the therapists could work to provide an experience of safety via personal and musical availability to the children. In contrast, the outside world was felt to be much less predictable, responsive, and

nurturing. In this way the therapy room seemed to provide space for necessary development – whether this was development that had been missed out on for various reasons, or whether this was development which was needed in order to cope with the demands of growing up in an environment characterised by toxic stress. However, the shadow of the external environment fell heavily on the serene oases of the music therapy spaces; in all cases but one (that of O), the narratives remind us of the extreme contingent challenges persisting in the children's lives.

Furthermore, the experienced nature of the room (as a safe space where therapy took place) was configured not simply by what the therapists did, but also by the actions and agency of the children themselves. In other words, the children themselves actively contributed to the creation of the therapy room as a therapeutic space in the ways in which they interacted with the therapist as well as in the uses they made of instruments and musical opportunities. Each process in its own way featured a sense of movement (from isolation or rejection to interaction and responsiveness), albeit in some cases significantly but unsurprisingly hampered by external circumstances. This was evidenced by physical behaviours as well as by new, often experimental, patterns of interaction featuring expressivity, humour, warmth, pride in aesthetic achievement etc.

## QUANTITATIVE ANALYSIS AND FINDINGS OF STATISTICAL DATA

Complete quantitative data, as stipulated in the research protocol, was collected for all the children involved. This is particularly significant with respect to the CBCL, an assessment compiled from the parent's answers about their children, as it indicates a high level of cooperation from these primary caregivers, in support of the research study.

The age distribution of the 23 children in the study group ranged from 7 years to 11 years 11 months. The mean age was 8 years 11 months.

The statistical tests on the different variables imply that there was a significant improvement in the pre- and post- music therapy intervention data for all the measures. The discrete steps and test results are outlined below.

### Variable Creation

To aid data analysis, the original data was compiled into the variables outlined in Table 1. Whereas variables for CBCL, CGAS and IMTAP were standardised for all children, the VAS indicators were child-specific and therefore treated as separate items, in order to maintain precision.

### Paired samples t-test

In order to establish if there was a significant change in the scores from the different psychological measures before and after the implementation of the music therapy intervention, a paired samples t-test was chosen as an appropriate statistical test. This test compares the mean value of the pre- and post- variables and calculates if the difference is significant. To meet the underlying assumptions of this test, the data was analysed for normal distribution and checked for outliers. Normal distribution was checked by looking at the variables' level of skewness and kurtosis. Skewness is "the degree to

which a set of scores, measurements, or other numbers are asymmetrically distributed around a central point” (APA Dictionary of Psychology, n.d.), whereas kurtosis is “a statistical description of the degree of peakedness of distribution” (APA Dictionary of Psychology, n.d.). The acceptable range for skewness is between -1 and 1, while for kurtosis between -2 and 2.

Measure	Variable 1	Cases	Variable 2	Cases
CBCL	CBCL Pre	23	CBCL Post	23
CGAS	CGAS Pre	23	CGAS Post	23
IMTAP - Emotional	IMTAP-E Pre	23	IMTAP-E Post	23
IMTAP – Social	IMTAP-S	23	IMTAP-S Post	23
IMTAP – Musicality	IMAP-M Pre	23	IMTAP-M Post	23
VAS	VAS Pre	70	VAS Post	70

**Table 1:** Compilation of variables

Variable	Value of skewness	Value of kurtosis
CBCL Pre	-.29	-.55
CBCL Post	-.82	.53
CGAS Pre	.13	-1.04
CGAS Post	.03	-.74
IMTAP-E Pre	.10	0
IMTAP-E Post	-.12	-1.45
IMTAP-S Pre	-.57	1.04
IMTAP-S Post	-.52	-.35
IMTAP-M Pre	.64	-.01
IMTAP-M Post	.51	.34
VAS Pre	-.33	-.8
VAS Post	-.03	-.83

**Table 2:** Distribution analysis

While five variables were moderately skewed and three variables showed moderate kurtosis, all values fell into the acceptable range and thus normal distribution of all variables was assumed (see Table 2). To check for outliers, the data was transformed into standardised values and as all of these fell into the acceptable range between -3 and 3, no outliers could be detected. Given these results, it was concluded that all variables were fit to be used in the paired samples t-test. The same was consequently applied to each pair of pre and post scores. The results in form of the mean (M) and the

standard deviation (SD) for each variable are given in Table 3. A significant effect of the music intervention can be assumed if the p-value (p) of the paired samples t-test (t) is  $p < .05$ . Similarly, a significant correlation (r) between the pre and post scores can be assumed if the p-value (p) is  $p < .05$ .

Variable	Pre		Post		T-Test		Correlation
CBCL	M=70.22	SD=6.92	M=65.43	SD=8.33	t(22)=2.58	p =.017	r =.33
CGAS	M=51.09	SD=12.96	M=68.7	SD=14.16	t(22)=-6.15	p =.000	r =.49
IMTAP-E	M=62	SD=16.42	M=72	SD=12.76	t(22)=-2.97	p =.007	r =.41
IMTAP-S	M=48.61	SD=13.35	M=57.65	SD=12.07	t(22)=-2.8	p =.000	r =.26
IMTAP-M	M=19.78	SD=11.07	M=32.17	SD=15.49	t(22)=-5.73	p =.000	r =.74
VAS	M=5.31	SD=2.66	M=4.44	SD=2.31	t(69)=2.04	p =.045	r =-.02

**Table 3:** Paired samples t-test results

By looking at the p-values for the paired samples t-test it could be inferred that there was a significant difference between the pre- and post- scores of all variables (see Table 3). Therefore, it can be assumed that the music intervention had a significant effect for the different psychological measures.

Furthermore, the two significant correlations in the Children's Global Assessment Functioning and the Musicality score of the Individual Music Therapy Assessment imply that the music intervention had a similarly strong effect on all of the participants for these two particular measures.

### Correlation in the IMTAP

As the IMTAP was measured in three domains (emotional, social and musicality), these were checked for correlation in the post-music therapy intervention data collection, by means of bivariate correlation analysis. As the data had already been checked for normal distribution and outliers, only linearity as assumptions needed to be met for the bivariate correlation. This was checked by inspecting the scatterplots of IMTAP-S x IMTAP-E, IMTAP-E x IMTAP-M, and IMTAP-S x IMTAP-M. For linearity, a "straight line" relationship between the variables should be formed. If a line were to be drawn between all the dots going from left to right, the line should be straight and not curved.

As seen in figures 1, 2 and 3, the scatterplots confirm linearity of the data and thus a bivariate correlation test was applied to the variables (see Table 4). The highly significant correlation between the three measures of the Individual Music Therapy Assessment Profile implies that the musical intervention had a nearly equal effect on the emotional, social and musicality measures of each individual participant.

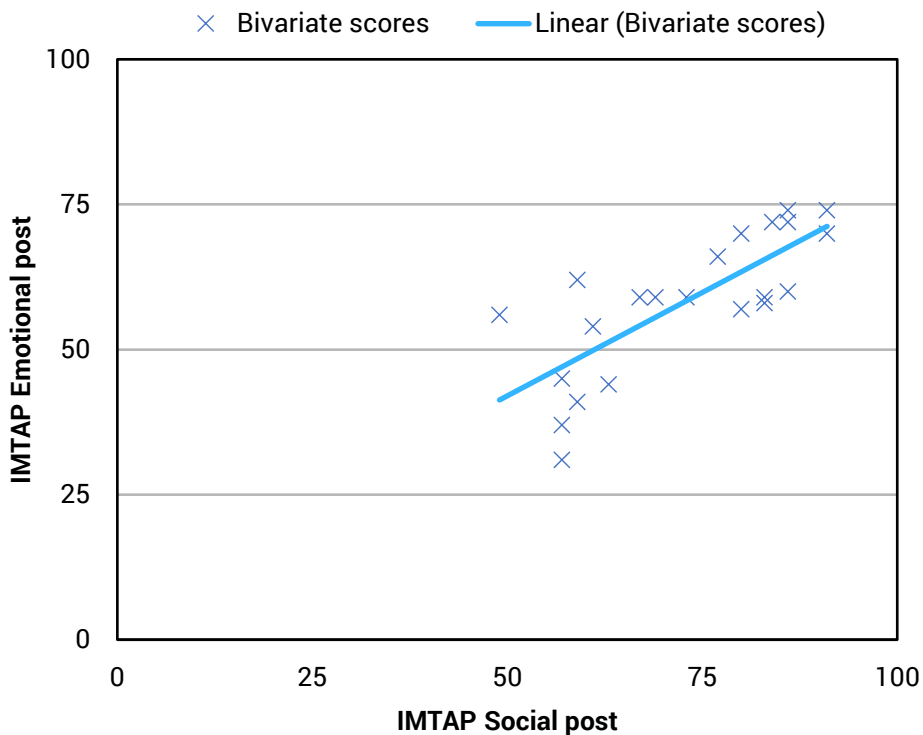


Figure 1: Scatterplot IMTAP emotional post vs. social post

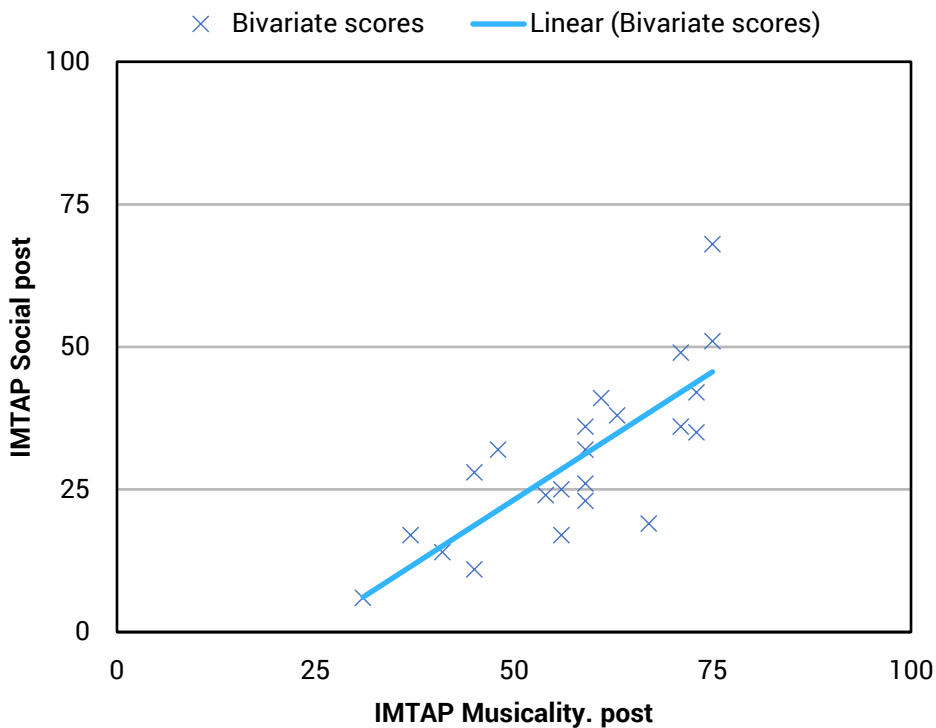


Figure 2: Scatterplot IMTAP social post vs. musicality post

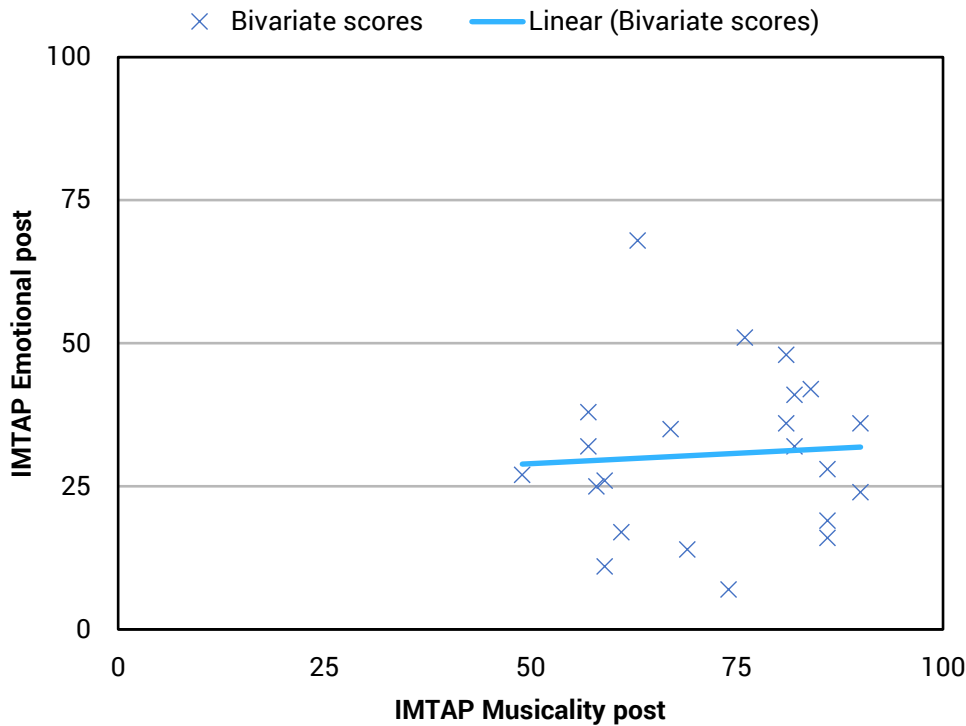


Figure 3: Scatterplot IMTAP emotional post vs. musicality post

Variable	Correlation	
IMTAP-E x IMTAP-S	R = 0.78	P = 0.000
IMTAP-E x IMTAP-M	R = 0.75	P = 0.000
IMTAP-M x IMTAP-S	R = 0.75	P = 0.000

Table 4: Bivariate correlation test

## DISCUSSION

The research aim in this study was to monitor the impact of music therapy on the emotional and social functioning of Palestinian refugee children from Lebanon aged 7-11. The statistical analysis shows a generalised improvement from pre- to post- evaluations in the assessment measures used, with scores shown to be largely reliable in terms of probability. The music therapy intervention is therefore considered to have had a significant positive effect on the children's emotional and social functioning – a consideration supported by the thematic analysis of the qualitative data. The analyses of both the statistical and the narrative data indicate that music therapy may be useful for children living in comparable situations. The statistical data provide measurable outcomes representing diverse viewpoints: CGAS and VAS reflect a general clinical point of view; IMTAP provides an evaluation specifically focused on musical, affective, and social behaviour and capacities; whilst CBCL contributes a complementary and important viewpoint, that of the parents.

The narrative data provides descriptive evidence of the characteristics of this situation, illustrating how the children's quality of life is heavily compromised by adverse experiences including

dysfunctional home environments and abuse of various kinds, and describing presenting signs and symptoms in the children, such as lack of self-esteem, fear, social withdrawal, speech, learning and behavioural difficulties. This narrative data also complements the statistical data by documenting some of the tangible “flesh and blood” work involved in generating the evaluation measures. In accordance with the quantitative analysis, the thematic analysis of the case studies reveals themes relevant to the hypothesis of the research, that “music therapy is an effective therapeutic method in lowering anxiety levels in children suffering from the effects of stress and trauma, and in strengthening their self-esteem and sense of agency, thus contributing to the development of their resilience.” The development of self-esteem and agency emerges clearly in the clinical stories of P and O. In the case of N, the child's improved confidence and emotional serenity contributed to the prospect of returning to his abandoned school career, clearly an indication of increased resilience. T's story, on the other hand, is important in reminding us that therapeutic interventions are always contextualised within each child's specific individual environment, inviting reflection as to the impact of this factor on effectiveness of treatment.

Both objectives of the research were achieved, the first of which (to test the hypothesis through the collection and analysis of controlled, standardised data and narrative data), has been discussed above. The consequences of the second objective (to develop and consolidate the clinical experience, in music therapy intervention to date, with Palestinian refugee children in Lebanon) are evident in Assumoud's continued use of music therapy for children suffering from symptoms of toxic stress, and in the extension of clinical practice to include children of other ages and with different difficulties, with the definition of new research projects. One example is a research project for which data collection occurred in 2019, to monitor the effectiveness of music therapy for children aged between two and three years presenting with speech delay, in order to improve their communication skills.

Using music therapy as an intervention method with refugee children living under highly stressful socio-economic and emotional situations is pioneering work in Lebanon. Given the lack of similar studies, the parents' consent to their children's involvement in the research, their cooperation in the CBCL data collection, and the children's availability to try this innovative approach are all encouraging factors for further ‘evidence-based’ studies. Music therapy could be a useful therapeutic tool to deal with emotional distress in children. However, the case studies suggest that full achievement of clinical objectives and maintenance of the positive effects of treatment depend on the sustainability of support for children and their families, as the analysis of narrative data has illustrated. This might suggest that music therapy treatment cycles should be of longer duration, or that complementary therapies, such as psychotherapy, are available for continuation of clinical support. In the case of this study's context, Assumoud's mental health environments in the Family Guidance Clinics can potentially offer these possibilities; they are however sadly limited by the scarcity of both human and economic resources, which are subject to the same adversities as the community they serve.

## LIMITATIONS AND REFLECTIONS

Several context-specific challenges necessarily shaped both the design and the conduct of this study. It was decided for ethical reasons that there would be no control group, and this clearly has implications for the external validity of the outcomes. Fewer children were worked with than originally

planned, again with implications for the outcomes.

Music therapy remains rare in Lebanon and the Arab countries, with relatively few trained therapists, and is even less proportionately available to children of refugee backgrounds. Unsurprisingly, therefore, there are few research projects examining its usefulness or effectiveness in such contexts: undertaking such research means addressing difficulties inherent to the context itself. Given the consequent limitations outlined above, it is clear that the “scientific” validity of such research may be questioned. However, from a humanistic standpoint which recognises the significance of social responsibility in the development of appropriate and adequate mental health resources for all peoples of the world, there would seem to be a role for evidence-based clinical research, however “humble,” in monitoring, assessing and refining interventions. This has to be done sensitively, using not only appropriate standardised measures but also narrative accounts. We hope that this study has provided an example of negotiating specific obstacles to produce findings that are both locally useful and more widely interesting.

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## Ελληνική περίληψη | Greek abstract

# Η μουσικοθεραπεία ως στρατηγική προστασίας απέναντι στο τοξικό στρες των Παλαιστινίων παιδιών προσφύγων στο Λίβανο: Μία πιλοτική ερευνητική μελέτη

Deborah Parker | Liliane Younces | Mohamad Orabi | Simon Procter | Milena Paulini

## ΠΕΡΙΛΗΨΗ

Αυτό το άρθρο παρουσιάζει μία πιλοτική έρευνα μικτών μεθόδων για την αξιολόγηση του αντίκτυπου της μουσικοθεραπείας στη συναισθηματική και κοινωνική λειτουργικότητα Παλαιστινίων παιδιών προσφύγων στο Λίβανο, ηλικίας από 7 έως 11 ετών. Ο ερευνητικός στόχος ήταν να επιβεβαιωθεί η υπόθεση ότι η μουσικοθεραπεία αποτελεί μία αποτελεσματική θεραπευτική μέθοδο για τη μείωση του άγχους σε παιδιά που πάσχουν από τις επιπτώσεις του στρες και του τραύματος, καθώς και για την ενίσχυση της αυτοεκτίμησης και της αίσθησης της αυτενέργειας, ώστε να συμβάλλει στην ανάπτυξη της ψυχικής τους ανθεκτικότητας. Αναλύονται τα συγκεκριμένα γεωπολιτικά και κοινωνικά πλαίσια, σε συνδυασμό με παρόμοιες μελέτες, και περιγράφονται οι στρατηγικές συλλογής δεδομένων. Αφηγηματικά δεδομένα μουσικοθεραπευτών αναλύονται θεματικά, συμπληρώνοντας την ανάλυση των στατιστικών δεδομένων που συγκεντρώθηκαν από σταθμισμένα εργαλεία κλινικής αξιολόγησης. Καταδεικνύοντας το θετικό αντίκτυπο της μουσικοθεραπείας στη συναισθηματική και κοινωνική λειτουργικότητα, τα ευρήματα συζητούνται στο πλαίσιο ενός ευρύτερου αναστοχασμού για πιθανές εξελίξεις στο μέλλον.

## ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ

κλινική μουσικοθεραπεία, παιδιά πρόσφυγες από την Παλαιστίνη, τοξικό στρες, περιγραφή σειράς περιστατικών