

# Capoeira Angola: An alternative intervention program for traumatized adolescent refugees from war-torn countries

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## Key points of interest

- Capoeira Angola is an Afro-Brazilian martial art that incorporates dance and is used as an alternative psychological treatment for young refugees needing clinical services and support.
- A Capoeira Angola program for young refugees in Australia improved interpersonal skills, increased a sense of responsibility and discipline, and promoted improved behavior towards peers and teachers.

## Abstract

*Background:* Following resettlement in Australia, young traumatized refugees often face social challenges, including language and cultural barriers and social adjustment, which can lead to behavioral difficulties. Providing support at this vulnerable stage is therefore vital for reducing future setbacks. *Objective:* The STARTTS Capoeira Angola program was developed to help traumatized

adolescents successfully integrate into their school environments. As an Afro-Brazilian martial art that incorporates dance, Capoeira appeared an appropriate intervention for adolescent refugees due to its unique ethos of empowerment and group membership. *Method:* 32 refugees from Middle Eastern and African countries (aged 12-17) from the Intensive English Centre (IEC) department of the participant schools were assessed pre- and post- intervention using the Teacher's Strengths and Difficulties Scale (SDQ). Teachers were also asked to observe the students' functioning in a range of different situations at school. *Results/conclusions:* A significant overall decrease in behavioral problems was observed, which was associated with improvements in interpersonal skills, confidence, respect for self and others, self-discipline, and overall sense of responsibility.

*Keywords:* Adolescents, refugees, trauma, alternative intervention, capoeira

## Introduction

Over the past two decades, the global population of forcibly displaced persons has increased from 33.9 million (1997) to 65.6 million (2018) (UNHCR, 2018) largely as a result of persecution, war and human rights violations. Of this latest figure, 25.4

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million are identified to be refugees. 75,000 unaccompanied minors have been identified in 2017 alone, and children below 18 years of age constitute 51% of the overall refugee population, the highest figure in a decade (UNHCR, 2018).

Exposure to high levels of cumulative trauma—such as war, violence, traumatic loss and witnessing gross human rights violations—places refugee children and adolescents at significant risk of developing psychological complications (Fazel & Stein, 2002). Many have also experienced high levels of deprivation, and threats to the safety and security of themselves and their loved ones (Aroche, Coello & Momartin, 2012a). In a study of Cambodian adolescents living in a refugee camp, Mollica and colleagues (1997) found heightened symptoms of somatic complaints, depression, anxiety, social withdrawal, and attention problems, due to cumulative trauma coupled with a lack of basic needs. Exposure to trauma in childhood can have a significant impact on the processes of psychological, emotional and social development of young people. Miller, Mitchell & Brown (2005) describe the experiences of refugee children and adolescents as distinctive, since suffering traumatic events often results in disrupted lifestyles and interrupted education. The interactions between the effects of exposure to trauma and the stresses involved in exile and resettlement processes are complex and have significant consequences for family relationships and their dynamics (Aroche & Coello, 1994).

Australia has received a large number of refugees and asylum seekers in the last decade, seeking security and safety for themselves and their families (AHRC, 2012; Karlsen, 2011; UNHCR, 2017). The New South Wales Service for the Treatment and Rehabilitation of Torture and Trauma Survivors (STARTTS), one of Australia's

leading organizations in refugee mental health, provides psychological treatment and rehabilitation to refugees who have survived torture, trauma, and conflict. The organization receives approximately 3,500 clients annually in need of counseling, clinical intervention, and community development programs. Almost 19% of this figure are adolescents; therefore, the need for sustainable interventions, as an alternative to traditional behavioral therapies, is recognized. The STARTTS Capoeira Angola program was developed to specifically address the particular interpersonal challenges faced by these adolescent refugees.

This paper illuminates the features of Capoeira, briefly surveys the evidence-based rationale for why Capoeira may be an effective intervention for traumatized young refugees, provides an overview of the Capoeira program, and presents the quantitative-based results from an evaluation of the program.

### Capoeira Angola

Capoeira Angola<sup>1</sup> is a simulated non-contact combat between two players and uses an amalgamation of music, singing, dance, acrobatics, and martial arts movements. It is an Afro-Brazilian art that shares certain qualities with martial arts and originates from Angolan slaves brought to Brazil during the 16<sup>th</sup> century by Portuguese colonists (Boneco, 2002; Hedegard, 2012). They developed it as a diversion from fighting when they were not allowed to have weapons, hence the emphasis on dance. As the slaves had been transferred to Brazil from the Southern African nation of Angola, the art led to an Angolan style of Capoeira, focusing on evasion tactics and

<sup>1</sup> Capoeira Angola is referred to as simply “Capoeira” throughout the paper.

self-defense to escape physical attacks from slave owners. The game is characterized by the “ginga,” a fluid, rocking body movement, which serves as the basis for other movements. Players maneuver each other into unguarded positions with contained movements, avoiding strikes through skillful awareness and turning with the other player’s rhythm. Players perform inside a circle of other players known as a “roda,” which is conducted by the “mestre” (master) who determines when players start and finish. Music is an integral part of the game and is played by a “bateria” (an orchestra of simple traditional instruments).

The game is also conducted by singing based on call and response whereby players sitting in a circle answer the chorus sung by the “mestre.” Both players and the audience are involved at all times. The elements of movement, music and singing are equally crucial to the game and, when combined, create a unique social interaction based on rules of respectful communication.

### **Capoeira as a therapeutical intervention: Possible benefits**

The use of Capoeira as an intervention is indicative of a broader shift from cognitive and behavioral therapies to more interactive and social methods of group therapy (Nosanchuk, 1981). For example, the use of movement and dance has been used to instigate therapeutic change and further emotional, cognitive, physical and social integration based on the empirically supported premise that the body, mind and spirit are interconnected (Dunphy et al., 2015). Furthermore, Lossing and colleagues (2017) explored dance movement as an intervention for patients experiencing depression and dementia because of its combination of exercise, music and cognitive engagement, indicating a correlation

between mind and body awareness, expression and coordination. Verreault (2017) also reported benefits of dance and movement therapy for traumatized female refugees that reinforced bodily engagement and included the use of music and movement, which strengthened their treatment model and provided a shared psychological safe space for self-expression.

A number of Capoeira’s features—including its unique framework of empowerment, confidence-building and overcoming adversity through the development of individual self-discipline, inner-strength and group membership—make it particularly suitable for young refugees. It is also culturally appropriate, transportable, low cost, and can be easily facilitated (Capoeira, 2003). We draw upon relevant literature to posit some key benefits of Capoeira that informed the rationale for the intervention, as well as the possible channels that may cultivate the outlined benefits. These benefits are presented thematically.

#### *Theme One: Repairing the Mind-body Link*

Trauma experiences can work to sever the mind from the body, particularly if the body was the site of trauma, which makes it imperative to involve the body in the healing process (Gray, 2001).<sup>2</sup> A key interdisciplinary concept is “kinesthetic empathy,” which facilitates the cultivation of compassion and kinship by observing the movements of others. Kinesthetic empathy enables self-development and introspection within the adolescent when the process has been blocked or interrupted by trauma

<sup>2</sup> Note that Gray (2001) also suggests that the absence of judgment or criticism in movement therapies is important for survivors of human rights abuses as it puts them at peace with themselves.

(Reynolds & Reasons, 2012). Capoeira may help to enhance the mind-body connection through bodily engagement, by moving it in unfamiliar ways and developing physical awareness, confidence and control. Indeed, Capoeira is physically demanding and can be initially challenging for some but it is an effective way to build fitness over time, which is a core component of emotional wellbeing (Assunção, 2005). The use of music and movement in clinical therapies, which—in light of the deep and complex relationship between body, mind and psychological trauma—has been shown to greatly affect the physical body (Hayes, Strosahl & Wilson, 1999).

*Theme Two: Youth Engagement and Appropriateness*

Twemlow and colleagues (2008) suggest that interventions should be comprehensive, practical and highly engaging in order to connect with youth, but dropout rates from other forms of individual therapy indicate that sustaining the attention of traumatized young people can be particularly challenging. Adolescents with problematic behavior, such as impulsiveness and aggressiveness, may not always respond to traditional therapies alone but combining the physical movements with therapeutic ideology may help to stimulate behavior change (Twemlow, Biggs, Nelson, Vernberg & Fonagy, 2008). The same authors also note that movement-based therapies are often more effective than traditional talk-therapy for aggressive or traumatized young people. Therefore, Capoeira has the potential to provide antagonistic and violent adolescents with non-aggressive approaches that reinforce prosocial behavior and positive role modeling. Moreover, Capoeira has been shown to elicit a sense of belonging, camaraderie and the feeling

of membership necessary to sustain the interest and tolerance of young people.

*Theme Three: Resilience, Relationship Building and Behavior Change*

The framework of Capoeira is also tightly intertwined with the notions of resilience and cooperation. It was used by the African slaves as a method of maintaining their identity (Boneco, 2002; Joseph, 2012), and it has a strong philosophical foundation of non-violence and cooperation. Participants are encouraged to take responsibility for teaching one another, while respecting the traditional forms and structures, and practicing teamwork (Capoeira, 2006). Bearing in mind that a disconnection from others is often at the core of psychological trauma, recovery incorporates the development of trust and new connections within the context of relationships. It cannot occur in isolation (Herman, 1997). The purpose of Capoeira is not winning or losing, but rather striving for alternative behaviors (Capoeira, 2006). Thus, when combined with support and encouragement, Capoeira may create an environment that diminishes undesirable and anti-social behavior through the strengthening of character and prosocial learning (Capoeira, 2006).

*Theme Four: Previous Positive Results*

Burt and Kent Butler (2011) assert that Capoeira could operate as a pragmatic model that supports cultural sensitivity and self-efficacy for young refugees.<sup>3</sup> Indeed,

<sup>3</sup> There are other social role modeling prevention programs, such as Aggression Replacement Training (Glick & Goldstein, 1987), for young people, although the safe framework, secure environment, peer relationships and camaraderie of Capoeira seems to be eliciting the observed improvements.

Capoeira has been used as a therapeutic method in a number of refugee camps. Sixsmith (2010) reported on the success of a UNICEF led Capoeira therapy group, titled “CapoeiraArab,” in helping highly traumatized young people in the Al-Tanf refugee camp on the Syria-Iraq border to achieve physical strength, confidence, and psychological stabilization. Capoeira, as perceived by the parents, was central to fostering the morale of the children and contributed to building emotional strength among camp residents as they observed children’s marked improvement. Similarly, a British non-profit organization, Bidna Capoeira (We Want Capoeira), organized Capoeira classes for Palestinian refugee children from Qalandiya refugee camp. The author reported that hundreds of children, over a period of a few years, experienced the benefits of Capoeira during a distressful period in their lives and, despite limited facilities, the children were reported to have fun, learn valuable life skills, and learn to control their anxiety (Alsaleh, 2013). Capoeira was also introduced to a refugee camp in Angola by UNHCR as an activity to promote peace, reconciliation and self-control, and to ease tensions among different groups of refugees (Schmitt, 2016).

### **The Capoeira Angola program in Australia: Suitability, aims and hypothesis**

Given the considerable number of adolescent refugees in Australia, whose social and educational development was disrupted by trauma, the school-based Capoeira program was developed to foster healing and address interpersonal challenges and to complement standard treatments.

Young refugees in Australia often face new challenges such as language barriers, discrimination and anxiety relating to the new culture (Aroche, Coello & Momartin

2012a; Fernandes & Aiello, 2018). These risk factors, if not managed properly and when complicated by pre-settlement trauma, could lead to future social problems such as failure to complete school, unemployment, antisocial behavior, economic dependence, and mental health conditions. In this context, Capoeira may operate as a protective factor, mitigating the impact of these problems, enhancing identity formation and predicting better future outcomes.

The purpose of the study was to appraise whether the overall objectives of developing this program were achieved—namely, helping enrolled adolescents to more effectively settle into their school life, instilling a sense of safety and control, increasing social skills and self-esteem, and feeling more satisfied in their relationships with peers and teachers. Specifically, the evaluation aimed to assess the efficacy of the program among this group of traumatized individuals.

Based on the literature of movement-based therapeutic programs, it was hypothesized that students participating in the intervention would exhibit an overall improvement in their behavior at school, with an increase in functional behavior and a decrease in dysfunctional behavior, as rated by their teachers.

### **Methodology for evaluation**

#### *Study Overview and Timeframe*

STARTTS school liaison officers, who periodically visit schools with large numbers of refugees, had obtained teacher testimonies about high truancy rates, minor offenses and frequent school suspensions as a result of un-adaptive behavior. During academic years 2014–2015, preliminary consultations between the school liaison officers and school principals and teachers provided the Capoeira evaluation team with impressions regarding

the needs of the students. Following initial preparations, the evaluation was planned to be carried out during academic years 2015-2016. During this period, the project aims were described and memorandums were signed. In preparation for the program, Western Sydney schools were selected based on their large numbers of refugee populations from war-torn countries, and their high numbers of students in the Intensive English Centre (ESL). A mixed evaluation method using both quantitative and qualitative techniques was selected, although the present paper presents the quantitative findings.

Capoeira ran at two high schools in Western Sydney, within the Intensive English Centre (IEC), over three school terms (nine months, with each term being three months, excluding 10-day term breaks in between).<sup>4</sup> A total of 37 students participated in consecutive groups of the program. Groups were facilitated by Capoeira Master, Mestre Roxinho, a professional Capoeirista with more than thirty years of experience. The young people participating at each school were granted an hour during school each week to participate in assessment sessions on school grounds, which were run by the Research Officer and a Community Development Evaluation Officer. Before the group sessions began, the youth received information about the Capoeira program. Some volunteered to participate whilst others were selected by teachers according to their needs. It is important to reiterate

that, during the intervention, the students did not receive any other type of individual treatment or group therapy. However, as this was an alternative therapy, it was clarified that if any of the participants were identified to need other forms of therapy, or requested it themselves, they would have been immediately placed in contact with an experienced STARTTS counselor.

#### *Sample Background*

Overall, 32 participants completed the study (five of the participants left the group) and all were refugees, comprising of 21 males and 11 females. The average length of resettlement in Australia prior to the initial assessment was one year (range=8-12 months) and the majority spoke functional English (n=30), with the remainder supported by bilingual teaching aids. Participants ranged in age from 12 to 18 years old (mean of 15). The schools were different in nature; one was a boys' high school whereas the other was co-educational. The participants were mainly from the regions of the Middle East and Central Asia (Iraq, Afghanistan, and Pakistan), Africa (Sudan and Somalia) and South East Asia (Burma and East Timor).<sup>5</sup>

Prior to resettlement, four of the participants had lost one or both parents, 10 had lost a loved one as a result of human rights violations (including beatings, torture, murder, and bombings) and seven spent

<sup>4</sup> The program was delivered through schools as adolescents spend most of their time at school and a need was observed. School is also the vital bridge between young people and the wider society and provides the primary context for the development of the child's peer, social support and reference network (Aroche, Coello & Momartin 2012b).

<sup>5</sup> Thirteen non-refugee students also participated in the program. Although this group was not comprised of refugees, they were disadvantaged youth from low socioeconomic backgrounds within the community who attended the same schools. Due to the small number of non-refugees, data from this group was not utilized within the analysis. Nevertheless, the benefits of the program were also observed amongst these disadvantaged youths.

lengthy periods in refugee camps. Four had arrived in Australia as unaccompanied minors, and seven had traveled with families. All participants had experienced or witnessed human rights violations, interrupted education and a lack of basic needs—factors that were perceived by the teachers to have impacted their behavior.

*Measures: Teacher-Rated Strengths and Difficulties Questionnaire (SDQ)*

The SDQ was used to assess the students before and after the intervention, similarly to other studies (Becker et al., 2004; Goodman, 2001). The SDQ is a concise behavioral screening questionnaire for 3-16-year-olds and has been widely used in schools with young people from a range of ethnic and refugee backgrounds to measure the impact of interventions (Birman & Chan, 2008; Ford et al., 2009). It uses clear English, which was important for ensuring prompt responses from the Capoeira facilitators.

The SDQ consists of 25 Likert-scale items that include both positive and negative behaviors, such as, “often loses temper” or “kind to younger children,” with answers chosen from “not true,” “somewhat true,” or “certainly true.” Answers to these 25 items are scored on five scales:

- 1) Emotional symptoms (five items)
- 2) Conduct problems (five items)
- 3) Hyperactivity/inattention (five items)
- 4) Peer relationship problems (five items)
- 5) Prosocial behaviors (five items)

The teacher version of the instrument was chosen for this evaluation due to logistical and administrative issues. While using teachers’ ratings of student behavior was not optimal, the close relationships between the teachers and students arguably improves the reliability of their ratings, as they were able to observe them in a range of situations at school.

The key informants of the 32 students (i.e., the teachers) assessed the students using the SDQ based on the participants’ behavior in class, their interpersonal skills with teachers and peers, and their self-esteem. Three teachers from the Intensive English Centre (IEC) participated in the project. Each student was rated by one teacher only.

*Data Handling and Analysis*

Results were analyzed in SPSS Version 20, using an alpha of .05 (representing a 95% confidence level). Scores for the item that rated the presence of headaches and other somatic features were missing from SDQs in either the pre- or post-Capoeira intervention for seven participants due to an error in the data collection form. The missing values were replaced with the individuals’ available scores from either pre- or post-intervention SDQ assessment sessions, which gave a conservative estimate of “no change” for participants with missing scores.

Means, standard deviations and t-tests were used to describe the sample and identify differences, comparing pre- and post-data. Although the items used a Likert-scale, SDQ claims that the dimensional scores can be treated as continuous scores, hence paired sample t-tests for each dimension were used to analyze results. Owing to the fact that t-tests are robust against violations of assumptions at sample sizes of 30 or above, normality assumptions were not tested. The sample size of 32 achieved an 80% probability of detecting a significant pre- to post-intervention effect of  $r = .29$ , which was calculated using GPower software (v3.1.5).

**Results of teacher SDQ**

*Descriptive and Comparative Analysis*

Means and standard deviations of pre- and post-intervention based on the teacher-rated

SDQ dimensional scores are shown in Table 1, with significant differences indicated in Table 2. As hypothesized, the intervention resulted in significant reductions in problematic behavior at school, as measured by “total difficulties” scores on the teacher-rated SDQ, from pre- to post-intervention. Although it was not hypothesized which specific areas of behavior would be perceived to have improved, the direction of change for each specific dimension was predicted by the hypothesized overall improvement.

#### *Two-tailed Exploratory Analysis*

Using two-tailed significance tests, an exploratory analysis was conducted to identify areas for the development of future hypotheses. Since this analysis was exploratory, no correction was made for multiple comparisons. For three of the five dimensions measured by the SDQ—“emotional,” “conduct,” and “prosocial behavior”—medium-sized to large significant improvements in pre- to post-intervention teacher-rated scores were observed. For

**Table 1:** Means and standard deviations of pre- and post-Capoeira SDQ scores

	Pre-Capoeira			Post-Capoeira		
	Mean	N	SD	Mean	N	SD
Emotional	3.9	32	2.0	2.3	32	2.3
Conduct	2.6	32	1.8	2.0	32	1.1
Hyperactivity/inattention	5.2	32	2.2	4.4	32	1.6
Peer problems	3.9	32	1.0	4.3	32	1.2
Prosocial behavior	6.1	32	2.1	7.7	32	2.2
Total difficulties	15.6	32	4.6	13.0	32	3.8
Impact	1.0	29	1.4	0.7	29	1.4

**Table 2:** Differences in SDQ scores from pre- to post-Capoeira

	Mean diff.	SD	95% CI of Mean		<i>t</i>	<i>r</i>	df	<i>p</i> (2-tail)
			Lower	Upper				
Emotional	1.6	1.8	0.9	2.3	4.88	.66	31	< 0.001
Conduct	0.6	1.5	0.0	1.1	2.18	.37	31	0.037
Hyperactivity / inattention	0.8	2.3	-0.1	1.6	1.90	.32	31	0.067
Peer problems	-0.4	1.1	-0.8	0.0	-1.88	.32	31	0.070
Prosocial behavior	-1.7	2.2	-2.4	-0.9	-4.33	.61	31	< 0.001
Total difficulties	2.6	3.7	1.2	3.9	3.88	.57	31	0.001
Impact	0.3	1.2	-0.1	0.8	1.51	.27	28	0.143



“hyperactivity/inattention,” a similar trend was evident but this was not significant. The exception to this general pattern of improvement was “peer problems,” which worsened from pre- to post-intervention scores, though not significantly.

Despite the significant reductions in problematic behavior (and increases in “prosocial behavior”), no significant reduction was observed in teacher-rated SDQ impact scores, although they did show a consistent trend. The SDQ impact score measures the extent to which teachers perceived that the participants’ behavioral problems caused those participants distress or were a burden on them. One explanation for the lack of significance could be that the average initial impact scores for the group were already low, indicating borderline (value of 1) but not clearly abnormal (value of 2) behavior. Many participants, therefore, had little or no room for improvement on this score. This explanation could be tested by using a subsample of participants with higher initial SDQ impact scores than observed; however, the present sample contained too few of these cases for this purpose and further data would thus need to be collected and evaluated.

## Discussion

Reductions in emotional and behavioral problems were observed as well as an overall diminution in behavioral challenges. The program had a discernible impact on peer relationships and reduced “hyperactivity/inattention” in at least some participants, which is reflected by the following quote from a teacher:

*“They’re not the angry disrespectful kids who were constantly getting into trouble with police. They are calmer, don’t get angry quickly and get into fights. Anger and disruptive behavior has been a big problem,*

*which is why this is a huge achievement and something we are proud of.”*

The significant transformations in the participants’ daily social lives—namely positive relationships with teachers, caretakers and peers—suggests that the Capoeira programs can be an effective intervention for assisting young refugee students to settle in school, thereby improving their social skills and capacities, and decreasing problematic behavior. Despite the non-significant improvement in peer problems, a visible bond developed between the students, teachers and “mestre,” which was perceived to contribute to the overall positive outcomes of the intervention. This is presented in the qualitative findings, which have been published in the journal *Intervention* (Momartin et al., 2018).<sup>6</sup> The combination of music and martial arts educated and trained the young people on respect, cooperation and non-violent communication and interaction. Furthermore, the mentoring and role modeling by the instructor helped to increase trust, which was important in forming respectful relationships and friendships.

Other factors may have contributed to the improvement of the participants other than Capoeira. Indeed, positive outcomes of therapy can sometimes be due to external variables such as time, receiving empathy and perceived optimism. However, the evaluation provides suggestive evidence that the effectiveness of the program is a compilation of various aspects, predominantly due to factors that are unique to Capoeira when compared to other programs available

<sup>6</sup> Our qualitative findings identified further benefits of the program, which were not only constructive for the individual’s current functioning and future growth but also effective for their overall school experience.

for young people in schools. This is due to the mentoring and role modeling provided, as well as the holistic nature of Capoeira and the values it embodies. Capoeira represents a distinctive blend of movement, music, self-expression and communication, a mix that is not found in most other activities available to young people, such as competitive sports or arts. Students may connect more with one aspect of the activity than the other; for example, teachers later reported that some students expressed that they especially liked the music and playing instruments. Others appreciated the mastery of movements or enjoyed the interaction and sense of belonging and camaraderie with their peers experienced during “*roda*.” It appears that integrating therapeutic principles with martial arts, within a culturally sensitive model, promotes change in the conduct of vulnerable adolescents, thereby cultivating appropriate and acceptable school behavior.

The success of the Capoeira program has continued over time with further intervention groups being established in Western Sydney. Moreover, the perceived effectiveness of the program is demonstrated by schools beyond Western Sydney (encompassing those in the wider New South Wales (NSW) regions) requesting that the project be implemented in their schools. At present, the Capoeira program runs in 17 groups around NSW (including Western Sydney, South West Sydney, Inner Sydney, regional Wollongong, New Castle, Coffs Harbour). Nine new schools are currently on the waiting list to join the program.

### Limitations

A major limitation of the study is that it did not utilize a quantitative self-report assessment for individual students due to time and resource constraints. Male and female differences were also not calculated

as there were more girls than boys, and this limited sample size prevented meaningful sub-group analysis. The rate of student attrition from the program was an additional challenge (Attrition rate=5%). Students resigned for a variety of reasons, including moving to another school or transferring from IEC to mainstream curriculum. This meant that some students (approximately 7) who were assessed at the beginning of intervention had left by the end of the year, and those who subsequently joined the group (approximately 6) had not completed a pre-intervention assessment. There was also no control group.<sup>7</sup>

### Conclusion

This study provides suggestive evidence that Capoeira can enhance the behavior of refugees. Young traumatized refugees have the potential to develop psychological complications, which may lead to anti-social and other negative behavior in the absence of a constructive outlet and guidance. Timely Capoeira interventions—with a highly structured environment, defined boundaries, and strong physical, moral and ethical codes—may help to prevent negative social challenges associated with dysfunctional behaviors. The experience of the Capoeira Angola program has convinced the authors of this paper that Capoeira can encourage cooperation, teach refugees to co-exist, promote functional relationships governed by mutual respect, and transform behavior. Further research is sorely needed on the efficacy of the intervention on other populations in other contexts using robust study designs, as well as more thorough

<sup>7</sup> As mentioned, 13 non-refugee students participated in the program and underwent pre- and post-assessments. As it was a small group, we did not use the data for comparison.

investigation into the channels through which Capoeira elicits change. It would also be interesting to explore whether an additional element behind the effectiveness of Capoeira is the controlled movements that would otherwise be harmful to the other player, and whether exercising and strengthening inhibitory pathways increase the overall capacity to inhibit impulsive behavior. Given their traumatic and distressful past, and taking into consideration their struggles with anger, being able to control the young people's movements is a significant improvement in their inhibitory pathways and would also be valuable to study further.

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