Article

Dance movement strategies training to help rebuild social capital in Colombia

Natalia Quinones¹, Yvonne Gomez², Diana M. Agudelo², Gabriela Martínez¹ & María A. López¹ ¹Dunna Foundation, ²Universidad de los Andes, Bogotá, Colombia

Abstract

Building social capital within a post-conflict scenario is key to achieving sustainable peace. The authors implemented an intervention consisting of a 120-h training programme in dance movement strategies in five violence-affected municipalities in Colombia (n = 150). The aim of the intervention was to assess any possible changes in the participants' states of mindfulness, bodily connection, emotional intelligence, somatic complaints, aggressive reaction, empathy, agency, and subjective emotional experience. We selected the tested variables as conditions necessary to rebuild social capital within a community affected by violence. Post-test measures revealed statistically significant changes in mindfulness, bodily connection, emotional intelligence and regulation, somatic complaints, aggressive reaction, agency, perspective taking, sleep and appetite.

Key implications for practice

- Dance movement strategies help to create the necessary individual conditions for rebuilding social capital in regions heavily affected by an armed conflict
- Training the community leaders in dance movement strategies positively impacts some aspects that are associated with better trust and reciprocity within communities
- Community leaders trained in dance movement strategies should be encouraged to replicate these strategies within their own communities.

Keywords: Body and movement therapy, Colombia, dance, social capital

INTRODUCTION

Armed conflict-related violence has caused severe damage to Colombia's social capital and cooperative networks (Hopfensitz & Miquel-Florensa, 2014). As a result, Colombia has consistently been classified as one of the three countries with the greatest number of internally displaced persons (Internal Displacement Monitoring Centre; Bilak, 2015). Indeed, the official figures from the Unit for Integral Reparations for the Victims (UARIV, 2017) reported 8,347,566 victims listed in the National Victims Registry.

The recovery of social capital, understood as interpersonal trust, reciprocity, associational membership, non-electoral political participation, civic activities and volunteering is crucial to transition to peace (Scholte & Ager, 2014). In particular, the cognitive component (interpersonal trust, reciprocity) of social capital has been found to function as a protector from violence in post-conflict Guatemala (Dinesen et al., 2013) and as a protective factor for firearm victimisation in Philadelphia (Medina, 2015). A study performed in urban and rural areas of the Caribbean in

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2011 found that victims of internal displacement in Colombia have been able to overcome community problems, such as the lack of electricity and drinking water and psychological trauma, by means of cooperative action (Palacio et al., 2001).

As social capital is hard to measure effectively (Collier, 2002), and given that it often takes time to materialise into the collective action desired within a post-conflict scenario, the authors chose to measure core abilities that have been associated with trust, reciprocity, social capital, or collective action within a certain community, rather than focusing on community measures that have not yet been validated for Colombia and that could take some time to reflect proper changes.

Address for correspondence: Mrs. Natalia Quinones, Dunna Foundation, Bogotá, Colombia. E-mail: nquinones@dunna.org

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The ability to reduce and control aggressive behaviour and aggressive reactions has been closely linked to social capital (Gatti & Tremblay, 2007), both as a cause and consequence of broken social capital. Violent and aggressive crimes have been linked to poor social capital in the family and within neighbourhoods (Rosenfeld, 2001). Thus, reducing the aggression is key to rebuilding broken social capital in communities affected by violence. A link has also been established between social capital and empathy (Preece, 2004), emotional intelligence (Lopes, Grewal, Kadis, Gall, & Salovey, 2006), and emotional states and mindfulness (Helliwell, Layard, & Sachs, 2015), as these variables enhance the flexibility needed by the individual to successfully and sustainably build social networks based on trust and reciprocity.

Literature has also established that communities with high agency and empowerment can more effectively claim the benefits of social capital (Krishna, 2001). Similarly, a link between health and social capital indicates that people with less somatic complaints (Yamaoka, 2008) and higher bodily connection scores are more likely to build strong social capital (Edmondson, 2003).

Moreover, the abilities referred to above have also been identified as moderators of the effects of trauma (Rothschild & Staunton, 2002), and are considered as psychophysical experiences (Sarid & Huss, 2010; Van der Kolk, 2014).

Dance, body and movement

Approaching trauma from a perspective of dance, body and movement (DBM) therapy, invites us to consider the body as a territory of violation in victims of violent events and, at the same time, as their main resource through which to process and express emotions and experiences (Ogden, Minton, & Pain, 2006). Moderating the effects of trauma in individual members of the community through dance movement strategies is also beneficial to rebuilding social capital, as trauma generally has a negative effect in the way individuals relate to themselves and to others (Gray, 2001).

DBM therapy work encourages *bodily self-awareness*, defined as one's ability to focus on one's moment-tomoment physical experience (Bekker, Croon, van Balkom, & Vermee, 2008). Rothschild and Staunton (2002) confirm that trauma survivors experience recurrent unconscious states of muscle tension, as a result of the body's memory of the traumatic event. As such, attention paid to bodily sensations rooted in the distress of trauma constitutes a key factor for their remission.

A meta-analysis confirms the positive effects of DBM interventions on the participants' subjective well-being, body image and general state of mind (Koch, Kunz, Lykou, & Cruz, 2014). Gray (2001) affirms that DBM therapy may be beneficial for an individual's sense of self and that it may improve interaction and relational skills. Further, Ogden et al. (2006) established that awareness of daily postures assumed by the victims is reflected in their emotional well-being and their sense of social position.

Survivors of violence often present somatic conditions (Afari et al., 2014), in which, evidence shows that dance, a fun activity, may potentially help to ease stress (Bräuninger, 2014; Duberg, Jutengren, Hagberg, & Möller, 2016; Gray, 2001). It has also been suggested that DBM interventions significantly reduced sadness, anger, anguish and anxiety in teenage ex-combatants in Sudan and Sierra Leone (Harris, 2007), in traumatised children (Kornblum & Halsten, 2006) and in adult trauma survivors (Gray, 2001; Koch et al., 2014).

Bodily self-awareness serves as a tool to observe mood and activate the nervous system, and it is key in reducing aggressive reactions and facilitating processes of mood regulation. In a study of survivors of torture in the contexts of armed conflict in Africa, it was shown that dance therapy reduces aggressiveness not only in youngsters involved in legal and illegal armed groups in Sudan and Sierra Leone (Harris, 2007). This is also true for school children (Koshland, Wilson, & Wittaker, 2004). Previous studies have shown that psychotherapy involving dance and movement reduces the levels of stress and anguish, as well as improves a number of the psychopathologies associated with aggressive reactions, such as paranoid thinking, phobic anxiety and psychosis (Bräuninger, 2014).

Literature has reported that therapies using dance and movement promote interpersonal relationships, expand resource networks and increase participation in community activities, especially in the elderly who constitute a significant segment of the victims of armed conflict (Bräuninger, 2014).

Improving interaction and establishing *empathy* with others requires a safe space, in which people can feel at home/ease (Pierce, 2014). This can be created through movement exercises, performed in pairs or groups, through which individuals can connect with others and with the resources available to deal with their pain (Behrends, Müller, & Dziobek, 2012). Baum (1991) mentioned that DBM models encourage empathy, free expression of the personality and negotiation in social interaction. This fosters the recovery of trust in others and, with it, the possibility of rebuilding social ties within a safe environment, in turn contributing to the reparation of the social fabric (Harris, 2007). According to Gordon (2014), dance and movement therapy motivates positive affection in the participants, which also promotes the building of social capital.

Scientific literature has identified the need for further research into the effects of the interventions involving the body, dance and movement in different population groups (Koch et al., 2014). The purpose of the present study is to determine whether a DBM-based intervention can affect/influence individual abilities, referred to above, in survivors of the armed conflict in Colombia.

METHODS

Design

The study was a quasi-experimental one with pre-test and post-test measurements with a single group (Montero &

León, 2007). It compared the variables before and after having taken part in a DBM diploma course.

group during the last module to enable feedback from the peer group and facilitators.

Intervention

The DBM strategies implemented for this study are fully documented in the *DBM Diploma Course Booklet* (Dunna Foundation, 2014). The DBM diploma course was set up as a group intervention, aimed at fostering conditions for the recovery of the participants' socio-affective wellbeing and the reparation of the social fabric within communities affected by conflict. The intervention was made up of five intensive 24-h modules, spread over four months, for a total of 120 h of training. The methodology used was experiential, reflexive and participative, with tutors experienced in dealing with somatic conditions through dance, as well as the management of groups and community processes within several of the country's different regions.

The programme was designed as a low intensity, psychosocial intervention, with a specialist who guided the team, but whose presence was not needed during the intervention itself. The focus of the programme was not on a diagnosis, but on developing a safe physical and psychological space that could offer opportunities to strengthen the body/mind connection, individual and group resources, to strengthen their resilience and to teach self-management and coregulation skills through DBM practices.

Facilitators had different backgrounds for each module, and included certified dance movement therapy (DMT) tutors, body-oriented psychotherapists and dancers with extensive experience in working with vulnerable communities. They were accompanied by a somatic psychotherapist and trauma specialist during the process, with individual supervision, trauma sensitive care training and team meetings. All trainers had broad experience working with groups, with vulnerable communities and with DBM interventions from their own professions. Additionally, all were native Colombian and aware of the culture and context of the country. A detailed review of the history of the armed conflict was made, and specific vulnerability and safety situations in each region were studied before interventions took place.

During the first four modules, the basis of the work was studied, focusing on comprehension of the transformative power of DBM through theoretical and practical exploration of creativity, collective memory, identity, rituals and community relationships to strengthen social fabric. Throughout the first 96 h (modules 1-3), participants were divided into small groups by geographical places of origin, with the purpose of designing a creative intervention, using what was learned during the process and strengthening the skills to responsibly apply the material. In the final module, each group developed a culturally appropriate practical application of the work within their own communities, focusing on the development of resources and well-being, rather than on painful experiences as more training would be necessary to contain situations dealing with overwhelming painful emotions. This work was presented to the whole

Subjects

The sample was taken from a population of 150 participants for the diploma course, bearing in mind a 5% error margin and 90% level of reliability, leaving a final sample of 97 subjects. Participants for the diploma course included community victim leaders (registered with the Colombian Victims Unit), as well as local cultural leaders (registered with the Colombian Ministry of Culture). These groups were prioritised by both entities as participants in the diploma course. Finally, of the registered participants who completed informed consent forms and instruments, a sample of 89 participants was obtained. The participants were aged between 15 and 77 (with a mean age of 35.97 years (DT = 12.67); 41.6% were women and 58.4% were men. A sample of 68 participants (36 women (52.9%) and 32 men (47.1%)) was used for the post-intervention assessment, maintaining the age range (a mean of 36.63 years, DT = 13.22).

It is important to note that all participants came from communities with a visible rupture in social capital caused by internal displacement and by ad-hoc rules imposed by armed groups that had forbidding group gatherings in the community, and had paid ransom for information on 'inappropriate' activities conducted by neighbours, creating high levels of distrust within the communities.

Instruments

After reviewing the literature, the authors chose to measure the impact through three categories, which group together the instruments used. These are described below:

Bodily self-awareness: includes mindfulness, using the *Five Facet Mindfulness Questionnaire* (FFMQ) (Baer, Hopkins, Krietemeyer, Smith, & Toney, 2006) validated in Colombia by Caycedo and Novoa (2010); bodily connection, measured using the *Scale of Body Connection* (SBC) (Quezada-Berumen, González-Ramírez, Cebolla, Soler, & García-Campayo, 2014); somatic complaints measured using the *Symptom Checklist 90* (SCL90) (Derogatis, 1997); and emotional intelligence, measured using the Spanish version of the *Trait Meta-Mood Scale* (TMMS-24) (Fernández-Berrocal, Extremera, & Ramos, 2004; Uribe & Gómez, 2008).

Interpersonal reactivity: referring to empathy as people's prosocial disposition, measured using the *Interpersonal Reactivity Index* (IRI) (Davis, 1980) in its Colombian version (Pineda et al., 2013); and the aggression inhibitory function, measured using the aggressive reaction subscale of the modified *Coping Strategies Scale* (CSS) (Londoño et al., 2006).

Agency and empowerment: referring to self-efficacy, selfdetermination and results orientation that favour perception of the context and control over the environment, measured using the *Psychological Empowerment Scale* (PES) (Pink et al., 2007; Zimmerman, 1995; Zimmerman and Rappaport, 1988).

Procedure

According to reports by the Victims Unit, participants were identified in five Colombian municipalities affected by armed conflict. Participants signed informed consent forms and were then assessed by independent psychologists trained by the Universidad de los Andes. Tests were administered through in-group applications, using standard instructions to reduce application bias. Once the diploma course was completed, the same assessors performed the post-test assessment. The Ethics Committee of the Universidad de los Andes approved the study.

Once the corresponding assumptions were verified, the means obtained in the pre-test and post-test were compared using a parametric test. The data were processed using the Statistical Package for the Social Sciences version 20.0 software (IBM Corp., Released 2011, IBM SPSS Statistics for Windows, Version 20.0, Armonk, NY: IBM Corp.).

RESULTS

The results of the comparison of the means, obtained in the pre-test and post-test in relation to the assessed variables, are presented. Table 1 shows the comparison of the means obtained in the pre-test and post-test for the variables of bodily self-awareness.

Table 2 shows the data related to the comparison of means for scales that measured interpersonal reactivity.

Table 3 shows the results of the pre-test and post-test comparisons for the subscale of empowerment. The data show statistically significant differences in all subscales in the expected direction for these variables. Also, the subscale for informal participation showed a change percentage of 26% with an effect size of 0.92, which denotes positive attitudes of agency.

Finally, comparisons were made by sex, and these reported no statistically significant differences. In terms of occupation and the municipalities, it was not possible to make comparisons as the required statistical assumptions were not fulfilled given the sample size.

To estimate the sample distribution in terms of the measured variables, the sample was distributed into three levels of intensity: low, medium and high, based on the scores obtained.

The results shown in Table 4 indicate that, in the post-test, the greater percentage of people fell within the high level for the scales of full awareness.

The frequency distribution in the three levels of intensity for both scales of the emotional intelligence variable changed in the two measurements. After participating in the diploma course, there was a lower percentage of people in the low and medium levels and a higher percentage in the high level, going from 18.8 to 45.3% for the clarity scale, which refers to the ability to understand the emotions. For the reparation scale, related to the ability to adequately regulate the emotions, the percentage went from 24.7 to 47.7% in the high level in the post-test.

In the report on somatic complaints, there was a reduction in the percentage of participants who, in the post-test, fell within the medium level and a small increase in the lowlevel, indicating a reduction of the presence of cardiovascular, gastrointestinal or respiratory somatic complaints. For other somatic complaints, such as those related to sleep and appetite, there was a change in the post-test with the high level shifting from 26.2 to 12.3% and the low level increasing from 34.5 to 47.7%.

For the empathy scale, Table 5 shows that no participants fell within the low level, either in the pre-test or the posttest, and in both cases, most of the participants fell within the high level. In the post-test, this trend was maintained, but the medium level went up to the high level.

For aggressive reaction, in the post-test the percentage of participants that fell within the low level increased (52.8 -63.2%), indicating a lower use of this coping strategy, whereas the percentage in the high level shifted from 11.2 to 1.5%.

Table 6 shows that for empowerment, there was a change in the post-test, with a lower percentage in the medium level and a greater percentage in the high level, indicating that following the diploma course, the participants reported formal and informal behaviour as well as attitudes that denote agency and control.

DISCUSSION

Initial measurements revealed that the sample of participants began with high levels for most of the studied

Table 1: Comparison of means for bodily self-awareness									
Variable	Phase			F	df	Р	R ²	Observed power	
	Pre-	e-test Post-test							
	Mean	SD	Mean	SD					
Full awareness observation	29.44	5.84	31.44	5.15	4.649	1	0.033	0.031	0.572
Full awareness acting with awareness	27.76	5.03	30.23	5.14	8.174	1	0.005	0.056	0.81
Full awareness/lack of judgment	24.22	5.86	25.25	5.98	1.091	1	0.298	0.007	0.18
Bodily connection bodily awareness	32.29	6.73	37.21	6.11	20.795	1	0.000	0.125	0.995
Bodily connection bodily disassociation	9.72	4.09	9.23	4.3	0.492	1	0.484	0.003	0.107
Emotional intelligence/clarity	29.31	5.74	32.7	6	12.19	1	0.001	0.077	0.934
Emotional intelligence/reparation	31.15	5.91	34.32	5.05	11.979	1	0.001	0.075	0.93
Somatic complaints/somatisation	1.21	0.79	0.99	0.74	2.858	1	0.093	0.02	0.389
Somatic complaints/other	1.5	0.85	1.13	0.82	7.168	1	0.008	0.086	0.758

Table 2: Comparison of means for interpersonal reactivity									
Interpersonal reactivity	Pre-	test	Post-	test	F	df	Р	R ²	Observed power
	Mean	SD	Mean	SD					
Empathy/perspective taking	26.36	4.55	28.13	4.07	4.43	1	0.038	0.041	0.55
Empathy/empathetic concern	24.71	3.97	25.79	3.93	1.802	1	0.183	0.019	0.264
Coping strategies/aggressive reaction	9.5	4.28	8.22	3.01	4.306	1	0.040	0.028	0.541

Table 3: Comparison of means for the empowerment variable

Agency and empowerment	Pre-t	test Post-test		F	df	Р	R ²	Observed power	
	Mean	SD	Mean	SD					
Empowerment control and competency	33.85	4.59	36.18	3.36	12.181	1	0.001	0.074	0.934
Empowerment formal participation	31.6	5.42	35.21	4.44	19.353	1	0.000	0.115	0.992
Empowerment informal participation	28.07	7.96	35.4	10.04	18.29	1	0.000	0.136	0.989
Empowerment skills and knowledge	26.36	6.32	30.50	6.60	10.943	1	0.001	0.086	0.907

Table 4: Bodily self-awareness frequency distribution in high, medium, and low levels

Bodily self-awareness	Level	Moment			
		Pre-test Percentage	Post-test Percentage		
Full awareness/observation	Low	3.7	1.6		
	Medium	30.5	25.4		
	High	65.9	73		
Full awareness/act with awareness	Low	1.3	0		
	Medium	54.4	35.5		
	High	44.3	64.5		
Full awareness/lack of judgment	Low	6.1	7.7		
	Medium	48.8	41.5		
	High	45.1	50.8		
Bodily connection/bodily awareness	Low	2.4	0		
	Medium	42.4	22.2		
	High	55.3	77.8		
Bodily connection/bodily disassociation	Low	40.4	44.1		
	Medium	22.5	22.1		
	High	30.3	27.9		
Emotional intelligence/emotional clarity	Low	17.6	7.8		
	Medium	63.5	46.9		
	High	18.8	45.3		
Emotional intelligence/emotional reparation	Low	12.9	1.5		
	Medium	62.4	50.8		
	High	24.7	47.7		
Somatic complaints/somatisation	Low	52.7	65		
	Medium	32.4	21.7		
	High	14.9	13.3		
Somatic complaints/other	Low	34.5	47.7		
	Medium	39.3	40		
	High	26.2	12.3		

variables (bodily self-awareness, interpersonal reactivity and empowerment), possibly indicating favourable conditions because the violent events to which the participants were exposed occurred a considerably long time ago or because, as reported in the literature, in critical situations, people tend to display coping strategies that they may not even know they possess (Folkman, 2013). Nevertheless, this information affirms the need to implement interventions closer to the time the violence takes place to help victims to recover their previous personal and collective conditions with greater speed.

According to the evidence provided by the data, in the measurements for full awareness, statistically significant differences were found for the subscales of observation and act with awareness, with the scores in the post-test being higher. In turn, the scale showed statistically significant differences with an increase given in the post-test. This may indicate that in the post-test, the participants were

Table 5: High, medium and low levels of frequency distribution in interpersonal reactivity							
Interpersonal reactivity	Level	Mo	Moment				
		Pre-test Percentage	Post-test Percentage				
Empathy/perspective taking	Low	0	0				
	Medium	19	12.7				
	High	81	87.3				
Empathetic concern	Low	0	0				
	Medium	28.1	17				
	High	71.9	83				
Coping strategies/aggressive reaction	Low	52.8	63.2				
	Medium	36	35.3				
	High	11.2	1.5				

Table 6: High, medium, and low levels of frequency distribution in personal agency and empowerment

Agency and empowerment	Level	Mo	ment
		Pre-test Percentage	Post-test Percentage
Empowerment/control and competency	Low	0	0
	Medium	37.9	17.9
	High	62.1	82.1
Empowerment/formal participation	Low	2.4	0
	Medium	53.6	26.9
	High	44	73.1
Empowerment/informal participation	Low	10.3	2
	Medium	57.4	30
	High	32.4	68
Empowerment/skills and knowledge	Low	5.7	0
	Medium	35.7	22.9
	High	58.6	77.1

more strongly connected to their sensorial experiences. In the same direction, for the distribution of the bodily connection variable, there is an increase in the percentage of participants in the high level (going from 55.3 to 77.8%). For the dimension of bodily disassociation, concentrating on avoidance of internal experience and emotions increases by a small percentage in terms of those in the low level and reduces in the high level. This trend is coherent with the expected result for the diploma course, even if the differences are not statistically significant between measurements.

Bodily self-awareness

Bodily self-awareness offers explorations centred on the body, from the awareness of the present moment, which leads to the integration of experience and the ability to respond adequately to daily situations, such as reducing autonomous reactivity. In this sense, the practice of DBM is based on the states of mindfulness due to its focus on the here and now. These results are consistent with the ideas set out by Rothschild and Staunton (2002), who indicated that the victims of traumatic experiences recurrent, unconscious states of muscle tension, are due to a memory of the traumatic event expressed through the body. As such, awareness of the body can contribute to the establishment of a feeling of ease and acceptance of the emotions brought about by reliving the traumatic event, and in turn, with their redefinition (Harris, 2007). There were statistically significant differences between the pre-test and the post-test for the emotional intelligence subscale, with higher scores in the post-test. It is also worth noting that a statistically significant difference, the bodily awareness subscale, also showed an effect size of 0.73, with a percentage of change between the pre-test and posttest of 15%, indicating increased awareness of the body's sensorial signals.

Somatic complaints

Finally, the SCL90 scales, used to assess somatic complaints, showed lower scores in the post-test, but the difference was only significant in the scale for other somatic complaints.

The intervention was aimed at creating bodily self-awareness, and fostered significant changes in the emotional states most closely related to well-being through the work conducted with the body, in line with that established in the literature on dance and trauma, which was summarised in the *Introduction* to this article.

Changes were also observed between the pre-test and posttest in terms of the percentage of participants who reported less bodily connection and somatic complaints. However, the differences in the averages obtained for these variables were only statistically significant for sleep and appetiterelated complaints. This information coincides with the information given by Kaltsatou, Kouidi, Anifanti, Douka, and Deligiannis (2014), regarding the impact of dance on cardiovascular health and somatisation (Koch et al., 2014).

Empathy

In the subscales for empathy, the participants showed high averages and levels in the pre-test, and this trend was maintained in the post-test, which may explain why the difference was statistically significant for the perspective taking scale. A statistically significant difference was found for the aggressive reaction coping strategy, showing that the participants, after having completed the diploma course, made less use of this as a coping strategy. This was evident in most of the participants who, in the post-test, fell within the low level, and this result is consistent, given that by increasing empathy with others' emotions and behaviours, it is reasonable to expect their aggressive responses to decrease, meaning they are more tolerant. This is a necessary condition for collective and social (re)construction and reparation, and is in line with what has been established by Gatti and Tremblay (2007), who pointed out that the ability to reduce and control aggressive behaviour and aggressive reactions has been closely linked to social capital. Additionally, the findings regarding the reduction of aggressive reactions in this study are coherent with reports by Harris (2007), regarding a sample of African youngsters, in whom dance reduced the levels of aggressiveness.

The ability to take action from a physical level offers opportunities to reduce the sense of impotence experienced in many traumatic situations (Ogden et al., 2006). Once individuals are able to recover their confidence and capacity for action, it is assumed that they will become empowered and more assertive when dealing with other people in their environment. This is reflected in a sense of agency in terms of their environment and a recovery of their life projects, as seen in African teenage ex-combatants following dance therapy (Harris, 2007).

In addition, the findings, regarding increased empathy in the present sample, confirm that DBM tools foster opportunities for connection with others through empathetic channels using and reflecting postures, movements and interactions with others. It has been proposed that mirror exercises (McGarry & Russo, 2011), in particular, may increase levels of empathy through the optimisation of mirror neuron circuits, but further empirical research is required on the relationship among dance, movement and empathy (McGarry & Russo, 2011). It has also been proposed that body and movement therapy can increase empathy in DMT participants (Behrends et al., 2012; Federman, 2011).

Empowerment

Finally, the results indicate statistically significant differences in all dimensions of the empowerment scale, showing an increase in the post-test. The participants reported a greater tendency towards formal and, especially, informal behaviour, indicating attitudes that denote agency and control, which are important conditions for the reparation of the social fabric. These data coincide with what had been set out by Krishna (2001) concerning the fact that communities with high agency and empowerment can more effectively claim the benefits of social capital. Similarly, less somatic complaints and a higher bodily connection score (Yamaoka, 2008) will help participants to build a strong social capital. The intervention was also designed to help participants to manage the somatic effects of the trauma that manifest through their bodies (Rothschild & Staunton, 2002), thus, creating the necessary conditions for establishing healthy relations with others and repairing the broken social fabric.

Data from the study also confirm that interventions for arts/ dance trainees foster higher resilience in participants and help them reconnect with their skills and strengths (Mosek & Gilboa, 2016).

As previously mentioned, the programme was based on a trauma informed approach, in which its purpose was to recognise, strengthen and develop the skills and resources that people and communities use to overcome difficult situations. This was considered to contribute to the success of the programme and the positive results obtained from it. It is recommended that all psychosocial interventions with communities could integrate this sensitive approach to avoid re-traumatisation and to increase a sense of stability and well-being.

The data mentioned illustrate the usefulness of the initiative of the diploma course to modify and/or foster the personal and collective conditions necessary to redress the social fabric in survivors of the armed conflict.

PRACTICAL IMPLICATIONS

The practical implications of the study suggest that a trauma-informed dance movement protocol, such as the one used for this intervention, is viable for implementation in vulnerable communities. This is especially valid in groups where community leaders and dance teachers are present, given their ability to replicate the techniques with the community at large, using native social and cultural resources. For example, one of the groups implemented communication strategies in the local city council, including word circles, word totems and active listening skills. Other groups integrated the strategies in the youth dance courses taught in schools, and yet another one integrated the resources conducted within their indigenous community.

CHALLENGES

As data were obtained from self-reporting questionnaires filled out by participants after standard instructions, a possible bias may exist. Future research could consider the inclusion of a control group that allows inferences to be drawn with respect to the results that may be the most pertinent in terms of controlling other variables as possible additional actions or interventions that may also explain the results.

Subsequent measurements are also recommended to allow the assessment of the continuation of the results through

time, and the extension of the intervention to other populations. An extensive follow-up and capacity building programme for trainees were not included in the diploma course citing the lack of time and budget constraints, but it is highly recommended to implement follow-up, supervision and capacity building sessions to guarantee better results in the long-term.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Afari, N., Ahumada, S. M., Wright, L. J., Mostoufi, S., Golnari, G., Reis, V., & Cuneo, J. G. (2014). Psychological trauma and functional somatic syndromes: A systematic review and meta-analysis. *Psycho-somatic Medicine*, 76(1), 2.
- Baer, R. A., Hopkins, J., Krietemeyer, J., Smith, G. T., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13(1), 27-45.
- Baum, E. Z. (1991). Movement therapy with multiple personality disorder patients. *Dissociation: Progress in the Dissociative Disorders*, 4(2), 99-104.
- Behrends, A., Müller, S., & Dziobek, I. (2012). Moving in and out of synchrony: A concept for a new intervention fostering empathy through interactional movement and dance. *The Arts in Psychotherapy*, 39(2), 107-116.
- Bekker, M. H., Croon, M. A., van Balkom, E. G., & Vermee, J. B. (2008). Predicting individual differences in autonomy-connectedness: The role of body awareness, alexithymia, and assertiveness. *Journal of Clinical Psychology*, 64(6), 747-765.
- Bilak, A. (2015). Global overview 2015: People internally displaced by conflict and violence. Internal Displacement Monitoring Centre, Norwegian Refugee Council. Retrieved from http://www.internaldisplacement.org/sites/default/files/inline-files/20150506-globaloverview-2015-en.pdf
- Bräuninger, I. (2014). Specific dance movement therapy interventions— Which are successful? An intervention and correlation study. *The Arts in Psychotherapy*, 41(5), 445-457.
- Caycedo, C., & Novoa, M. (2010). Mindfulness training with single mothers: its relationship with emotional regulation (Thesis). Pontificia Universidad Javeriana, Bogotá.
- Collier, P. (2002). Social capital and poverty: A microeconomic perspective. In C. Grootaert, & T. van Bastelaer (Eds.), *The role of social capital in development: An empirical assessment 19-41*. Cambridge, UK: Cambridge University Press.
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. JSAS Catalog of Selected Documents in Psychology, 10, 85.
- Derogatis, L. R. (1997). SCL-90 administration, scoring and procedures manual. Baltimore: Johns Hopkins University, School of Medicine.
- Dinesen, C., Ronsbo, H., Juárez, C., González, M., Estrada Méndez, M. Á., & Modvig, J. (2013). Violence and social capital in postconflict Guatemala. *Revista Panamericana de Salud Pública*, 34(3), 162-168.
- Duberg, A., Jutengren, G., Hagberg, L., & Möller, M. (2016). Dance intervention for adolescent girls: Effects on somatic symptoms, emotional distress, and use of medication. A randomized controlled trial. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:oru: diva-50024
- Dunna Foundation. (2014). *DBM Diploma Course Booklet*. Available at SSRN: https://ssrn.com/abstract =
- Edmondson, R. (2003). Social capital: A strategy for enhancing health? Social Science & Medicine, 57(9), 1723-1733.
- Federman, D. J. (2011). Kinesthetic ability and the development of empathy in dance movement therapy. *Journal of Applied Arts & Health*, 2(2), 137-154.

- Fernández-Berrocal, P., Extremera, N., & Ramos, N. (2004). Validity and reliability of Spanish modified version of the trait meta-mood scale. *Psychological Reports*, 94, 751-755.
- Folkman, S. (2013). Stress: Appraisal and coping 1913–1915. Springer: New York.
- Gatti, U., & Tremblay, R. E. (2007). Social capital and aggressive behavior. *European Journal on Criminal Policy and Research*, 13 (3-4), 235-249.
- Gordon, A. J. (2014). Focusing on positive affect in dance/movement therapy: A qualitative study. *American Journal of Dance Therapy*, 36 (1), 60-76.
- Gray, A. E. L. (2001). The body remembers: Dance/movement therapy with an adult survivor of torture. *American Journal of Dance Therapy*, 23(1), 29-43.
- Harris, D. A. (2007). Pathways to embodied empathy and reconciliation after atrocity: Former boy soldiers in a dance/movement therapy group in Sierra Leone. *Intervention*, *5*(3), 203-231.
- Hopfensitz, A., & Miquel-Florensa, P. (2014). Investigating social capital in Colombia: Conflict and public good contributions. *Toulouse School of Economics (TSE)*. http://neeo.univ-tlse1.fr/3625/1/ wp_tse_463.pdf.
- J. F. Helliwell, R. Layard, & J. Sachs (Eds.). (2015). World happiness report 2015. New York: Sustainable Development Solutions Network.
- Kaltsatou, A. C., Kouidi, E. I., Anifanti, M. A., Douka, S. I., & Deligiannis, A. P. (2014). Functional and psychosocial effects of either a traditional dancing or a formal exercising training program in patients with chronic heart failure: A comparative randomized controlled study. *Clinical Rehabilitation*, 28(2), 128-138.
- Koch, S., Kunz, T., Lykou, S., & Cruz, R. (2014). Effects of dance movement therapy and dance on health-related psychological outcomes: A meta-analysis. *The Arts in Psychotherapy*, 41(1), 46-64.
- Koshland, L., Wilson, J., & Wittaker, B. (2004). PEACE through dance/ movement: Evaluating a violence prevention program. *American Journal of Dance Therapy*, 26(2), 69-90.
- Kornblum, R., & Halsten, R. L. (2006). In-school dance/movement therapy for traumatized children. In S. Brooke (Ed.), Creative arts therapies manual: A guide to the history, theoretical approaches, assessment, and work with special populations of art, play, dance, music, drama, and poetry therapies 144-155. Springfield, USA: Charles C. Thomas.
- Krishna, A. (2001). Moving from the stock of social capital to the flow of benefits: The role of agency. *World Development*, 29(6), 925-943.
- Londoño, N. H., Henao, G. C., Puerta, I. C., Posada, S., Arango, D., & Aguirre, D. C. (2006). Psychometric properties and valitation of the Modified Coping Strategies Scale (CSS-M) in a Colombian Sample. Universitas psychologica, 5, 327-349.
- Lopes, P. N., Grewal, D., Kadis, J., Gall, M., & Salovey, P. (2006). Evidence that emotional intelligence is related to job performance and affect and attitudes at work. *Psicothema*, 18(Suppl), 132-138.
- McGarry, L. M., & Russo, F. A. (2011). Mirroring in dance/movement therapy: Potential mechanisms behind empathy enhancement. *The Arts in Psychotherapy*, 38(3), 178-184.
- Medina, J. C. (2015). Neighborhood firearm victimization rates and social capital over time. *Violence and Victims*, 30(1), 81.
- Montero, I.,, & León, O. G. (2007). A guide for naming research studies in Psychology. *International Journal of Clinical and Health Psychology*, 7(3).
- Mosek, A. A., & Gilboa, R. B. D. (2016). Integrating art in psychodynamic-narrative group work to promote the resilience of caring professionals. *The Arts in Psychotherapy*, 51, 1-9.
- Ogden, P., Minton, K., & Pain, C. (2006). Trauma and the body: A sensorimotor approach to psychotherapy (345 pp.). New York: Norton. ISBN 978-0-393-70457-0.
- Palacio, J., Sabatier, C., Abello, R., Amar Amar, J., Madariaga, C., & Gutiérrez, K. (2001). Social capital supports overcoming problems for internally displaced persons due to violence in Colombia. *Investigación & Desarrollo*, 9(2).
- Pierce, L. (2014). The integrative power of dance/movement therapy: Implications for the treatment of dissociation and developmental trauma. *The Arts in Psychotherapy*, *41*(1), 7-15.

- Pineda, D. A., Aguirre-Acevedo, D. C., Trujillo, N., Valencia, A. M., Pareja, Á., Tobón, C., & Ibáñez, A. (2013). Dimensions of empathy in ex-combatants of the Colombian armed conflict using a standardized scale. *Revista Colombiana de Psiquiatría*, 42(1), 9-28.
- Pink, S., Sirkin, J., Ortega, I., Osorio, P., Martínez, R., Xocolotzin, U., & Givaudan, M. (2007). Scale to measure personal agency and empowerment (ESAGE). *Revista Intamericana de Psicología*, 41(3), 295-304.
- Preece, J. (2004). Etiquette, empathy and trust in communities of practice: Stepping-stones to social capital. *Journal of Universal Computer Science*, 10(3), 294-302.
- Quezada-Berumen, L. C., González-Ramírez, M. T., Cebolla, A., Soler, J., & García-Campayo, J. (2014). Conciencia corporal y mindfulness: Validación de la versión española de la escala de conexión corporal (SCB). Actas Españolas de Psiquiatría, 42(2), 57-67.
- Rosenfeld, R. (2001). Social capital and homicide. *Social Forces*, 80(1), 283-310.
- Rothschild, B., & Staunton, T. (2002). Body psychotherapy without touch: Applications for trauma therapy. In *Body psychotherapy* (pp. 101-115).
- Sarid, O., & Huss, E. (2010). Trauma and acute stress disorder: A comparison between cognitive behavioral intervention and art therapy. *The Arts in Psychotherapy*, 37(1), 8-12.

- Scholte, W. F., & Ager, A. K. (2014). Social capital and mental health: Connections and complexities in contexts of post conflict recovery. *Intervention*, 12(2), 210-218.
- Unidad para la Atención y Reparación Integral a las Víctimas. [UARIV]. (2017). Registro único de víctimas. Retrieved from http://www. unidadvictimas.gov.co/es
- Uribe, L., & Gómez, J. (2008). Validación de la escala de Inteligencia Emocional tmms-24 versión castellano, de Fernández-Berrocal, Extremera y Ramos, para su aplicación en Colombia. Medellín: Universidad de Antioquia, Facultad de Ciencias Sociales y Humanas, Departamento de psicología.
- Van der Kolk, B. (2014). *The body keeps the score: Mind, brain and body in the transformation of trauma*. UK: Penguin.
- Yamaoka, K. (2008). Social capital and health and well-being in East Asia: A population-based study. *Social Science & Medicine*, 66(4), 885-899.
- Zimmerman, M. A. (1995) Psychological empowerment: Issues and illustration. American Journal of Community Psychology, 23, 581-599.
- Zimmerman, M. A., & Rappaport, J. (1988). Citizen participation, perceived control, and psychological empowerment. *American Jour*nal of Community Psychology, 16(5), 725-750.