Yoga for active coping, emotional recovery and functionality of victims of the armed conflict in Colombia*

Agudelo, D.,[1] Gómez, Y.,[1] Sepúlveda, R.,[2] Quiñones, N.,[3]

Abstract

The civil armed conflict in Colombia has generated devastating effects in the emotional wellbeing and functionality of victims of the military and illegal armed groups. Given the dimensions of the conflict and the limited publicly available offer, research of the efficacy of alternative programs to address these issues is required. The purpose of this mixed-methods study is to assess the efficacy of the Satyananda Yoga program in increasing active coping strategies, emotional recovery, and functionality in the different areas of adjustment in a group of victims of the Colombian armed conflict. For the quantitative component, we compared a group that participated in a yoga program (n =103) with a control group (n = 103), using a single posttest measurement. For the qualitative component, we applied a grounded theory method based on in-depth interviews applied to 37 participants (26 from the yoga group and 11 from the control group). The data indicates that the yoga group uses active coping strategies (problem resolution, seeking social support, and positive reevaluation) more often; that fewer people from this group resort to aggressive reactions; that they perceive lower levels of sadness, fear, anxiety and anger; and that they perceive greater functionality in social, family and health-related areas. The qualitative data showed that participants of the yoga group were able to acquire additional coping strategies that contribute to emotional recovery and to the building of social networks. It also confirmed that yoga strengthened their social and economic functioning. Further research with baseline and long-term measures are encouraged.

Introduction

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[1] Universidad de los Andes/ School of Social Sciences / Psychology Department

[2] ROS: Resignifying Social Orientation, Consultancy

[3] Dunna: Creative alternatives for peace

The effects of the armed conflict in Colombia have been many, including forced displacement. Between 1985 and 2012, the Victim's Register (hereafter RUV) recorded a total of 4,790.317 displaced people from 1,117 municipalities in the country (Unit for Attention and Reparation of Victims, 2013). Subsequently, Human Rights Watch (HRW, 2014) reported that over 5 million Colombians have been displaced as a consequence of the internal armed conflict and that every year, at least 150.000 people abandon their land, pressured to do so by different armed groups, making Colombia the country with the second highest rate of forced internal displacement in the world.

Forced displacement and violence alter individual and collective functioning in different areas, which, in turn, affect the social fabric (Alejo, 2005). Within this framework, forced displacement fosters trauma understood as the psychosocial impact caused by being a victim to violence (Miller and Rasmussen, 2010; Martín-Baró 1989). Its consequences include physical and emotional malaise (Besser, 1987; Kamphuis, Emmelkamp & Bartak, 2003; Kleinman, 1988), and have a negative impact on the development of the social functioning of individuals and communities that are subjected to it (Rebolledo and Rondón, 2010). This leads to a final feeling of rootlessness in people that suffer such traumas (Escobar and Meertens, 1997; Fúquene, 2010).

The impact of such alterations depend on the person's previous history and coping strategies, understood as the mechanisms that—when set in motion—allow the victim to minimize the damage brought about by the stressful event (Lazarus & Folkman, 1984, p.151). The purpose of such mechanisms is to change the object that causes the threat; resolve, reduce or eliminate the emotional response; and to modify the initial assessment of the situation (Fernández-Abascal & Palmero, 1999).

In line with the above, Alejo (2005) describes three typical responses in victims: fear, anger and pain accompanied by feelings of uncertainty, mistrust and the sensation of a bleak future.Given that such emotions can significantly interfere with people's lives, this justifies the implementation of interventions that can help reduce their impact on the victims' emotional wellbeing and social and community functioning.

Given the multiple implications of exposure to violence on the emotional wellbeing of victims, many alternative interventions have been explored (Cukor, Spitalnick, Difede, Rizzo &

Rothbawn, 2009). One such practice is the repetition of mantras, which implies repeating a word or phrase in moments of stress. This brings about a state of relaxation when autonomic activity is high, helping to interrupt the fight or flight response. It also helps to reduce reactivity to the environment and increases awareness and focused attention (Bomyea & Lang, 2012). Similarly, the study by Brown & Gerbarg (2005), reports the benefits of yoga and breath management in reducing the symptoms of depression and physiological activation in war veterans. Bormann, Thorp, Wetherell & Golshan (2008) found that, compared to usual treatments, the repetition of a mantra reduces PTSD scores and reports greater scores for quality of life and mindfulness.

In post civil war Kosovo, the victims of violence were treated with breathing therapies *(pranayamas)*, physical postures *(asanas)* and meditation *(pratyahara)*, all part of yoga. After six weeks, the victims' symptoms had significantly reduced and the result was maintained for two months after the intervention (Gordon, Staples, Blyta & Murray, 2004). The study was repeated and after 12 yoga sessions, the group presented significant reductions compared to the control group. The control group was also treated with yoga after the initial experiment and it too presented a significant reduction o f symptoms (Gordon, Staples, Blyta, Murray & Wilson, 2008). Another study (Ehud and Avshalom, 2010), applied a program of 13 yoga sessions to children and teenagers affected by the civil war in Lebanon. The results reported a reduction of their symptoms and an improvement of their levels of attention and satisfaction.

With respect to prior interventions with the Colombian population, a number of relevant findings have been reported. A previous study undertaken by the Dunna Corporation with excombatants from illegal armed groups (Quiñones, Gómez, Agudelo & López, nd) showed that a Satyananda Yoga® program, led to an 18% improvement in the participants, which is considered clinically significant (Phillip & Long, 2011). The results show that yoga is an effective therapy that allows people to become reconnected to their bodies, which, in turn, leads to positive changes in their attitude and self-image.

In the case of victims, the Unit for Integral Attention and Reparation of Victims (UARIV) has focused on the psychosocial attention of victims by providing psychological support, building intra-community support networks, and offering individual and collective programs targeted at reducing suffering and rebuilding social capital (UARIV, 2013, February 1). Within that framework, UARIV has supported the implementation of the present pilot project consisting of

Satyananda Yoga sessions with victims residing in six municipalities of Colombia that were prioritized because of their exposure to violence during the armed conflict.

Satyananda Yoga classes focus on four key aspects of yoga: asana (physical postures), pranayama (breathing exercises), yoga nidra (deep relaxation), and meditation (Saraswati, 2008). The practices of asana and pranayama are drawn from the hatha yoga tradition, while the practices of yoga nidra and meditation are taken from the raja yoga tradition. The practices are aimed at creating awareness in an integral or holistic approach, which harmonizes the body, mind, emotions, and spiritual aspects of the practitioner (Saraswati, 1996, Vivekananda, 2005). The asana and pranayama component can reduce anxiety, depression, and stress by helping participants to focus on awareness of the present moment (Vivekananda, 2005), rather than focusing on the traumatic events of the past or the uncertainties of the future. Asanas and pranayamas also have a significant effect on the secretion of hormones, including an increase in dopamine and serotonin and a decrease in the secretion of cortisol (Thirthalli et al., 2013), which could account for decrease in the frequency of the emotions of anger, fear and anxiety.

On the other hand, deep relaxation has been linked to an improvement in sleep patterns, including a positive increase of alpha EEG waves, and to significant changes in the Galvanic Skin Response (Kumar, 2006), which have a direct correlation with the fight-or-flight response. Meditation, the fourth component of a Satyananda Yoga class has also been associated with regaining a sense of control which is usually lost in the traumatic experiences (Posadzki, Parekh, & Glass, 2010), as well as with an increased sense of self-efficacy, which could improve coping in trauma survivors (Waelde, Thompson, & Gallagher Thompson, 2004). Furthermore, meditation has also been associated with an increase of telomerase activity (Jacobs et al., 2011), 5-HIAA (5-hydroxyindole-3-acetic acid) and serotonin, as well as a decrease of VMA (vanillic-mandelic acid), all of which could prompt the rest-and-fullfilment response instead of the fight or flight response (Bujatti & Biederer, 1976). Finally, Satyananda Yoga meditation has been associated with an increase in low frequency EEG activity (Thomas, Jamieson, & Cohen, 2014), which could be responsable for an improvement in coping strategies and . Satyananda Yoga was selected as the yoga technique as the classes incorporate the benefits of these four practices in a holistic approach, so that all PTSD symptom clusters are addressed in the most integral way.

The aim of the present study was to test the efficacy of an intervention based on a Satyananda Yoga protocol for PTSD on Colombians exposed to the violence of the armed conflict who registered as victims in the RUV. It was hypothesized that 28 Satyananda Yoga sessions can significantly increase active coping strategies, reduce feelings of sadness, anger, fear, and anxiety, and increase general functionality and wellbeing in the family, work, health, and social areas.

Methodology

Design:

We applied a mixed methodology. For the quantitative analysis we used a yoga group and a control group, with a single posttest measurement. For the qualitative analysis, we applied in-depth interviews to both groups, reaching saturation point and establishing a grounded theory around the object of study.

Participants:

The sample was made up of 206 participants, divided into two groups (yoga and control), each containing 103 people. The yoga group was made up of 82 women (79.6%) and 21 men (20.4%) and was selected considering the expected effect size expressed as Cohen's d=-.5, which is a conservative estimate as compared to the effect size of -3.25 reported by Cabral et al. in a meta-analysis for yoga and trauma. We also considered a statistical power of 0.8, and a 95% confidence interval. The control group matched the yoga group in terms of age, sex, occupation and socioeconomic condition.

The participants' age range was between 14 and 84 years, with an average of 48.70 years (SD = 15.08); 16.5% of the sample was illiterate; 29.1% had incomplete elementary studies; 58.3% were housewives and 8.8% were agricultural workers. Only one person reported being unemployed and many of the participants reported working in the informal economy.

The control group was made up of 76 women (73.8%) and 27 men (26.2%) with an age range of 17 to 80 years, and an average of 43.48 (SD = 16.62). There was the same percentage of illiterate people in this group as there was in the yoga group but a lower percentage of people with

incomplete primary school studies (20,4%). In terms of occupation, 54.4% of the participants were housewives, 9.7% were agricultural workers, and 2.9% were unemployed. The rest undertook different types of activities, mainly in the informal economy.

For the qualitative assessment, we interviewed 11 control group participants and 26 yoga group participants. We included participants of different ages, sex and type of victimization. It is important to point out that most of the victims experienced the violent episode over a decade ago.

Instruments:

Modified Coping Strategies Questionnaire. The questionnaire is based on the Lazarus and Folkman (1987) Coping Scale modified by Londoño et al., in 2006. The Colombian version presented a Cronbach's alfa of 0.847, with values for the subscales that oscillated between 0.905 and 0.651. For this study, we chose the following coping strategies from the original questionnaire: problem solving, social support, waiting, aggressive reaction, emotional avoidance, cognitive avoidance, and positive reevaluation.

The feelings thermometer uses a subjective scale to assess the level of functioning in different adjustment areas, and is widely used in the health sector (National Comprehensive Cancer Network, 2008). The thermometer is a scale of 0 to 10 where the patient is asked to indicate her level of anxiety, where "0" equals "no anxiety" and "10" equals "the highest possible level of anxiety." Adapted to the needs of the study, it was applied to: a) measure the participants' perceived levels of wellbeing in family, work, social and health contexts; and b) to measure the level of emotional wellbeing. The members of the yoga group were asked to describe their perceived wellbeing in those areas and their perception of the continuing presence of the emotions once the yoga program had finished. The control group was asked to assess these aspects over the previous six-month period.

For the qualitative part of the analysis, a grounded theory (Morse, 2009) method was applied, defined as a systematic process to compile empirical information based on in-depth interviews, whose coding and inductive analysis allowed us to uncover the contribution of yoga to the psychosocial recovery of the victims. The main source of the grounded theory were the in-depth interviews (Seidman, 2006)—through which we were able to account for the different

meanings of yoga for the psychosocial recovery of the victims—until reaching saturation[4] (Ritchie and Lewis, 2003).

Procedure:

The participants were selected through a community call supported by the Victims' Unit. The groups were assigned based on their interest in taking part in the program and their willingness to attend. The first participants to sign up for the yoga program were assigned to the yoga group, and the remaining participants were assigned to the control group on a waiting list. All the cases fulfilled the requirements of being recognized as victims according to the RUV. Prior to assessment, the participants were informed about the study and they all signed the informed consent form. Participants did not receive compensation for their participation in the study, although the yoga group received a light snack after each session. The study was approved by the Ethical Committee at Universidad de los Andes.

The Satyananda yoga program, in which the yoga group participated had the following characteristics: The 14-week intervention of 28 sessions consisted in 2 weekly yoga classes taught by 3 yoga teachers and teacher trainers with ten years' experience or more in Satyananda Yoga. The groups had a maximum of 25 participants per group. In addition, a yoga expert and psychiatrist guided the design of a handbook for participants and a teacher protocol for each session. The team held periodic meetings aimed at evaluating the protocol and discussing the changes observed in the participant group.

The Yoga techniques and practices included in this study were all taken from the Satyananda yoga tradition sequences PM1 and PM2 (Saraswati, 2008) and adapted to meet the needs and requirements of the victims of the armed conflict in Colombia. Following the teachings of Sw. Satyananda, participants were encouraged to listen to and respect their bodies instead of being pushed into the practices. Rather than rush through the practices, which is common in other yoga traditions, the protocol encouraged them to slow down so that awareness of the present moment was maintained. Satyananda Yoga does not use props, which facilitated the process of

[4] Saturation in qualitative research is reached through the systematic repetition of the codes in the compiled information. That is, it is the point at which the significance around a specific social event—in this case, the contribution of yoga to the psychosocial wellbeing of the victims—become saturated (Ritchie and Lewis, 2003).

accepting, appreciating and trusting one's body as it is. Regarding physical assists, Satyananda Yoga teachers always restrain from adjusting the participants, trusting that they are able, in the short or long-term, to adjust the practices to their own capabilities and will.

Each 1-hour class included a component of asana (postures), pranayama (breathing techniques), yoga nidra (deep relaxation) and meditation techniques-removing any references to the devotional aspects of yoga- to facilitate the process of reconnecting body, mind and emotions, and developing acceptance of and trust in one's own self. Postures were drawn from the beginners and intermediate asana series (Saraswati, 1996), and pranayama practices may be found in the same manual at pages 372-403 (Saraswati, 1996). Guided meditations (Saraswati, 2001) and full descriptions of yoga nidra are also publicly available (Saraswati, 2006). Every class included five sessions: 1. Settling the mind and body and establishing awareness (5 minutes); 2. Asana (20 minutes); 3. Pranayama (5 minutes); 4. Yoga Nidra (20 minutes); and 5. Meditation (10 minutes).

Participants in the intervention group were encouraged to practice yoga at home during and after the intervention. To facilitate this process, individuals that were part of the intervention group were given a yoga cd with the recorded yoga nidra and meditations and handbook with the postures and breathing exercises practiced during the intervention. Participants did not receive compensation for their participation in the study, although the intervention group received a light snack after each session. All analyzed participants attended at least 75% of the sessions offered during the intervention. Attendance to yoga sessions was strictly controlled.

Analysis Plan

The data was processed using SPSS 20 and double blind data entry to avoid researcher bias in recognizing participants involved in the control and intervention groups.

In order to determine statistically significant changes in the variables assessed in both groups, once we verified the fulfillment of the assumptions under Levene's test of equal variances, we undertook a comparison of means using the ANOVA test or the Mann Whitney U test when statistical assumptions were not met. Also, in order to estimate the impact of the intervention in

the variables measured, we classified the sample into three groups based on high, medium and low scores in the available normative data.

Results

Following are the results obtained through the questionnaires and in-depth interviews comparing the two groups (yoga and control groups) in terms of the use of coping strategies.

The results showed statistically significant differences between the yoga group and control group for the coping strategies of problem solving ($F = 5.91$; $p < .05$), social support ($F = 7.38$; $p < 05$) and positive reevaluation ($F = 10.41$; $p < .05$), indicating a greater use of these active strategies by the yoga group (Table 1). For the aggressive reaction strategy, the comparison of the median of the two groups indicated a relevant difference (Mann Whitney U test = 3.946; $p < .005$), given that the yoga group did not use this strategy as much as the control group.

Insert Table 1.

The classification into subgroups with high, medium and low scores in the coping strategies was undertaken based on the normative data reported in the study by Londoño et al. (2006) in Colombia.

Insert Table 2.

The results shown in Table 2 establish that for the strategies of problem solving, social support, and positive reevaluation, the distribution of the participants—regardless of the group—is divided into medium and high levels, meaning that such strategies are frequently used. Nevertheless, for these three strategies, considered active strategies, the yoga group presents a greater percentage of participants in the high level. For the case of the aggressive reaction strategy, the groups are distributed in the medium and low levels. However, for the high level, only 5.8% of participants in the yoga group make frequent use of this strategy compared to 22.3% in the control group.

When analyzing the percentage of members in each group in their use of strategies such as waiting, it is interesting to note that for both groups, the same percentage makes little use of

this strategy (16.5%) and most of the participants were located in the medium and high levels. Nevertheless, the highest percentage of people in the high level belongs to the control group. Similarly, for the emotional avoidance strategy, the data shows that 50.5% of the control group implement this strategy frequently compared to 43.5% of the yoga group. The cognitive avoidance strategy presents a similar distribution for both groups, with a notable high percentage—around 74%—in the high level.

The qualitative results point to the fact that the members of the yoga group were able to potentiate their orientation towards achievements, and to consider yoga an active coping strategy:

> (…) Having had your children's future all planned out and then losing it all is really hard, it makes you think and think, about everything you left behind, about how to cope now (…) I arrived here with nothing, I had to scratch around in the garbage and give my kids fish bones [scraps of food]. How are you supposed to feel doing that? (…) Now, when I walk in the street, I remember that, and I immediately start repeating my mandra [mantra], ohmmm, I put my fingers [index fingers] by my ears and repeat my mandra [mantra], and I begin to feel better, (…) and with a calm mind, I can sort out my problems better (Interview 23, Soledad).

The testimonials also point to yoga as a source of social support:

> I didn't want to do anything, all I felt was apathy, I felt like I was going to die, (…) but with the yoga classes, (…) and I breathe all the time and when I am in a bad mood or I feel bad, I breathe and relax (…) here with my yoga colleagues, we have already organized ourselves into a number of projects and I look for people to help out (Interview 1, San Cayetano).

Yoga has strengthened the victims' reevaluation of their suffering as victims of the armed conflict, and of their bodies: "People are like leather that becomes hard over the years. There may be hard bits, but we continue on, and I continue on with my family doing my yoga that's like a balm for our souls" (Interview 15, Mampuján). Victims reported that reevaluation was also extended to family members: "I do yoga with my partner and my children, she has taught them to do yoga and to have control over their bodies, (…) yoga helps every little part to become stronger and better" (Interview 34, Barranquilla).

Yoga has helped diminish aggressive reactions and, as such, avoid violence: “With my children, [yoga] has helped me talk to them instead of shouting at or hitting them. We do the postures together in the front room. If they are misbehaving, we go and do yoga” (Interview 25, Soledad).

Moving on to the victims’ emotional recovery, Table 3 shows the quantitative results of the perception of four specific emotions: sadness, anger, fear and anxiety. For the four emotions evaluated, we found statistically significant differences between both groups, with the yoga group presenting, on average, lower levels of such emotions.

Insert Table 3.

Insofar as the distribution per levels, the results on emotional perception (see Table 4) indicate that in the low level (low presence of the emotion), there is a greater percentage of people from the yoga group compared to the control group. In the high level, the percentage is lower for the yoga group and greater for the control group for the four emotions assessed: sadness, anger, fear and anxiety.

It is worth noting that for the emotion of anger, this distribution is especially marked (low level; yoga group = 59.2% vs. control group = 28.2% and high level: yoga group = 8.7% vs. control group = 23.3%).

Insert Table 4

The qualitative results related to recovery from emotional states such as sadness, fear, anger and anxiety, manifested favorable changes. Such changes are attributed to constant exercise and the self-replicating of yoga in daily life:

> (…) I was depressed, so much so that I thought I wanted to die, and planned my death (…) thank God and yoga, my episodes of depression don’t last so long anymore, I feel it, one day a week or so and that’s it, this is why I keep doing yoga (Interview 24, Soledad).

> I used to be afraid of going out, and I still say we are not going to go out today, but now I am more inclined to do it (…) I began going out about a month and a bit ago, and I think it is down to the yoga (Interview 20, Sabanagrande).

> (…) I used to want to hit them hard [the children], because it put me in such a bad mood when they misbehaved; now, I talk to them more. (Interview 27, Sabanagrande).

The control group also presented emotional recovery through the coping strategies they developed on their own. However, they were not able to rely on the same wellbeing-fostering tools as the yoga group:

> I don't live well, I am always bored or sad, my wife asks me why I still feel like this if it all happened so long ago, she tells me to stop being in a bad mood, that I have no reason to be in a bad mood all day, but that's just how I feel and I don't know why. When I see the kid, my son, that's when I cheer up and I think, I need to work so that he doesn't go through what I went through, and he is the reason why I get up in the morning to try and make a living. (Interview 20, Soledad).

When comparing the two groups in terms of their perception of their level of functioning in different areas, the data only indicated statistically significant differences in the family area ($F = 7.41$; $p < 05$), whereby the yoga group perceived a greater level of wellbeing than the control group (see Table 5).

In the social and work areas, although the difference was not significant, we observed a trend of greater perception of wellbeing among the yoga group, as indicated in the statistical results, where the yoga group obtained greater averages.

Insert Table 5.

Table 5 shows that for the four areas assessed (family, work, social and health) both groups presented a positive assessment of their level of wellbeing. However, in the high level regarding wellbeing, there is a greater percentage of participants from the yoga group, in particular in the family, social and health areas.

Even though there was no statistically significant difference in the perception of wellbeing in the area of health, the yoga group had more participants in the high level of health-related functioning in the subjective scale (greater than 7).

Insert Table 6.

The pattern of correspondence between the qualitative and quantitative results is maintained for the case of functioning per areas. In relation to the family area, yoga contributed to improving the perception of family relations: “I do yoga with my partner and my children, she has taught them to do yoga and to have control over their bodies” (Interview 34, Barranquilla).

It helped improve their physical health:

> My whole back ached, and my legs, my knees, when I washed clothes. Before this [forced displacement] I had no aches and pains whatsoever. But, I don’t know, after what happened, my back, knees and shoulders started to hurt. Not anymore. For me yoga was the ultimate cure. (Interview 1, San Cayetano).

Yoga supported the victims’ social functioning in their community contexts, not only in terms of the recuperation of their social skills, but also to improve the social fabric:

> (…) I didn’t go anywhere, I didn’t even leave my house. But now, with the new friends I made at yoga, I go out, I talk to people like I used to. (…) The family too, I used to be afraid to catch a bus, I thought they were spying on me, but now I have even been on vacation with my family (…) I am sure that yoga helped me a lot with all this. (Interview 34, Barranquilla).

Discussion

The results obtained from the study, show that the Satyananda Yoga program benefitted those who took part in it by increasing their active coping strategies and improving their functioning in their different areas of adjustment as well as their emotional wellbeing.

With respect to the coping strategies, the intervention with Satyananda Yoga consolidated the active coping strategies of the yoga group. A beneficial effect of yoga was observed, which is in line with that which was exposed by Cabral, Meyer and Ames (2011) in their meta-analysis. These authors reviewed a series of studies that showed how yoga can serve as a useful alternative treatment in the management of various psychological problems, with the combination of practices (meditation, breathing and postures) that prove the effectiveness of the procedure, more than the use of isolated components.

In line with effective coping, it is indicated that despite the violent episode, and perhaps because it took place over a decade ago, the assessed victims presented a high and adequate general level of coping, regardless of the condition (yoga or control group). The use of active coping strategies in line with Fernández-Abascal and Palmero (1999) was notorious and possibly based on the people's own experiences in terms of the needs derived from their experiences. That is, despite the difficult situations of violence, they develop levels of recovery that allow them to reconsider their experience and positively value their present condition, even in the midst of the consequences of violence (Abello, et al., 2009; Das, 2004; Kleinman, 1988, 2008).

This coincides with Tol, Song & Jordans (2013) who, in a systematic review of studies on resilience in children and teenagers that live in areas of conflict, found that resilience is strengthened through individual level factors (psychological flexibility, coping, optimism), as well as through inter-individual factors (peer and family relationships), and contextual ones (educational and health support, political agency). In line with the above, Sousa, Haj-Yahia, Feldman & Lee (2013) emphasize the concept of resilience specifically in situations of political violence and define this construct as people's and communities' capacity to overcome political violence and develop commitments to construct wellbeing. This was manifested in the sample for this study through different practices of social and community reorganization as well as the use of individual strategies to overcome their condition as victims. This aspect, as we already pointed out, was more notorious in the yoga group.

Following what has been set out by Estrada, Ripoll & Rodríguez (2010), in relation to how the psychosocial interventions documented by the authors transform the victim into survivor and diverse social subject, and the forgotten into the recognized (p.110), this is also highlighted as one of the benefits identified after the yoga program and ratified in the testimonials of a number of the participants. They agree that the intervention helped them recover the roles they had abandoned before, such as social leadership, organizing themselves around community goals to improve their quality of life, and establish new forms of managing authority in the home. Such factors undoubtedly account for the recovery of a social fabric damaged by the violence, and help recover the victims' concept of agency, which is fundamental in individual and collective functioning (Torres, 2013).

For its part, yoga connects individuals with their bodies and a sensorial experience (Emerson & Hoper, 2011) that can help break down rational barriers that maybe affecting the current experience of the participants and favor the use of more active strategies, fostering, for example, the use of their own initiative to find solutions to problems, allowing a reevaluation of the experiences, strengthening social support and promoting the regulation of their emotions, specifically, anger. These effects are similar to those reported by Bomyea & Lang (2012); Bormann, Thorp, Wetherell & Golshan (2008); and Brown & Gerbarg (2005), in which different yoga exercises and practices proved to be beneficial in reducing symptoms and fostering greater psychological wellbeing. With respect to the more frequent use of positive reevaluation, the study by Gootjes, Franken & Van Strien (2011) showed how people that practiced yoga were able to reduce their negative feelings brought about by aversive images through reevaluation, and how this effect was maintained for a longer period of time than for the groups that did not practice yoga. In the yoga group, the use of this strategy was associated with greater psychological flexibility that leads to the adoption of a less harmful attitude in terms of the experience of violence.

It is worth highlighting that the use of the aggressive reaction strategy was higher in the control group. As pointed out by Alejo (2005), this is a typical response in people in situations of conflict; however, the regular practice of yoga has proven to regulate the emotions, increasing both self-awareness and the locus of internal control (Bomyea & Lang, 2012).

We also highlight that the scores for cognitive avoidance—considered a passive strategy—were similar in both groups. However, the participants' testimonials make it clear that the sense they gave to these questions was positive; they understand that they have to stop thinking about the problem in order to transcend it, not focus on it. In this sense, it cannot be considered a passive strategy. This would be consistent with the studies that show how psychological flexibility increases the possibilities of resilience in people who are victims of violence (Tol, Song & Jordans, 2013).

The benefits of the intervention are reflected in improved functioning perceived in the areas of performance, in particular, in the family and social areas. Social networks in favor of the psychosocial recovery of the victims have been constructed around the practice of yoga. Such networks configure a social fabric in favor of practices that contribute to improving the victims'

quality of life (sports, yoga in the community, community solidarity in financing the yoga sessions with the community's own resources). This is pointed out by Domínguez and Godin (2007) in a study on the resilience of Colombian families that have been displaced by violence, by showing that the families actively seek the help of institutions, friends, relatives and neighbors. This is relevant in that authors like González (2002) insist on the fact that situations of violence such as forced displacement, provoke uprootedness and a rupture in life projects and the social fabric. The practice of yoga with this group helped mitigate feelings of rootlessness, favoring greater future projection based on a recovery of trust.

In parallel, yoga helped the participants in the group to work towards family unification through practicing it in their homes, as was exemplified in the testimonials of some of the participants.

It is also important to highlight that yoga helps reduce somatic complaints. Even though the differences were not statistically significant, the quantitative data showed a tendency whereby a greater number of victims that participated in the program reported higher levels of wellbeing in terms of their health. The in-depth interviews confirmed this perception. This improvement in the victims' health—one of the most important advantages of the yoga program—allowed them to undertake their daily activities without having to endure such high levels of pain or to restart activities that they had stopped doing. One possible explanation could be the correlation between yoga and increased levels of Gaba, a substance that regulates the excitability of the nervous system as well as muscle tone (Streeter et.al., 2007). The United States National Center for Complementary and Alternative Medicine (NCCAM) is currently undertaking research that supports the benefits of yoga; for example, for diabetes, arthritis, the symptoms of menopause, and multiple sclerosis (Agarwal, 2013). The entity also affirms that the regular practice of yoga is an excellent means to maintain general health and prevent disease if it is implemented together with conventional treatments. A number of studies coincide in that yoga is an effective alternative and complementary treatment for diseases such as osteoarthritis and carpal tunnel syndrome, as well as discomforts such as back pain, and pain in the joints, shoulders and neck (Garfinkel, Schumacher, Husain, Levy & Reshetar, 1994; Saper, Sherman, Cullum-Dugan, Davis, Phillips & Culpepper, 2009; Sherman, Cherkin, Erro, Miglioretti & Deyo, 2005; Wren, Wright, Carson & Keefe, 2011).

Evidently, and as shown in the above results, yoga has fostered psychosocial wellbeing, and mitigated emotional malaise such as depression or sadness, and excitations or a state of permanent fear. Also, compared to the control group, it is plausible to affirm that yoga constitutes an additional tool for emotional recovery, whose effects on emotional wellbeing constitute an added value when compared to the control group.

Considering the qualitative and quantitative results, it is possible to affirm that those that participated in the yoga program were able to improve their self-efficacy and achieve a greater sense of agency together with a reduced feeling of impotence and helplessness in line with that which has been set out by González (2002).

For this group of victims who experienced the violent episode over a decade ago, the program was able to strengthen their active coping strategies and favor improved regulation of negative emotions as well as an improved sense of wellbeing in their functioning. Bearing this in mind, it is possible to predict an equal or greater efficiency for those who only recently experienced a violent episode. In fact, this is what public policy refers to when it talks about the urgency of opportune reparation for the victims.

One of the study's limitations was not having a pretest measurement. Indeed, it would also be useful to have measurements at 3 and 6 months to assess the maintenance of the long-term positive effects of the program and make greater inferences on the effectiveness of the yoga program. These aspects—that should be taken into account when designing the studies—are reiterated in the scientific literature of quantitative studies on the topic; for example, emphasizing a design with random group assignment, appropriate controls and adequate sample sizes and populations (Dunn, 2008). However, the qualitative reports obtained through the interviews in this study do support the quantitative results. Similarly, mixed methodology studies are becoming increasingly popular (Creswell, 2009; Tashakkori & Teddlie, 2003), as they broaden the information available and potentiate the research results.

Finally, it is worth insisting on the need to increase research into the use of alternative practices such as yoga that favor the development of individual and collective skills in victims' processes of emotional recovery as an alternative to existing interventions and that, in this case, account for an significant portion of the participants' recovery. We suggest that future studies

should consider taking pre-test measurements and as such assess the effect of the program's efficacy over time.

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Table 1. ANOVAS for the Coping Strategies Scale according to condition (yoga group and control group).

Coping strategies	CONDITION								
	Yoga Group		Control Group						
	Average	SD	Average	SD	F	gl	sig	R^2	Pot.Obs
Problem resolution	44.04	6.57	41.75	6.80	5.91	1	.016*	.024	.67
Seeking social support	32.00	7.49	29.18	7.34	7.38	1	.007*	.030	.77
Waiting	28.52	10.39	28,50	10.26	0.00	1	.99	-.005	.05
Emotional avoidance	28.10	8.67	29.97	8.65	2.28	1	.13	.007	.32
Cognitive avoidance	22.82	4.88	22.24	5.54	.61	1	.43	-.002	.12
Positive reevaluation	24.61	4.07	22.75	4.20	10.41	1	.001*	.044	.89

* p < ,05

Table 2. Percentage of participants presenting affectation in the coping strategies, according to condition (yoga or control).

Coping strategies	LEVEL	CONDITION			
		Yoga group		Control group	
		Frequency	Percentage	Frequency	Percentage
Problem resolution	Low	2	1.9	2	1.9
	Medium	19	18.4	32	31.1
	High	82	79.6	69	67
	Low	4	3.9	6	5.8

Seeking social support	Medium	32	31.1	41	39.8
	High	67	65	56	54.4
	Low	17	16.5	17	16.5
Waiting	Medium	37	35.9	32	31.1
	High	49	47.6	54	52.4
Emotional avoidance	Low	18	17.5	13	12.6
	Medium	40	38.8	38	36.9
	High	45	43.7	52	50.5
Agressive reaction	Low	59	57.3	44	42.7
	Medium	38	36.9	36	35
	High	6	5.8	23	22.3
Cognitive avoidance	Low	4	3.9	7	6.8
	Medium	22	21.4	20	19.4
	High	77	74.8	76	73.8
Positive Reevaluation	Low	4	3.9	7	6.8
	Medium	17	16.5	27	26.2
	High	82	79.6	69	67

Table 3. ANOVAS for the emotional perception according to condition (yoga and control).

Emotional perception	CONDITION								
	Yoga Group		Control Group						
	Average	SD	Average	SD	F	gl	sig	R^2	Pot.Obs
Sadness	3.71	2.98	5.00	3.02	7.36	1	.007*	.036	.77
Anger	3.03	2.68	4.78	3.00	15.95	1	.000*	.081	.98
Fear	3.13	2.86	4.41	3.38	7.12	1	.008*	.030	.75
Anxiety	3.76	2.79	5.15	3.05	9.65	1	.002*	.040	.87

* p < ,05

Table 4. Percentage of participants' levels of emotional perception according to condition (yoga or control group).

Emotional perception	Level of affectation	CONDITION			
		Yoga group		Control group	
		Frequency	Percentage	Frequency	Percentage

	Low	46	44.7	28	27.2
Sadness	Medium	39	37.9	48	46.6
	High	18	17.5	27	26.2
	Low	61	59.2	29	28.2
Anger	Medium	33	32.0	50	48.5
	High	9	8.7	24	23.3
	Low	58	56.3	36	35.0
Fear	Medium	30	29.1	41	39.8
	High	15	14.6	26	25.2
	Low	49	47.6	29	28.2
Anxiety	Medium	40	38.8	43	41.7
	High	14	13.6	31	30.1

Table 5. ANOVAS for the areas of functionig according to condition (yoga or control group).

Areas of functioning	CONDITION								
	Yoga Group		Control Group						
	Average	SD	Average	SD	F	gl	sig	R^2	Pot.Obs
Family	8.40	2.02	7.41	2.54	8.65	1	.004*	.036	.83
Work	6.66	2.90	6.80	2.79	1.02	1	.31	.000	.17
Social	8.11	2.02	7.78	2.33	1.12	1	.29	.001	.18
Health	7.36	2.62	6.73	2.69	2,66	1	.10	.008	.37

* p < ,05 ** between 0 and 3 = low or slight perception of wellbeing; between 4 and 6 = average perception of wellbeing and between 7 and 10 = high perception of wellbeing[5].

Table 5. ANOVAS for the areas of functioning according to condition (yoga or control group).

Areas of functioning	CONDITION								
	Yoga Group		Control Group						
	Average	SD	Average	SD	F	gl	sig	R^2	Pot.Obs
Familiar	8.40	2.02	7.41	2.54	8.65	1	.004*	.036	.83
Laboral	6.66	2.90	6.80	2.79	1.02	1	.31	.000	.17

[5] Es de anotar que para estas áreas se daba la opción de No aplica and por eso el número de participants no es igual en todas las área

Social	8.11	2.02	7.78	2.33	1.12	1	.29	.001	.18
Salud	7.36	2.62	6.73	2.69	2,66	1	.10	.008	.37

Table 6. Percentage of participants presenting affectation in the areas of functioning according to condition (yoga or control group).

Areas of functioning	Level of wellbeing	CONDITION			
		Yoga group		Control group	
		Frequency	Percentage	Frequency	Percentage
Familiar	Low	3	2.9	9	8.7
	Medium	11	10.7	25	24.3
	High	89	86.4	69	67.0
Laboral	Low	9	7.8	8	7.8
	Medium	31	30.1	28	27.2
	High	64	62.1	67	65.0
Social	Low	4	3.9	7	6.8
	Medium	14	13.6	18	17.5
	High	85	82.5	78	75.7
Salud	Low	10	9.7	12	11.7
	Medium	23	22.3	34	33.0
	High	70	68.0	57	55.3