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Working towards peace through yoga:
Qualitative assessment of yoga program
in a social housing complex in Santa Marta,
Colombia

Laura Liévano Karim

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**Working towards peace through yoga: Qualitative assessment of yoga
program in a social housing complex in Santa Marta, Colombia**

Laura Liévano Karim

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Masters Thesis

Escuela de Gobierno Alberto Lleras Camargo
Universidad de los Andes

Bogotá, 2016

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Abstract

The goal of the study was to evaluate perceived mental and physical health benefits of yoga for people living in Ciudad Equidad, a social housing complex in Santa Marta, Colombia. The participants of the study voluntarily enrolled to complete two yoga sessions per week, each lasting 1.5 hours, during a three-month period. Additionally, they participated in baseline and end-program focus groups and post-intervention semi-structured interviews. These qualitative assessments were intended to measure perceived changes in aggressiveness, coping strategies, emotional intelligence and stress among others. Data analysis revealed that yoga participants perceived significant changes over time in relation to when they began the intervention in all measures included (aggressiveness, emotional intelligence, coping strategies and stress). These preliminary results suggest that implementation of yoga is a feasible and effective alternative to improve co-existence and manage violence among neighbors in Ciudad Equidad.

Key Words: yoga, social housing, violence, Colombia, well-being, aggressiveness, emotional intelligence, stress

Resumen

El objetivo del estudio fue evaluar los cambios percibidos en habitantes de un conjunto de vivienda de interés social en Santa Marta, Colombia, quienes voluntariamente se inscribieron para participar en la intervención de clases de yoga. También participaron en grupos focales previos y posteriores a la intervención, y en entrevistas semiestructuradas posteriores a la intervención. Estas metodologías cualitativas de recolección de datos pretendían medir cambios percibidos en agresividad, estrategias de afrontamiento, inteligencia emocional y estrés, entre otros. El análisis de datos reveló que el yoga causó que los participantes percibieran cambios significativos en las variables incluidas en el estudio. Estos resultados preliminares sugieren que las intervenciones de yoga son una alternativa factible y eficaz para mejorar la convivencia y disminuir la violencia entre los vecinos de Ciudad Equidad.

Palabras clave: yoga, vivienda de interés prioritario, violencia, Colombia, convivencia, bienestar, agresividad, inteligencia emocional, estrés

Working towards peace through yoga: Qualitative assessment of yoga program in a social housing complex in Santa Marta, Colombia

Men, women, adolescents and children living in extreme poverty in violent environments are in great need of safe, inexpensive, non-pharmacological, accessible and effective programs or therapies to enhance general wellbeing and reduce the burden of depressive, post traumatic, or anxious symptomology, among others. Therefore, the purpose of this study is to conduct a qualitative assessment of the effect yoga has on residents of Ciudad Equidad, a social housing complex in Santa Marta, Colombia (known to be a dangerous and hostile environment). This qualitative assessment answers the following research questions: *What is the general experience of Ciudad Equidad residents in the yoga intervention program and what, if any, changes have they experienced/perceived in terms of the following qualitative variables: aggression, emotional intelligence, coping strategies and stress? Additionally, do residents in Ciudad Equidad consider that practicing yoga could be an effective tool to reduce violence in their neighborhood in the long term?*

The Colombian government defines the residents of Ciudad Equidad as people living in extreme poverty. This status is given to individuals who live on under \$ 97,790 COP (\$ 30.62 USD) per month, which is approximately \$ 3,206 COP (one dollar) per day (DANE, 2015). Furthermore, many of these individuals have been displaced from their homes due to the armed conflict in the country. Therefore, it is likely that many residents of Ciudad Equidad have lived through painful situations or have experienced loss, and live with the psychological and physical consequences associated with those situations.

Ciudad Equidad is a priority social housing complex located in Santa Marta, Colombia. Construction began in January 2013 under the supervision of Bolívar Construction Company; currently (March 2016), Ciudad Equidad is made up of 12 blocks (*manzanas*). On average, there are 333 houses on each block, each of which has two floors and measures approximately 45 square meters. The construction company's goal was to build 4,000 houses by June 2015; by that time, 2,462 houses were already occupied. Additionally, each block has a children's park and a *maloca*, which is an open-air community center where group activities such as birthday parties or conferences are held. This is also where the yoga sessions took place. To become a resident in Ciudad Equidad individuals must have enrolled in a draw exclusively available for people whom, according to the definitions established in Colombia, live in extreme poverty. Individuals selected from the draw would be given a free home under the condition that residents pay the utilities.

The internal armed conflict in Colombia has lasted for more than five decades (Sánchez, Díaz & Formisano, 2003). Approximately 10% of its population has been internally displaced due to violence (Shultz, et al., 2014; Stammel, et al., 2012). Furthermore, millions of civilians in Colombia have been faced with severe human rights violations and a substantial number of victims suffer from psychological distress and mental health issues such as post-traumatic stress disorder, depression and anxiety (Richards, et al., 2011; Shultz, et al., 2014; Stammel, et al., 2012). Reparation mechanisms have been implemented to indemnify the victims, including free housing (such as the housing complex at Ciudad Equidad) for the individuals who have been forcefully displaced from their homes (Stammel, et al., 2012).

Additionally, extreme poverty, displacement and violence alter individual and collective functioning. These situations affect daily life in different areas (psychological and physical health) and imply negative consequences for the emotional and physical well being of individuals (Kamphuis, Emmelkamp & Bartak, 2003; Kleinman, 1988). Furthermore, violence, displacement and extreme poverty cause a negative development of social skills at the individual and communitarian level. This generates feelings of rootlessness (not belonging) among people faced with these extreme situations (Escobar & Meertens, 1997; Rebolledo & Rondón, 2010).

In Colombia, a significant number of persons in situations of extreme poverty have been affected by violence and internal displacement (Ibáñez & Moya, 2010). As a result of this, most free housing project residents in the country suffer at least some of the consequences of violence described above. These difficulties are translated into increased neighborhood violence, low cognitive human capital, and general hostility between social housing complex residents (Fundación Bolívar Davivienda, 2016). Additionally, low-income neighborhoods tend to be generally exposed to chronic violence patterns that negatively affect children and adults who are regularly exposed to it (Lott, 2004). Low-income communities where violence is common are environments in which traumatic stress as well as feelings of hopelessness and despair are commonplace (Lott, 2004).

Violence is a result of many things, including feelings of loss, anger, loneliness, and powerlessness, which are common in social housing complexes where people live in extreme poverty and have been internally displaced. It is worth mentioning that violence can be directly observed or indirectly experienced by, for example, knowing or hearing from others who have directly experienced it (Lott, 2004). Practicing yoga addresses those feelings of stress, anger, and sadness as well as mental illnesses such as anxiety. Therefore, it enhances individuals' emotional and mental needs (Pascoe & Bauer, 2015; Sharma & Haider, 2013). Yoga gives its practitioners the ability to emotionally regulate themselves, channel energy and aggression, reduce negative emotions, have self-control and improve physical capabilities, among other physical and emotional benefits that improve general wellbeing (Khalsa et al., 2012; Oken et al., 2006; Pascoe & Bauer, 2015).

It is important to reduce violence and improve well-being of individuals living in social housing complexes because exposure to chronic violence and feeling of stress or anger have been associated with negative emotional and behavioral consequences in children and adults. Consequences such as hyper-vigilance, feeling unsafe, poor health, and mental illness, among others (Spano & Bolland, 2011; Lott, 2004). Furthermore, there likely exists a positive relationship between exposure to violence and the probability of committing violent acts, delinquency, and gang membership. This, in turn, would cause a vicious cycle, particularly for children living in unsafe and dangerous environments like Ciudad Equidad or in a high poverty context (Ebensen et al., 2009; Spano & Bolland, 2011). Additionally, the steep economic costs of violence, crime and antisocial behaviors hinder economic growth (Blattman, Jaminson & Sheridan, 2015).

Programs that seek to reduce violence through yoga have been implemented in dangerous neighborhoods worldwide. For example, the Chicago Yoga Program that began in Englewood, one of Chicago's most violent neighborhoods (Badwin, 2014). There have also been smaller

sized programs established that seek for better wellbeing of individuals living within a context of urban poverty and violence, for example students from ages 10-14 who attend a high-poverty school in Hartford, Connecticut (Ms. R, 2011). The reason this is being done and seems to be not only feasible, but also effective, is twofold: first, research has shown that practicing yoga allows people to reduce stress, aggressiveness and enables emotional self-regulation among other previously mentioned benefits (Frank et al., 2014; Khalsa et al., 2012; Pascoe & Bauer, 2015). It has also been identified that changing people's underlying skills, identity and values has a positive effect in changing antisocial behaviors and therefore reducing violence and crime (Blattman, Jaminson & Sheridan, 2015). Secondly, there is a recent tendency of using public health strategies for solving community problems, justified by research that shows how healthier communities are safer communities (Schweig, 2014).

1. Literature Review

Yoga is an ancient practice that combines asanas (physical postures and movement), pranayamas (breathing exercises), yoga nidra (deep relaxation) and meditation (Saraswati, 2008). Yoga Satyananda, which is the kind of yoga taught during the intervention, is drawn from the hatha and the raja yoga traditions. Yoga and mindfulness techniques are being increasingly used as tools to enhance physical and emotional wellbeing in various populations with different health concerns (Clark et al, 2014; Khalsa et al., 2012; Pascoe & Bauer, 2015; Quiñones et al., 2015). Yoga practice is designed to cultivate a sense of non-judgmental body and mental awareness of the present moment, which has been documented by studies as an effective tool in reducing psychiatric symptoms and improving both attention and concentration among others (Salmon et al., 2009; Sharma & Haider, 2013; Quiñones et al., 2015). Yet, despite the increasing body of knowledge, there have been no studies in Colombia conducted to inquire about the perceived effectiveness of the Satyananda Yoga protocol for improving wellbeing and therefore co-existence in social housing complexes.

1.1 Yoga and aggression

Results from a school-based randomized control trial (RCT) suggest that practicing yoga may lead to reduced anger and fatigue (Khalsa et al., 2012). The study involved 121 high school students aged between 15 and 19 years, who were randomly assigned to either a physical education class (as usual) or to a yoga group. Anger control measured by a subscale of the Behavior Assessment Survey for Children Version 2 (BASC-2) in the study by Khalsa et al., (2012) demonstrated a significant difference between the treatment (yoga) and control (physical education) groups, favoring the yoga group. Furthermore, a non-significant decrease in anger and hostility as measured by the Profile of Mood States (POMS-SF) self-report was identified, as well as a significant decrease in fatigue (Khalsa et al., 2012). Another study with adolescents' aged 14 to 18 years with different psychiatric diagnoses identified self-reported reduction in anxiety, depression and hostility relative to controls (Biegel et al., 2009). The treatment used in the study was a Mindfulness-Based-Stress Reduction (MDSR) program.

Frank et al. (2014) performed a study to assess the effectiveness of a yoga-based program on indicators of attitudes toward violence in a sample of high-risk adolescents (adolescents at risk of low grades, disruptive behavior, and repeated suspension or expulsion). This study used a

quasi-experimental control group pretest-posttest design and identified significant reductions in revenge motivation and reported hostility for the treatment group. The students who were assigned to participate in yoga lessons were less likely to endorse revenge-motivated orientation in response to interpersonal transgression after the intervention. In addition, these students reported less hostility than the students in the comparison condition group (Frank et al., 2014). Furthermore, yoga decreases negative affection and physical agitation (Salmon et al., 2009).

The current study contributes to the literature on yoga and aggression by being a qualitative assessment rather than a quantitative research study. This same contribution is done by the study with regards to the other variables studied: emotional regulation, coping strategies and perceived stress because most studies on the topics mentioned, have been created to identify statistically significant changes in the variables by means of quantitative instruments. Furthermore, in terms of the literature on aggression and yoga it is worth mentioning that although there have been studies which have identified yoga to be an effective tool in decreasing individuals' aggression, it is not yet known if yoga could have the same effect on a community or on social groups as it is being preliminarily studied with the current qualitative assessment.

1.2 Yoga and emotional intelligence

A review by Davidson and McEwen (2012) presents evidence as to the effects of mindfulness meditation and the mindfulness-based stress-reduction (MBSR) program –which includes a yoga component– towards reducing perceived stress. The review includes an association between brain plasticity and the decrease in stress reactivity concluding that the reduction in stress is due to individual improvements in the self-regulation of emotions. Furthermore, another study mentioned in the review suggests that reductions in stress occur in as little as 8 weeks of mindfulness meditation training and were correlated with reductions in the amygdala (a part of the brain that increases growth under moderate to severe stress) measured with magnetic resonance imaging (MRI) scans.

Mindfulness interventions with young people show an increase in self-efficacy and emotional regulation skills that promote social-emotional wellbeing (Metz et al., 2013). Due to conflicts with parents, schoolmates, and friends, adolescents might sometimes feel emotional distress, which can negatively affect well-being. The ability to self-regulate emotions, on the other hand, helps the individual cope with life stressors by acting as a protective factor against emotional and behavioral difficulties. Metz et al. (2013) performed a pretest-posttest comparison group design experiment to assess the effectiveness of the Learning to BREATHE program that consists of a series of lessons on core themes such as body awareness, understanding and working with feelings, and integrating mindful awareness into daily life, among others. They identified that as it was hypothesized, the Learning to BREATHE program significantly increased measures of emotional regulation and self-efficacy, and decreased psychosomatic complaints and the perceived stress level relative to controls.

Studies with adults indicate that mindfulness is associated with greater emotional awareness, acceptance, and improved mood states (Brown, Ryan & Creswell, 2007). Results from the review of Brown et al. (2007) demonstrate the influence on mindfulness (as a quality of consciousness) on mental health and well-being, as well as on physical health, self-emotional

regulation, and interpersonal relationships and behavior. Furthermore, yoga has also been identified as a discipline that enhances emotional regulation among adolescents (15–17 years old) (Daly et al., 2015). Yoga enhances body awareness and it helps individuals to develop a firm sense of self, which in the randomized controlled trial performed by Daly et al (2015) was identified to be significantly correlated with emotion regulation.

Furthermore, a study performed by Frank et al. (2014), with a population of high-risk adolescents (behaviorally disruptive and/or with a low academic achievement), identified significant improvements on several emotion regulation indicators as measured by the Responses to Stress Questionnaire. In the study, students were assigned to either a yoga-based program during school hours or a comparison condition group. Students who participated in the yoga lessons reported significant improvements in measures of involuntary engagement, involuntary action, rumination, intrusive thought, physical arousal and emotional arousal; all of which are indicators of overall emotional regulation, as previously mentioned.

1.3 Yoga and coping strategies

Preliminary studies have done research on the effectiveness of yoga in enhancing psychological and physiological coping. For example, Dale et al. (2011) identified that the yoga practice could ameliorate the negative impact of abuse and enhance psychological coping skills. Given their experience, women who have suffered abuse tend to develop a heightened sensitivity that might dampen their ability to express trusting behaviors or to employ functional coping mechanisms. Dale et al (2011) identified that although a history of abuse leads to increased use of dysfunctional coping mechanisms, practicing yoga ameliorates the risk of individuals who have suffered abuse of developing such dysfunctional coping mechanisms.

Another study conducted on 34 female nurses working in intensive care units in Iran, identified that eight weeks of yoga practice enabled nurses to amend stress coping strategies by significantly increasing the use of a problem focused coping strategy, which increased their ability to cope with stress (Mehrabi et al., 2012). It must be highlighted that nurses are constantly exposed to high stress environments that increase their possibility of using dysfunctional coping strategies.

In terms of yoga and coping strategies the current study contributes to the literature by assessing the variable on its own, because usually conflict resolution techniques or coping strategies are not included in studies that use yoga as their main intervention strategy. Moreover, coping strategies tend to be related to either perceived stress or emotional intelligence therefore assessing it on its own (as previously mentioned) is the main preliminary contribution of this study to the literature of yoga and coping strategies. It is worth to highlight that the qualitative nature of the study that, includes perceptions and opinions of the participants is another contribution to the topic. Participants are the one who answer to the question of whether they have perceived changes in their way of handling hardship and interpersonal conflicts among other difficult situations due to the yoga sessions.

1.4 Yoga and perceived stress

Yoga is an effective treatment for the reduction of perceived stress as well as for depressive and anxious symptomatology (Pascoe & Bauer, 2015). Although there are many forms of yoga, they all share common elements such as controlled breathing, physical postures and meditative techniques that seek to achieve general wellbeing and a “...union of mind, body and spirit” (Pascoe & Bauer, 2015). Recent studies of different populations have identified the effectiveness of yoga in decreasing pain, stress, and depressive and anxiety symptoms, as previously mentioned.

In Australia, Smith et al. (2007) conducted a randomized controlled trial with a sample of 68 adults with mild/moderate stress levels who attended one 60-minute yoga session twice a week during 10 weeks. They identified that yoga increased their quality of life, was associated with a better mental health state, and decreased anxiety and stress levels. A similar study held in India with breast cancer outpatients identified similar positive effects: decreased anxiety and depression, as well as reduction in perceived stress and of biological responses to stress such as salivary cortisol (Vadiraja et al., 2009). Emotional distress contributes to a deregulation of the hypothalamic-pituitary-adrenal (HPA) axis that result in high cortisol levels and a decreased regulation of the immune response to physical and psychological stress. Therefore, a reduction of cortisol (the stress hormone) is interpreted as a positive physiological effect of yoga that contributes to the ultimate reduction of perceived stress (Vadiraja et al., 2009).

The importance of treating stress in people who have been exposed to extremely stressful situations, such as forced displacement, due to armed conflict lies in the fact that prolonged stress can have damaging effects in general health and wellbeing and is associated with mood disorders such as anxiety and depression (Berry et al., 2012; Shultz et al., 2014; Thordardottir et al., 2014). Furthermore, forced displacement has been identified as one of the most devastating experiences in terms of psychological consequences due to the fact that forced migrants are exposed to traumatic events and multiple losses such as being dispossessed of their homes, their social support systems, their identities and their communities (Shultz et al., 2014).

Community-based yoga programs have been used to help reduce individual and communal stress after massive traumatic events. For example, a controlled trial carried out in Iceland after the 2008 earthquake (6.1 on Richter Scale) hypothesized that a yoga intervention would decrease stress-related symptoms among residents living in the earthquake affected area (Thordardottir et al., 2014). Results of the study identified promising trends and differences (not statistically significant) in the measured variables of stress, post-trauma symptoms and depression, as well as an increase in energy, wellbeing and sleep observed between the treatment (n=31) and control groups (n=35) (Thordardottir et al., 2014). Furthermore, it is worth highlighting that this community-based intervention identified improved social relations among participants of the intervention, measured by the Icelandic Quality of Life Scale (IQL) (Thordardottir et al., 2014).

The underlying physiological processes that achieve stress reduction are the repetitive motions practiced in yoga that appear to restore and re train the rhythmicity of biological functions that are disrupted by long periods of stress (Salmon, et al., 2009). Simple movement

patterns such as those present in yoga sessions or when walking, for example, create a reciprocal interaction between cognitive and emotional states, which is what appears to regulate biological and psychological rhythms (Salmon et al., 2009).

The tendency of current literature of measuring changes in personal behaviors and characteristics has been mainly to use quantitative assessments for the identification of significant changes among the studied variables. On the other hand, this current study is a qualitative assessment that seeks to identify changes in behaviors and individual characteristics by means of testimonies (interviews), conversations (focus groups) and individuals' perceptions. Assessing the general experience of practicing yoga in a qualitative manner is therefore filling a gap in current literature; additionally, it helps to set down on paper the thoughts and perceptions of the individuals who lived through the experience being assessed (in this case the yoga sessions). Performing a qualitative assessment allows researchers to obtain information about a wide variety of different variables including attitudes, opinions, preferences, and behaviors, which may be difficult to obtain with any other methodology (Gravetter & Forzano, 2009). Furthermore, qualitative instruments provide a relatively easy and efficient way of gathering large amounts of information (Glesne, 2006; Gravetter & Forzano, 2009).

Moreover, the current study makes a contribution to fill in a sample population gap in the existing literature by being developed with a Latin American population living in a social housing complex. Lastly, it is worth mentioning that this study seeks to carry out a preliminary test on whether improvement in community or social groups' health can also help increase community safety in violent neighborhoods, such as in this case: Ciudad Equidad.

2. Methodology

2.1 Description of the yoga intervention

The yoga intervention being assessed consisted of 20 ninety-minute yoga sessions held twice a week during a three (3) month period (12 weeks). A certified yoga instructor with extensive experience on vulnerable populations led the sessions. The instructor focused the session on yoga postures, breathing techniques, and relaxation exercises. Yoga mats and other necessary yoga equipment were available for all participants in order for the postures to be performed correctly. The groups of individuals in each session did not exceed 25 people and were taught by one yoga instructor at a time. After every class, each participant received a snack. Ideally, classes would be supplemented by home practice aided by an audio CD and an accompanying handbook. The classes were taught inside the *maloca* of each of the four blocks included in the intervention: blocks number 3, 6, 7 and 8. There are in total twelve of these blocks that compose the housing complex. The intervention aimed to positively impact aggressiveness, impulsiveness, anger, rage, sadness, perceived stress, dysfunctional coping strategies and emotional regulation.

Photo 1. Participants of the study in a yoga session in Ciudad Equidad



2.2 Subject recruitment and research population

This qualitative study took place in Santa Marta, Colombia, during the second semester of 2015. Participants were recruited using the quantitative data set that was collected parallel to the qualitative component. The three methods used to contact potential participants were: posters throughout the shared spaces in the community, phone calls, and visits to each house on the different blocks. Subjects eligible to participate must be 14 years or older and reside in Ciudad Equidad. At the beginning of the intervention, the local coordinator of the yoga program contacted 350 individuals from the social housing complex Ciudad Equidad who were willing to voluntarily assist the yoga sessions.

From the original data set of 350 individuals, 83 of them did not confirmed assistance (therefore did not attend any of the yoga sessions). There were a total of 232 inhabitants of Ciudad Equidad who went to at least one yoga session. During the time the intervention was taking place as well as at the end of the yoga sessions, the local coordinator was in charge of calling individuals who had stopped attending classes, to directly ask them why they had decided to stop going to the yoga sessions. Thanks to this, we know that out of the total 232 participants: 6.47% (n=15) deserted the program without giving any explanation; 6.90% (n=16) deserted because their work schedule was incompatible with the yoga sessions schedule; 5.60% (n=13) deserted because of lack of interest; 8.19% (n=19) deserted due to other studies or sports training; 6.90% (n=16) deserted to take care of a sick relative or because of personal sickness; 3.45% (n=8) left Ciudad Equidad during the time period the sessions were taking place; and lastly there were 2 (0.86%) individuals whom the local program coordinator was not able to contact (see Appendix 1).

Focus groups were held before the intervention, and additional focus groups and interviews took place at the end of the yoga program. All participants signed a written consent form prior to the focus group or interview. For the post intervention interviews the local coordinator contacted individuals who had participated in at least 50% of the yoga sessions and confirmed the participation of 20 individuals in four blocks of the housing complex (five for each of the four blocks) (see Table 1 below). The interviewers and focus group moderators had previous experience with qualitative research at the time the data collection was conducted and were not involved in administering the yoga intervention. Both, the moderators and the

interviewers used a semi-structured guide, respectively developed under the guidance of a professor with experience in designing and leading qualitative research with vulnerable populations (see Appendix 2).

Table 1. Research population table

Population subgroups including inclusion and exclusion criteria and subject recruitment	Number of participants
1. Residents of Ciudad Equidad: Men and women who live in Ciudad Equidad and want to participate in a free yoga intervention. Individuals must be at least 14 years old and residents of one of the four blocks selected for the intervention (blocks, 3, 6, 7 and 8). Individuals younger than 14 or non-residents of Ciudad Equidad will not be included in the study. Subject recruitment: The local project coordinator distributed posters in the common areas of Ciudad Equidad and personally contacted individuals whom had shown interest in the intervention and in being part of the study.	230
2. Pre focus group participants. Men and women who, previous to the start of the intervention, had agreed to participate signed informed consent forms and were willing to attend the focus group held on their block before attending any of the yoga sessions. Recruitment: The local coordinator called 5 to 7 individuals from each block, who had shown interest in the intervention and asked them whether they wanted to participate in the focus groups before the intervention.	20 – 28
3. Post focus group participants. Individuals who had attended at least 50% of the yoga sessions and were willing to participate in focus groups. They must have already signed informed consent, and the same limitations as to being a participant in the study applied. Recruitment: The local coordinator called 5 to 7 individuals from each block, who had shown interest in the intervention and asked them whether they wanted to participate in the post intervention focus groups.	20 – 28
4. Participants for the post intervention semi-structured interviews. Residents of Ciudad Equidad blocks 3, 6, 7 or 8 who had attended more than 75% of the classes and were willing to be interviewed about their personal experience throughout the intervention. On average participants were 39 years old. Recruitment: The local coordinator called approximately 8 individuals from each block that had been attending yoga sessions to ask them whether they wanted to be interviewed about their experience practicing yoga. The met goal was to achieve a total of 5 interviews per block.	20

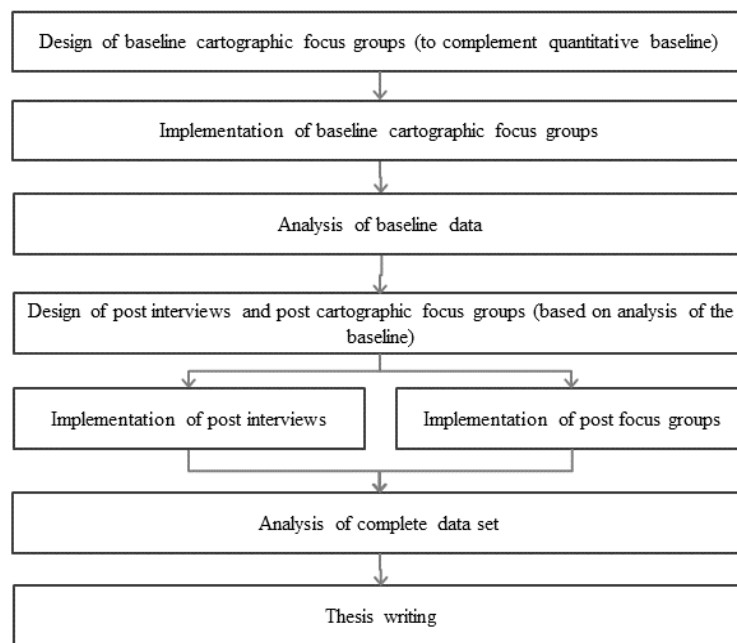
2.3 Data collection and research phases

Participants were asked open-ended questions during both data collection activities (focus groups and interviews). Questions allowed for open discussion and participants were encouraged to direct the conversation focusing on what they considered to be the most important aspects. Focus groups included questions such as: “Where in your neighborhood do you feel in danger?”; “Have you witnessed any armed fights on your block recently?” On the other hand, the interviews focused more on individual changes due to yoga and included questions such as: “How did you feel during and after yoga?” and “Has practicing yoga changed anything in your life?” (see Appendix 3 for the focus group cartographic guide followed by the interviewers).

Focus groups prior to the intervention were held in the *malocas* of each of the blocks included in the intervention (blocks 3, 6, 7 and 8). On the other hand, interviews were conducted in the interviewees' houses and post-intervention focus groups were also held in private houses; this change was made to reduce noise pollution in the recordings. Focus groups lasted around 40 to 60 minutes, while interviews lasted 20 to 40 minutes each. Focus groups and interviews were audio-recorded and transcribed in Microsoft Word for further analysis in NVIVO 11.0.

It is worth highlighting the fact that data collection took place before and after the intervention in order for participants to reflect on whether any changes felt, if any, could be potentially attributed to the yoga intervention. Furthermore, given the fact that it is a qualitative research assessment, we were able to ask participants in the study directly whether or not they considered the intervention was what had changed their behaviors, feelings, and wellbeing among other variables, which potentially reassures readers that any identified changes between pre and post intervention were caused by the yoga. The ability to apply instruments previous to the interventions allowed researchers to establish a spatial, qualitative baseline for the dataset. The following figure (Figure 1) summarizes the data collection and research phases.

Figure 1. Data collection and research phases



As mentioned by Glesne (2006), qualitative assessments and research take different approaches; the one applied in this study, is the sociological tradition approach, which “treats texts as a window into human experience” (p. 147). Therefore, the data analysis is thematically based. Like-minded pieces of data are placed together into data chunks for further analysis and posterior description and discussion. Generally, when doing qualitative research more data is collected than what is needed therefore there is a need for methodological organization to deal with all the data (Glesne, 2006). Having two coding cycles for the analysis, as performed in this study, allows for an organizational framework to be created (see Figure 2 ahead).

2.4 Qualitative instruments

2.4.1. Focus groups

The focus groups were designed to be held by at least one experienced facilitator for every four (4) participants to six (6) participants maximum, before and after the intervention (see Photo 2 below). Focus groups held before the intervention (yoga classes) aim to examine rigorously the current situation, or baseline, of individuals living in the social housing complex (refer to Appendix 3). Their research purpose was that of exploratory research focus groups: identifying needs and issues (Fern, 2001). For example, people were asked to tell voluntarily whether they have been involved in any fights, fights with neighbors, fights with weapons, or if they were members of a gang. Therefore, these focus groups enabled researchers to understand whether participants in the study were violent, stressed, sad, or not, among other variables. These focus groups also gave researchers information on whether the residents of Ciudad Equidad felt secure living in the housing complex; whether they enjoyed it or not, and whether they were happy.

Photo 2. Post intervention focus group (with social cartographic component) held in the back yard of a house in Block 7 in Ciudad Equidad on the 10th of December 2015



On the other hand, focus groups held at the end of the intervention, sought to understand whether the intervention had been perceived as effective, or not, in reducing general violence by enhancement of individual wellbeing. These focus groups sought to answer one of the research questions of the assessment: did the participants of the yoga classes experience any changes, and if so, what did they perceive changed due to the intervention? Experienced facilitators encouraged participants to freely talk about their experience throughout the intervention as well as of any perceived changes in their emotional or physical wellbeing or in general in the housing complex or among any neighbors. This second set of focus groups may be defined as experiential focus groups because these are being used to assess the impact of the yoga classes and to allow researchers to decide on whether the yoga program could be an effective tool for reducing

violence by observing the natural attitudes of participants (Fern, 2001). For a summary on objective and brief description of cartographic focus groups see Table 2.

It is worth highlighting; the homogeneity in the focus groups is intended for uncovering the impact of the intervention and shared opinions about the yoga program in the population of interest (Fern 2001). Furthermore, because only females composed the focus groups it is expected –but not supported by empirical evidence– that there would be a higher level of personal and general information disclosure (Fern, 2001).

Table 2. Cartographic focus groups summary table

Focus Group	Block	Date	Objective	Description
Baseline (pre) cartographic focus groups	3	October 23, 2015	Rigorously examine the current situation, or baseline, of individuals living in the social housing complex. Their research purpose was that of exploratory research focus groups: identifying needs and issues.	Held prior to the intervention by one experienced facilitator for every four (4) or up to six (6) participants in each of the four blocks included in the study.
	6	October 22, 2015		
	7	October 22, 2015		
	8	October 23, 2015		
Post intervention cartographic focus groups	3	December 9, 2015	Sought to understand whether the intervention had been effective or not in reducing general violence by enhancement of individual wellbeing.	Held after the intervention by one experienced facilitator for every four (4) or up to six (6) participants in each of the 4 blocks included in the study.
	6	December 9, 2015		
	7	December 10, 2015		
	8	December 10, 2015		

2.4.2 Social cartography

The social cartographic map was created through the process of “... psychological transformation by which an individual [...] recalls and decodes information about the relative locations and attributes of phenomena in the everyday geographical environment” (Paulston & Liebman, 1994, p. 215). For the current qualitative assessment, this process was used as a component during the focus groups that took place before and after the intervention. During the focus groups participants were encouraged and directed to draw a map that would represent different places within their blocks, in the social housing complex Ciudad Equidad (see Photos 2 and 3). Participants were asked to draw the places where most of them felt safe and secure, or otherwise. They were also asked to indicate places where they had witnessed or heard about any violent acts taking place, such as sexual aggressions, raids and fights. This activity was performed in order to collect data and identify any changes before and after the intervention.

Photo 3. Post intervention focus group (with social cartographic component)



Social cartography is used to portray more than the physical area of the blocks, it is a way to reflect the perspective of its producer with regard to the social world that is being talked about, in this case their block in Ciudad Equidad (Yamamoto & McClure, 2011). It is also used as a tool to locate complex relationships and spatial relationships (Yamamoto & McClure, 2011). Furthermore, social mapping or social cartography is considered to be a particularly useful tool in policy formation because it allows analysts of the data to deliberate the momentary relationships of the current situation, as well as longer term pictures (Yamamoto & McClure, 2011). Furthermore, social mapping balances multiple points of view about a particular social world and context, which in this case is: how is life in blocks 3, 6, 7 and 8 of Ciudad Equidad, and were there any changes perceived when comparing life at baseline (before intervention) with life after the yoga intervention?

Some of the variables used and discussed during the social mapping component of the focus groups were extracted from the Spanish version of the Perceived Neighborhood Violence Sampson Scale (Gracia & Herrero, 2007). This scale seeks to operationalize neighborhood violence and has been validated with Spanish speaking participants. Some of the variables it includes are: fights with weapons, violent arguments among neighbors, gang fights, sexual assaults, and thefts or assaults to houses.

Social cartography was included as a component of the focus groups because it is a tool, which facilitated and enhanced the interpretation and comprehension of social events (Paulston & Liebman, 1994). Therefore, it provides an opportunity to map changes, and to analyze and interpret events, which was what was intended by doing focus groups with a component of social cartography before and after the yoga intervention (Paulston & Liebman, 1994).

2.4.3 Interviews

The interview is a conversation between at least two people, the art of asking questions and listening (Denzin and Lincoln, 2005). For this qualitative assessment, twenty (20) semi-

structured interviews were held after the intervention in an effort to establish whether or not the yoga intervention helped enhance the perceived wellbeing of the participants as well as to assess if the intervention had had an impact on the variables being studied: aggression, emotional regulation, coping strategies and perceived stress. Additionally, some of the questions included addressed the participants' perception on whether they considered the intervention was effective or not, if they thought it was helpful for them to feel better, and if it could potentially be useful for other individuals as well. One limitation of using interviews is that "... this method is influenced by the personal characteristics of the interviewer, including race, class, ethnicity, and gender" (Denzin and Lincoln, 2005, p. 643).

The semi-structured interviews were divided into nine (9) major topics of conversation. These were: 1) the experience of practicing yoga; 2) the sensations and feelings after yoga practice; 3) changes on personal aggression or impulsiveness; 4) perceived stress; 5) reactions towards conflicts or problems; 6) interpersonal relationships; 7) emotional regulation; 8) community relationships and yoga as a group activity; and 9) multiplier effect of yoga. Furthermore, each of these sub-sections included approximately 3 to 5 guidance questions for the interviewer to use as a general guide for the conversation. Some of the questions included were: "Did the yoga session have an impact on your life?"; "Do you feel any different after practicing yoga?"; and "Do you consider that after the intervention you fight and argue less with your partner? Children? Neighbors?" For the complete and original version in Spanish of the semi-structured interview guide, see Appendix 2.

2.5 Data analysis

Following transcription of the audios NVIVO 11.0 qualitative data analysis software was used to code the information in nine (9) thematic nodes. Nodes were selected by grouping common themes into categories. Two coding cycles were done using the Saldaña (2009) model and the designed codebook (see Table 3) that represent the analytic scheme, which guided the data analysis process performed in NVIVO 11.0. After reviewing word frequencies for each node, larger themes were developed to merge into the distinct thematic categories (Saldaña, 2009). This process resulted in seven categories that were used to describe changes in the variables of interest: perceived stress, coping strategies, emotional regulation, and aggressiveness. Word clouds and word frequency tables were also developed. See Appendix 4 for the original codebook in Spanish.

2.6 Methodological limitations

The vision throughout the study was to do the best work possible given the particular circumstances; the place where it was done, the participants, time and money constraints. However, it is important, that as with any research study, these findings are interpreted cautiously due to several limitations. The sample was small and represented a self-selected group of women living in a public housing complex in Santa Marta, Colombia. It is therefore unknown if similar results would be found with a different set participants, or with men. The fact that the participants volunteered to be part of the study is also a limitation because volunteer bias can threaten the external validity of the results. Being a within-subjects design also has its disadvantages; because the intervention took some time, there is a possibility that time-related

factors such as adaptability to the classes or being more comfortable with the group or the exercise influenced participants' answers. Furthermore, it is worth highlighting that this study does not prove any causality between the intervention and its perceived effects on the participants. As previously mentioned it is a qualitative study that compiles the voices of inhabitants of Ciudad Equidad who attended the yoga intervention, in order to establish whether yoga is perceived or not as an effective tool for the reduction of violence and aggressiveness among other variables studied.

Table 3. Codebook used to guide the data analysis process performed in NVIVO 11.0

Codebook		
Codes	Definition	Example
Places of peace and security	Places where you feel in peace secure and/or relaxed inside your block	“Well, yes, there are places at least in some blocks in which peacefulness is felt after practicing yoga; or since you are relaxed you see things with more tranquility, not with such violence” (Participant, Post intervention focus group, Block 8, Santa Marta, December 10, 2015).
Places of conviviality	Places where there is comprehension and respect among neighbors inside your block	"At the <i>maloca</i> is where we have the most conviviality” (Participant, Post intervention focus group, Block 6, Santa Marta, December 9, 2015).
Conflict zones	Places where you have witnessed or been involved in a conflict inside your block	“Yes, up there [...] the one that has his sister at the corner, he came, broke the girl’s leg, and in that crowd, in that fight, a seventeen year old kid fought with him, that’s the gossip” (Participant, Pre intervention focus group, Block 6, Santa Marta, October 22, 2015).
Places where I never go	Places you avoid inside your block or in the social housing complex (Ciudad Equidad)	“On that side there is a farm, where there are, I do not know, horses, things, and there are rich people and it is forbidden to pass by” (Participant, Pre intervention focus group, Block 7, Santa Marta, October 22, 2015).
Places of danger	Places where you feel insecure or in danger inside your block or in Ciudad Equidad	“... Behind that fence there is a small hill, we are supposedly located between a clinic and the hill, and the hill is a dangerous place” (Participant, Pre intervention focus group, Block 3, Santa Marta, October 23, 2015).
Places where fights are common	Places where you have seen or participated in fights inside your block	“...and now you don’t see those fights, those quarrels between neighbors it is much calmer now and yoga has helped us all a lot” (Participant, Post intervention focus group, Block 6, Santa Marta, December 9, 2015).
Places where consumption and/or sale of psychoactive substances takes place	Places where consumption and/or sale of psychoactive substances takes place inside the social housing complex (Ciudad Equidad)	“I have to pass everyday close to that brook. One is afraid because there are people taking drugs, and it is scary because you do not know if they could do something to you” (Participant, Post intervention focus group, Block 6, Santa Marta, December 9, 2015).

Fights with weapons	Places inside your block where there has been fight with weapons (firearms, sticks, bottles, rocks and knives)	“I say that the use of logs and sharp points of bottles in fights has decreased because you rarely see them anymore, as it was before when we first got the houses. That was craziness after craziness, but now it has diminished a lot”. (Participant, Post intervention focus group, Block 8, Santa Marta, December 10, 2015).
Violent fights between neighbors	Sites where there have been violent fights among neighbors	“There in the park, in the park. People have fought over their children” (Participant, Pre intervention focus group, Block 6, Santa Marta, October 22, 2015).
Gang fights	Sites where there have been gang fights	“... [Members of gangs] should be invited to practice yoga, so that they have some entertainment doing something else, and not throwing stones, or fighting over unnecessary things [...] they have to be cured, controlled and invited to do yoga...” (Participant, Post intervention focus group, Block 8, Santa Marta, December 10, 2015).
Sexual aggressions	Places where sexual aggressions have occurred inside your block	“No, they don’t do yoga. What they do is smoke, smoke and smoke weed all day. They should be all placed in jail because they don’t have anything to do. It is scary they might rape a girl there [by the brook]. It is a dangerous area” (Participant, Post intervention focus group, Block 6, Santa Marta, December 9, 2015).
Thefts	Sites where thefts have occurred inside your block	“Yes I’ve heard, up there in front of their house a bike was stolen. In the middle of the day, back there. Casually the woman went to yoga and her bike was stolen” (Participant, Post intervention focus group, Block 6, Santa Marta, October 9, 2015).
Home Robberies	Zones inside your block where there have been home robberies	“...you don’t hear about [home robberies] anymore, there were maybe one, two, three houses robbed, but not anymore” (Participant, Post intervention focus group, Block 8, Santa Marta, October 10, 2015).
Domestic violence	Houses inside your block where you have witnessed or lived or where you know there is domestic violence	“I had that way being abusive, yelling, everything was yelling and when I approached them to talk; they would immediately react nervously. But not anymore I have become more tranquil” (Participant, Post intervention focus group, Block 6, Santa Marta, December 9, 2015).
Aggression against guards	Places where acts of aggression against guards have taken place	“Yes, of course [yoga can help people have better relationships with the security guards], because the person can control their own character, temper and can be respectful to others; that he has to behave and follow rules. Therefore, [yoga] would help a great deal” (Participant, Post intervention focus group, Block 8, Santa Marta, December 10, 2015).
Damage to private and public property	Places where private and public property has been damaged	“At the <i>maloca</i> yes, some damages of some kids, who were in charge of damaging lamps, bathroom doors and things like that but that has been

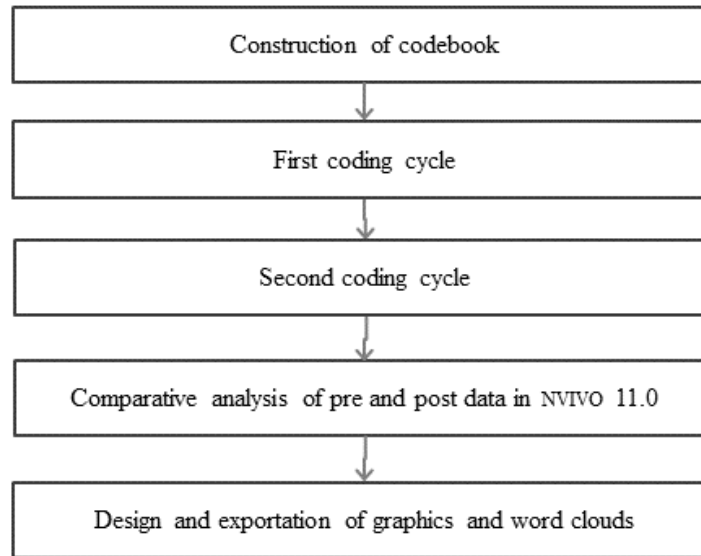
		recovered” (Participant, Post intervention focus group, Block 3, Santa Marta, December 10, 2015).
The experience of practicing yoga	What did you like or dislike about practicing yoga inside your block in Ciudad Equidad	“I would like [yoga] being available for other people who get to come here, I would like them to have the opportunity that we had so that they don’t become people who live with anger, or spend time fighting; practicing yoga is really good it would heal them” (Participant, Post intervention semi-structured interview, Block 6, Santa Marta, December 9, 2015).
Feelings about practicing Yoga	What you perceived were feelings in your body and mind while practicing yoga and after the yoga sessions	“...practicing yoga you start becoming conscious of yourself and at least of you being a girl, a woman, you see that place late at night (...) and while thinking much more clearly you will obviously avoid taking that path because something could happen to you” (Participant, Post intervention focus group, Block 3, Santa Marta, December 9, 2015).
Aggressiveness	Physical and verbal aggression, anger and Hostility (Buss & Perry, 1992)	“Because I used to discharge my anger at any moment. Now, in order not to become aggressive I shut up and start crying; one becomes more emotional” (Participant, Post intervention semi-structured interview, Block 7, Santa Marta, December 10, 2015).
Perceived Stress	Perceived stress, anguish and/or frustration	“Yes, yes it has changed stress a lot; sometimes I used to feel a lot of stress, now I calm down, close my eyes, think, concentrate. I stop thinking about things that stress me, because stress makes you sick, now with yoga I don’t get as stressed as I used to” (Participant, Post intervention semi-structured interview, Block 6, Santa Marta, December 9, 2015).
Coping Strategies	Positive reevaluation: cognitive strategy that seeks to learn from difficulties, identifying the positive aspects of the problem. Search for alternatives: cognitive strategy that seeks to analyze the causes of the problem and to generate alternate solutions to it (Londoño et al., 2006)	“... when you are relaxed, everything is taken much more easily and you think of more alternative solutions for a given situation: ‘ok, if you cannot do it this way find another solution,’ but without fighting, yelling and insulting people” (Participant, Post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).
Interpersonal relationships with family and friends (openness)	Openness: refers to the extent to which relevant information is shared, indicating trust in that the information will not be exposed, and that others can feel the same trust in return (Hoy & Tschannen-Moran, 1999)	“With my kids too, I now talk more to them. I talk to them calmly, before it was different, I used to explode against them more than anything. They would do something ‘there it is!’, [I used to burst] now I am more calm” (Participant, Post intervention semi-structured interview, Block 8, Santa Marta, December 10, 2015).

Emotional intelligence (emotional regulation and comprehension of emotions)	Comprehension: I properly comprehend my emotional states. Emotional regulation: I am able to regulate properly my emotional states (Fernández-Berrocal et al., 2004)	“Because before I would come and discharge all my anger any moment, now in order to not becoming aggressive I shut up and start crying, you become more sensitive” (Participant, Post intervention semi-structured interview, Block 7, Santa Marta, December 10, 2015).
Relationships with community members	Benevolence: Refers to the confidence that one’s wellbeing or something one cares about will be protected by members of the group, or that one can count on the good will of the other to act in one’s best interest. Dependability: refers to the perception that the people trusted have a fiduciary capacity and can be counted on to provide what is needed (Hoy & Tschannen-Moran, 1999)	“We have always been good neighbors but we have gotten closer because of that [yoga], because we talk, we share experiences, this and that” (Participant, Post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2010).
Perception of the effectiveness of yoga for the construction of social capital and overall reduction of violence in the community	The effect yoga has on individuals (aggression, stress, coping strategies and emotional regulation) who live in Ciudad Equidad can promote a better living environment by reducing violence and enhancing social capital	“Well I think I have told you everything that I have seen; as I have said: it has given us tranquility, it has made us know each other better, and it has made us better neighbors, better people. Personally I have become a better mother and wife because I can now control myself and my negative emotions and all those things” (Participant, Post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2010).

The data analysis process began with the construction of the codebook, which was used as a guiding tool for the coding process. As suggested by Saldaña (2009), the codebook includes the sources used to develop descriptions of the variables/nodes used for coding. Table 3, which is the codebook, has three columns; one, with the variable used as a node, the second column is a description of the data, which would be included in each of the nodes, and the third column has an example of the excerpts that would be included in each of the nodes. This coding process is an example of what Glesne (2006) recommends to do when doing qualitative research in order to create a method for dealing with the data collected and further description and analysis.

Following the construction of the codebook, the data analysis process continued with a first coding cycle and a second coding cycle. After coding the information into the final seven thematic nodes, a comparative analysis of pre and post data was performed using NVIVO 11.0 (a qualitative analysis software for text-based data). Finally, frequency tables and word clouds were designed for the analysis of the data. These visual representations assisted in making meaning of the data and helped observe overall patterns in research without getting lost in details (Glesne, 2006). Figure 2 shows a flow chart of the coding cycles and data analysis process in chronological order.

Figure 2. Flow chart of coding cycles and data analysis process



The data analysis process began by making meaningful connections (thematic grouping), and continued with the transformation of data by describing, analyzing and interpreting it, as suggested by Glesne (2006). The data was transformed from its original form (how it was acquired) into information, which is a form that communicates finding and results (Glesne, 2006).

3. Ethical considerations

According to the guidelines established in Res. No. 008430 of 1993 of the Ministry of Health in Colombia, this study may be classified as a minimum-risk study, particularly in relation with the scientific, technical, and administrative regulations for research in health (Title II: Research involving human beings; Chapter I: Ethical considerations in research involving human beings; and chapter V: Research in subordinate groups).

Data collection will be performed with the application of pre and post qualitative data collection instruments to determine the change in the chosen variables for the study: perceived stress, coping strategies, emotional regulation, and aggressiveness before and after the yoga intervention for a group of people who voluntarily enrolled in the study.

The study therefore aligns with the guideline of the Ministry of Health which states that these are studies based on data obtained via common procedures, which consist on: physical or psychological tests or common treatments for groups of individuals whose behavior will not be manipulated (Ministerio de Salud, 1993 p.2).¹

All participants in the study were asked to sign an informed consent form prior to enrollment in the study (to see the original form in Spanish refer to Appendix 5). After being

¹ Original quote in Spanish for the Ministry of Health guideline: “Son estudios prospectivos que emplean el registro de datos a través de procedimientos comunes consistentes en: exámenes físicos o psicológicos de diagnóstico o tratamientos rutinarios, (...) en grupos de individuos en los que no se manipulará la conducta del sujeto”.

enrolled, each participant was given an identification code in order to protect their identity and ensure that whether the study was published or not, the participants would maintain anonymity. Additionally, two files were kept to handle data: one containing general demographics of the participants necessary for the post-test evaluation, and another with the results reported in the evaluations. The first file was only accessible to the researcher in charge of the post-test evaluations.

The informed consent form signed by the participants was designed for research purposes and endorsed by the Research Ethics Committee at Universidad de los Andes (see Appendix 5). The protection of participant identity and data will be guaranteed, as well as the fulfillment of all ethical guidelines established for research involving human participants. Special attention was given to the training of moderators and interviewers involved in the study in order to achieve appropriate participant care, including understanding their current situation, age, and educational level.

4. Results and analysis

All participants living in Ciudad Equidad are considered –by the Colombian government– to be people who live in extreme poverty (with an approximate income of a dollar per day). The focus group participants and interviews were all female, most of them unemployed and living with their families, and defined themselves as “amas de casa” (housewives). The mean age of the participants was 39 years old, within a range from 25 to 55 years. The educational level attained by the majority of the participants was primary school graduate. All participants perceived yoga as an effective tool for enhancing individual wellbeing and reducing violence in their neighbourhood. Most participants attended 80% or more of the prescribed yoga classes, on average participants went to 17 classes out of the 20 that were stipulated for the intervention. Table 1 (shown in section 2.2 subject recruitment and research population) summarizes the research population of the study; it includes inclusion and exclusion criteria and recruitments techniques used.

The qualitative variables discussed during the focus groups as well as the interviews were: (1) aggression and impulsiveness; (2) emotional regulation; (3) coping strategies; and (4) perceived stress. Additionally, three main themes arose from the interviews regarding perceptions of the yoga experience: (1) physical effects; (2) psychological effects; and (3) body awareness. In total, there were eight focus groups held, four before the intervention and four after the intervention. On the other hand, twenty (n=20) interviews were held after the intervention took place.

Furthermore, during the cartographic focus groups participants were asked to talk about where in their block had they experienced or witnessed or even heard about certain situations taking place. These were: (1) fights between neighbors, or between gangs and fights with weapons; (2) sexual aggressions; (3) thefts; (4) home robberies; (5) domestic violence; (6) aggressions against security guards; and (7) damage to private and/or public property. In addition, in particular to the social cartographic component of the focus groups participants were also asked to discuss which places inside their blocks were considered (before the intervention) to be unsecure, dangerous, violent or secure, peaceful and/or places of conviviality.

Please refer to Table 1 in Section 2.2 in order to contextualize the details and characteristics of the research population from which the following results are drawn. In summary, data analysis revealed that yoga participants felt and perceived the intervention caused differences over time in relation to when they began the intervention in all measures included (aggressiveness, emotional regulation, coping strategies and perceived levels of stress). These preliminary results suggest that implementation of yoga is perceived by participants as a feasible and effective alternative to improve co-existence and manage violence among neighbors in Ciudad Equidad by improving individuals' wellbeing.

This main finding will be supported in the following four sections that cover each of the variables assessed. First, in section 4.1 the results obtained for the variables aggression, impulsiveness, fights and conflicts are presented. The data of this section was obtained from the focus groups held before and after the intervention, in part it seeks to answer the research question: do residents in Ciudad Equidad consider that practicing yoga could be an effective tool to reduce violence in their neighborhood in the long term? On the other hand, the data of the following three sections was obtained from the semi-structured interviews held after the intervention took place: section 4.2 emotional intelligence, 4.3 coping strategies and 4.4 perceived stress, which answer to the questions what is the general experience of Ciudad Equidad residents in the yoga intervention program and what, if any, changes have they experienced in terms of the following qualitative variables: aggression, emotional regulation, coping strategies and perceived stress? Following the results and analysis section the document concludes highlighting main findings and with a policy recommendation.

Table 4. Final node count table for the post intervention semi structured interviews data set

Node	Total number of references per node
Impulsiveness and aggressiveness	106
Emotional intelligence	28
Relationships with community members	114
Interpersonal relationships	60
Coping strategies	45
Stress	50
Yoga experience	281
Sensations after yoga	76
Perceived effectiveness of yoga	99

The above table (Table 4) demonstrates that the three analytic categories (nodes in NVIVO 11.0) that are most important in participants' discourse around their yoga practice are: the changes perceived in terms of aggressiveness and impulsiveness (with a total reference count of 106); changes in terms of relationships with community members (total reference count of 114) and the perceived effectiveness of yoga (with a total reference count of 99). It is important to mention that the node related to the perceived effectiveness of yoga was focused on whether yoga is perceived to be a feasible tool for the reduction of violence in Ciudad Equidad. Other node that is worth to highlight is: the "yoga experience" node which included information about what people felt during and after the yoga sessions, as well as their overall experience during the intervention.

4.1 Aggression, impulsiveness, fights and conflicts

“... I did not participate from the beginning, but a neighbor told me that [practicing yoga] helps you to calm down and; therefore, helps you not to fight...”

(Participant, semi-structured interview Block 3, Santa Marta, December 9, 2015).²

This variable group’s information collected before and after the intervention on individual changes perceived in terms of aggression and impulsiveness as well as information regarding common conflicts and fights in Ciudad Equidad. During the focus groups (which took place before and after the intervention), participants were asked about the frequency of violent fights between neighbours, fights between gangs, sexual aggressions, and domestic violence. While during the semi-structured interviews (that took place only after the yoga intervention), the questions were more focused on perceived changes in their aggression and impulsiveness, as well as the probability or tendency to get into discussions or fights with family members or neighbours after being part of the study (therefore having attended the yoga sessions).

According to the axial coding, the most saturated criteria in relation to aggression, impulsiveness, conflict and fights during the post-intervention semi-structured interviews were rage and yoga, as shown in Table 5. The reason this is the case is that during the interviews participants explained to the interviewers that they usually end up being aggressive (particularly against their own children) because of rage they felt. Participants also mentioned there had been a change in their aggressive reaction when comparing how they tended to act before the intervention took place and after. For this reason, the words “before” and “now” are also frequently mentioned (see Table 5).

Table 5. Frequency of words associated with variable impulsiveness and aggression during semi- structured interviews, related to the word cloud on Figure 3

Word	Frequency
Rabia (rage)	35
Yoga (yoga)	26
Antes (before)	19
Ahora (now)	15
Mejor (better)	11
Hijos (children)	10

Data collected during the semi-structured interviews, which took place after the intervention, suggests participants consider that practicing yoga helps them to be able to control their rage, particularly when dealing with their children. Furthermore, participants consider that yoga classes worked as an effective tool to enable them to control their violent and impulsive reactions. The following quotes extracted from the interviews support this finding.

²“... yo no participaba antes, pero la vecina me dijo que eso se relaja uno, que eso sirve para no pelear...”. Excerpt obtained from the coding node “impulsiveness and aggressiveness” with a total saturation of 106 references, this node is part of the post-intervention semi-structured interview data set.

example, the woman in the following excerpt mentions that what the experience changed for her was the ability to control her impulsiveness.

“... before [the intervention] It seemed I was very impulsive, not any more, now I react and think about what I am going to say” (Participant, semi-structured interview, Block 7, Santa Marta, December 10, 2015).⁵

This following excerpt also supports the fact that residents in Ciudad Equidad perceive that practicing yoga produced changes in their level of aggression, impulsiveness or anger. Moreover, it is worth mentioning that the previous as well as the following excerpts, both, highlight the fact that yoga helped participants to “think before reacting”, which clearly exemplified that residents in Ciudad Equidad did consider that they had experienced changes for example regarding impulsiveness due to the yoga practice.

“In the moment you are about to get angry, you remember the [yoga] classes, that one should think before acting” (Participant, semi-structured interview, Block 7, Santa Marta, December 10, 2015).⁶

As previously discussed, many participants also mentioned that the yoga sessions helped them to be more understanding with their children. Therefore, punishing them only when necessary and reducing violent reactions when doing so; thus hitting them less often. Moreover, interpersonal relationships with family members were perceived as improved by the participants. Both of the excerpts below show how participants in the study consider that yoga has helped them to act in a calmer manner when dealing with their children. The excerpts also show how participants are more in control of their emotions and are able to recognize how this has changed the way the act.

“With my kids, too, I now talk more to them. I talk to them calmly, before it was different, I used to burst at them more than anything. They would do something ‘there it is!’ [I exploded] now I am calmer” (Participant, semi-structured interview, Block 8, Santa Marta, December 10, 2015).⁷

“... [I] carried a lot of anger with my kids, with my husband, I carried a lot of anger with him, too, and no one could tell me anything because I would answer in a bad manner and would curse, but not anymore, now

⁵ “... antes [de la intervención] como que era muy impulsiva, entonces ahora no, ahora yo reacciono y pienso lo que voy a decir”. Excerpt obtained from the coding node “impulsiveness and aggressiveness” with a total saturation of 106 references, this node is part of the post-intervention semi-structured interview data set.

⁶ “En el momento que uno coge ira, uno se acuerda de las clases [de yoga], que uno debe pensar antes de actuar” Excerpt obtained from the coding node “impulsiveness and aggressiveness” with a total saturation of 106 references, this node is part of the post-intervention semi-structured interview data set.

⁷ “Con mis hijos también. Hablo más con ellos. Les digo las cosas con más calma, porque también esa era otra cosa, que yo explotaba con ellos más que todo. Cualquier cosa ¡ahí está! Y ahora soy más calmada”. Excerpt obtained from the coding node “impulsiveness and aggressiveness” with a total saturation of 106 references, this node is part of the post-intervention semi-structured interview data set.

Table 6. Frequency of words associated with the variable “fights” for the focus groups performed before and after the yoga intervention. Table related to the word cloud in Figure 4

Focus group before intervention		Focus group after intervention	
Word	Frequency	Word	Frequency
Niño / Niños (child/children)	38	Yoga (yoga)	29
Siempre (always)	20	Bastante (a lot)	16
Gente (people)	18	Riñas (conflicts)	10
Pelea (fight)	17	Disminuido (reduced)	8
Cuchillo (knife)	15	Carácter (temperament)	7
Botellas (bottles)	14	Peleas (fights)	7

The information captured in the focus groups is particularly relevant, to answer the question of whether residents of Ciudad Equidad who have practiced yoga consider this could be an effective tool to reduce violence in their blocks (and hopefully in a future at Ciudad Equidad), which according to the results is in fact considered to be a feasible idea.

As previously mentioned in terms of fights and conflicts among participants, particularly with their family members (partners and children) or neighbors, all participants perceived that yoga had been helpful in terms of reducing these incidents in their lives. Furthermore, they considered that practicing yoga not only helped them, but that it is an effective tool that might help other people, too. For example, a common issue was that adolescents and youngsters, particularly those who tend to get involved in conflicts and fights with or without weapons, should attend the yoga classes. This is because participants perceive that going to yoga would be of great help in reducing aggression and impulsiveness, and therefore, fights and conflicts.

“You learn to control yourself, control your character, and I say that if teenagers would attend a yoga class, I do believe that it would change (.....) the war they have within themselves a little bit” (Participant, post intervention focus group, Block 8, Santa Marta, December 10, 2015).¹⁰

“... just as an example, in my house I was the type that would explode over any little thing, and since I’ve been practicing yoga I have learned to control myself, of all those, all those bad habits I had” (Participant, post intervention focus group, Block 8, Santa Marta, December 10, 2015).¹¹

¹⁰ “Uno aprende a controlarse, a controlar el carácter... y digo que si..., que si los adolescentes asistieran a ese curso de yoga, sí creo que cambiaría un poco (...) la guerra que tienen dentro de ellos mismos”. Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

¹¹ “... por decir, en mi casa yo era una que con cualquier cosita explotaba, y desde que estoy haciendo el yoga me he aprendido a controlar, todos esos, todas esas cuestiones que tenía de mal carácter”. Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

As you can see in the following excerpt, which is the answer of a participant to the question: ¿Do you consider that inviting youngsters who tend to get involved in fights in Ciudad Equidad, and particularly in your block, to practice yoga, could help in reducing general violence in the neighborhood? Participants consider that yoga could in fact help in reducing general violence if violent individuals went to yoga practice. In particular, the cited participant thinks this would be the case because of the effect a yoga class can have in an individual: "...you feel clearheaded [when arriving home after a yoga session]".¹²

"Yes, I think yes, honey, because there [in the yoga class] one spends at least an hour, or hour and a half there, distracting the mind, arriving home clearheaded. Therefore, I believe yes, [inviting young people that participate in fights and quarrels to yoga] will help them"
(Participant, post intervention focus group, Block 6, Santa Marta, December 9, 2015).¹³

During the focus groups participants mentioned the frequency and the type of weapons they knew were used during fights in their blocks. Regarding this, it is worth mentioning that there was a significant decrease in the frequency of references of types of weapons when comparing the focus groups that took place before and after the yoga intervention. For example, Table 6 shows how in the focus groups prior the intervention "bottle" was mentioned as a common weapon used in fights on 19 different occasions, while in the focus groups held after the intervention the use of bottles as a weapon was mentioned just one (1) time.

This reduction in the frequency of weapon references may be attributed to the yoga intervention because it is comparing the topics of conversation in focus groups before and after the yoga sessions had taken place. Furthermore, it indicated how the topic of conversation changed after the intervention. Before the intervention, when participants were asked about fights with weapons they mentioned bottles, knives, gases, glasses, daggers and even guns, but after the intervention when participants were asked the same questions the conversation was completely different, as it can be seen by the fact that out of the seven (7) weapons originally mentioned only two (2) were mentioned in the post-intervention focus groups (bottles, and machetes).

¹² Excerpt obtained from the coding node "perceived effectiveness of yoga" with a total saturation of 99 references, this node is part of the post-intervention semi-structured interview data set.

¹³ "*Sí, yo pienso que sí nena, porque ahí [en clase de yoga] uno pasa, por lo menos una hora, hora y media que uno, mantiene ahí, distrae la mente. Llega a la casa despejada. Yo creo que sí, invitándolos de pronto lo, los [jóvenes que participan en riñas y peleas con armas blancas] sí se componen*" Excerpt obtained from the coding node "fights and conflicts" with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

Table 7. Frequency of the type of weapons used associated with the variable “fights” in the focus groups before and after the yoga intervention

	Frequency of weapon references	
	Focus groups prior intervention	Focus groups post intervention
Botella / Botellas (bottles)	19	1
Cuchillo (knife)	15	0
Gases (gases)	5	0
Vidrios (glasses)	5	0
Puñal (dagger)	4	0
Machete	3	3
Pistola (gun)	3	0

During the focus groups it was identified that the people who usually fought with weapons were the youngsters or adolescents and that the most common weapons used according to the participants were bottles, knives and machetes. The way bottles are used as a weapon is by cutting of the bottom part to give it an irregular sharp edge that is used to hit and cut the other person.

In terms of where the fights often take place, participants consider that it is usually outside their blocks, with the exception of three common conflicts, which are: first, because of the limited access to water in block number 3; second, fights between mothers because of accidents that occur with their children; and third, conflicts caused by neighbors who listen to loud music and disturb others. The fight between mothers tends to happen in the parks inside the blocks or in the parking lot. In general, mothers fight and tend to react violently to protect their kids when they think the mother of another child has treated them unfairly, usually. The reduction in the number of fights with or without weapons documented in Tables 7 and 8 as well as in Figure 5 is further supported by quotes extracted from the focus groups, as shown below.

“I say that the use of sticks and sharp points of bottles in fights has decreased because you rarely see them anymore, not like it was before when we first got the houses. Then it was craziness after craziness, but now it has decreased substantially” (Participant, post intervention focus group, Block 8, Santa Marta, December 10, 2015).¹⁴

In terms of violent fights between neighbors, quotes extracted from the focus groups show that these were common before the intervention. As previously mentioned, it was common to see women fighting over accidents that involved their kids. The drawing below represents this common conflict by showing one woman pulling another woman’s hair. This kind of fight is common in Ciudad Equidad and tends to occur in the parking lot or at the park,

¹⁴ “Yo digo que ha disminuido el uso de palos y picos de botellas en peleas porque como ya casi no se ven esas riñas como al principio que nos entregaron las casas. Eso era despelote tras despelote, pero ahora ya ha disminuido bastante” Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

which are the most common places for children to play. The quotes following the drawing highlight how common this type of fight is.

Figure 5. Zoom of the social cartographic map created during the pre-focus group held in block number 6



“There at the park, at the park, they have fought because of their children”. (Participant, pre intervention focus group, Block 6 - Santa Marta, October 22, 2015).¹⁵

“... or the kids fight and their mothers arrive and they fight and hit each other” (Participant, pre intervention focus group, Block 6 - Santa Marta, October 22, 2015)¹⁶.

The majority of the participants in the focus groups carried out after the intervention indicated that they do perceive a reduction in the number of violent fights among neighbors. This is because they perceive that they have personally been involved in a reduced number of fights. They feel the yoga sessions help them control their anger and think about acting or reacting violently before doing so. Therefore, participants think that practicing yoga would help people in the general community of Ciudad Equidad to stop getting involved in unnecessary fights with other neighbors.

“... and now you don’t see those fights between neighbors, those quarrels, it has all calmed down and yoga has helped us all a lot” (Participant, post intervention focus group, Block 6, Santa Marta, December 9, 2015).¹⁷

¹⁵ “*Allí en el parque, en el parque, se han agarrado por los hijos*” Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

¹⁶ “... *O se pegan los pelaitos y llega la mamá de uno y la mamá del otro, se agarran y se dan*” Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

In terms of gang fights, participants mentioned that these were not as common in Ciudad Equidad, and if these did occur, they would take place on the outside of the complex. Participants also mentioned they were not or had not been part of any gang, and that they did not know any gang members. They also did not know if gang members were residents of Ciudad Equidad or not. Given that gangs were not considered a common problem in Ciudad Equidad during the pre or the post focus groups, this topic was barely mentioned. Still it is worth highlighting that as in the case of violent fights among neighbors, participants considered that if gang members were invited to participate in the yoga sessions this phenomenon would probably be non-existent (see excerpt below).

“We have to invite [gang members] to practice yoga, so that they are involved in different things and are not throwing stones and fighting over unnecessary things (...). They have to be improved, they need to be controlled and invited to practice yoga....” (Participant, post intervention focus group Block 8 - Santa Marta, December 10, 2015).¹⁸

Domestic violence was another topic discussed in the focus groups. Results indicate it was common for mothers to hit their children as a way of punishment. It was also common for mothers to react violently against their children or their partner, due to the high stress levels they had to deal with. The word clouds in Figure 6 and the information in Table 8 (for both please see below) demonstrate how participants considered that practicing yoga helped them reduce violent reactions, particularly against their children (domestic violence). This finding is further supported by quotes extracted from the focus groups, which took place after the yoga intervention.

¹⁷ “... y ya no, o sea no se ven esas riñas, esas peleas entre vecinos, ya ha calmado todo eso, y el yoga nos ha ayudado bastante a todas” Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

¹⁸ “Hay que invitarlos [a los miembros de las pandillas] a que hagan yoga, para que tengan entretenimiento en otra cosa y no tirarse piedras, ni estar peleando por cosas innecesarias (...). Hay que mejorarlos, hay que controlarlos e invitarlos a que hagan yoga...” Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

Figure 6. Word clouds for the topic “domestic violence” mentioned during the focus groups performed before and after the intervention, respectively¹⁹

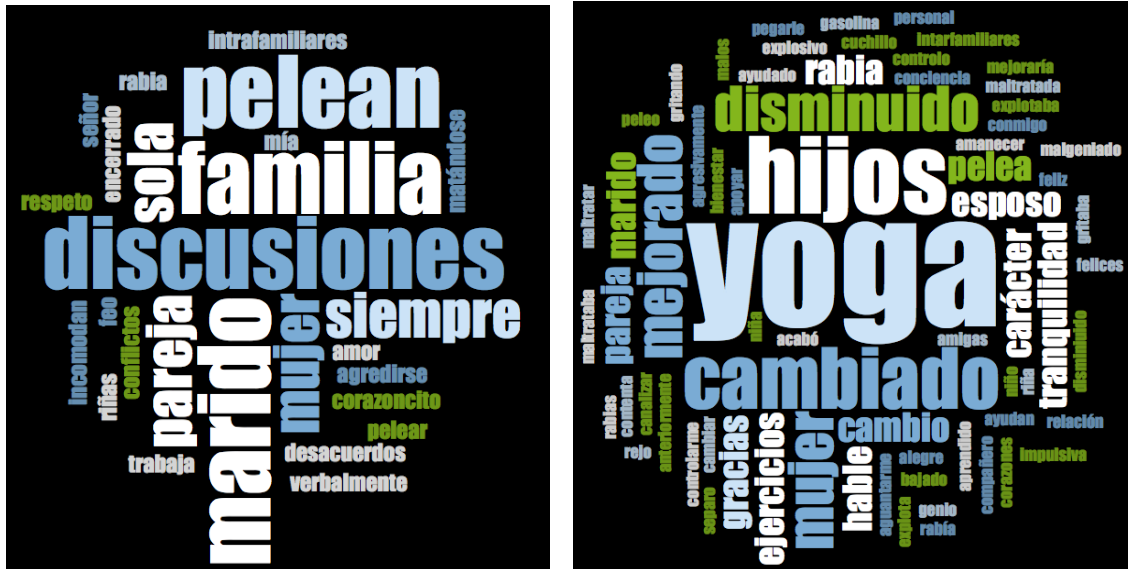


Table 8. Frequency of words used associated with the variable “domestic violence” for the focus groups performed before and after the yoga intervention. Words related to Figure 6

Frequency of words associated with domestic violence	
Focus groups pre-intervention	Focus groups post-intervention
Discusiones (discussions) (3)	Yoga (yoga) (8)
Familia (family) (3)	Hijos (children) (5)
Marido (husband) (3)	Cambio (change) (4)
Pelean (people fight) (3)	Disminuido (reduced) (3)
Mujer (woman) (2)	Mejorado (improved) (3)
Pareja (partner) (2)	Mujer (woman) (3)

As it can be seen in Table 8, when asked about the same topic (domestic violence) the most common words changed, which demonstrates that at first domestic violence was associated with discussions between family members, usually partners, and after the intervention, it was related to improved situations and change; which implies a reduction of domestic violence. During the focus group that took place in complex number 6, domestic violence was exemplified by the drawing shown below, which displays a man choking a woman while asking her, “Why don’t you do as I say?”.

¹⁹ Word clouds generated with NVIVO 11.0 from the coding node “Domestic Violence” with a total saturation of 37 references, this node is part of the focus groups performed before and after the intervention data set.

Figure 7. Zoom of social cartography exercise from block 6 (before the intervention)



The most common form of domestic violence mentioned during the focus groups was against their own children. Domestic violence is considered an uncommon phenomenon between partners, although many participants did mention general conflicts and discussions with their spouse. During the focus groups that took place after the intervention it was mentioned by many participants that practicing yoga had helped them to reduce conflicts and fights with their partners and children. They mentioned being able to manage rage and be more patient and respectful with their own children. This act of being more respectful with their children implies that there was a reduction in physical violence when punishing them. The quotes shown below highlight this finding.

“I had this way of mistreating my kids, yelling, everything was yelling and every time I went to them to talk, they would immediately react nervously. But not anymore; I’ve found more tranquility.” (Participant, post intervention focus group, Block 6, Santa Marta, December 9, 2015).²⁰

“In my house I have also changed a lot because I was very impulsive, I would get angry about nothing, I didn’t know how to hold myself back, but thanks to yoga I have learned how to channel that anger and control myself and breathe before getting angry, even including the bad moments that you sometimes have with your children. Not

²⁰ “Yo tenía esa forma de maltratar a mis hijos gritando, todo era gritando y cada vez que yo les iba a hablar, ellos enseguida se exaltaban. Pero ya no, ya he cogido más tranquilidad” Excerpt obtained from the coding node “domestic violence” with a total saturation of 37 references, this node is part of the focus groups performed before and after the intervention.

everything is hitting and so on, so [yoga] has helped me a lot in that sense” (Participant, post intervention focus group, Block 7, Santa Marta, December 10, 2015).²¹

“ ... Before practicing yoga, I had family problems in my house with my partner, and since I have been practicing yoga, I have improved with that. There are times when he tells me things and I don’t pay attention, he tells me the same thing three times and I just let him talk to himself or sometimes I just go out and leave him alone” (Participant, post intervention focus group, Block 8, Santa Marta, December 10, 2015).²²

During the focus groups the topic of sexual aggressions was also mentioned, particularly because there had been a rumor in the neighborhood about a 12-year-old girl being raped near Ciudad Equidad. Participants mentioned that the aggressor is not a resident of Ciudad Equidad and that they usually do not hear of sexual aggressions taking place in the housing complex. Figure 8 below displays two word clouds containing the most common words used in relation to sexual aggressions. The importance of this figure (Figure 8 below) is that it shows how participants’ comments changed before and after the intervention. Before the intervention, the rumor about the girl was the most frequently mentioned topic in relation to sexual aggressions. After the intervention participants not only mentioned the rumor, but they talked about how they thought yoga would be an effective tool for young women to develop consciousness around the importance of taking care of their physical integrity. Participants think that yoga might help in reducing sexual aggressions in the sense that young women would appreciate their bodies more, have more integrity, and therefore, take fewer risks in general.

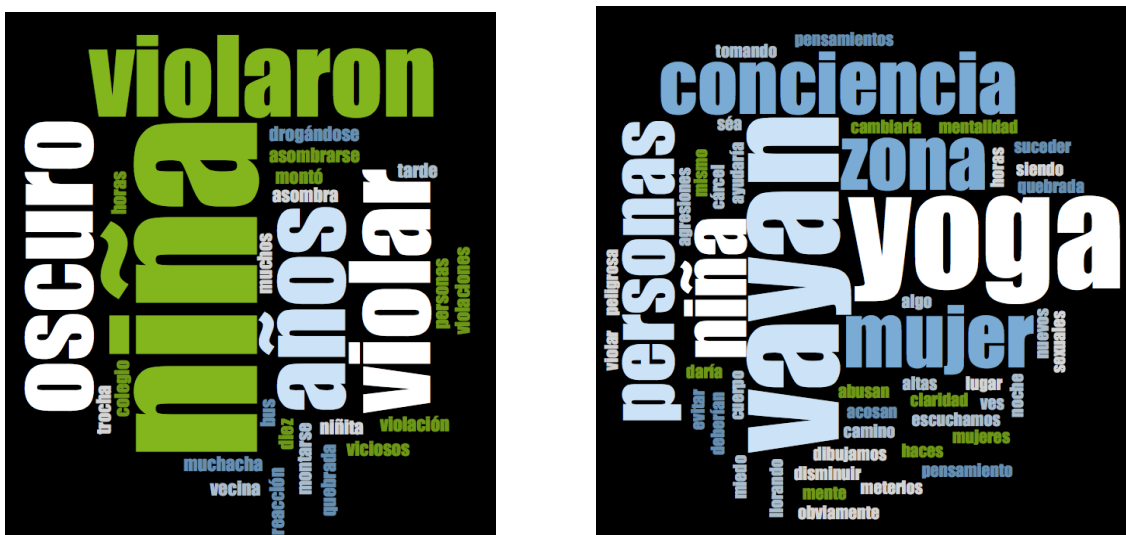
“.... In practicing yoga you start becoming more conscious of yourself, therefore, at least for you being a girl, a woman, you see that place late at night (...) and now, while thinking much more clearly, you will obviously avoid going down that path because something could happen to you” (Participant, post intervention focus group, Block 3 - Santa Marta, December 9, 2015).²³

²¹ “*En mi casa yo también he cambiado bastante, porque yo era muy impulsiva, yo cogía rabia con nada, no sabía aguantarme y gracias al yoga he sabido como canalizar esa rabia, he sabido cómo controlarme y respirar profundo antes de las rabias y los malos ratos que pasa uno con los hijos a veces. No todo es rejo y eso, entonces sí [el yoga] me ha servido bastante en ese sentido*” Excerpt obtained from the coding node “domestic violence” with a total saturation of 37 references, this node is part of the focus groups performed before and after the intervention.

²² “... *antes de hacer yoga tenía problemas intrafamiliares en mi casa con mi compañero y desde que estoy haciendo yoga he mejorado con eso, o sea hay veces que él me dice cosas, y yo no le paro tres bolas, me dice tres veces y lo dejo ahí que hable solo, o hay veces que me voy para la calle y lo dejo ahí, que hable solo*” Excerpt obtained from the coding node “domestic violence” with a total saturation of 37 references, this node is part of the focus groups performed before and after the intervention.

²³ “... *en el yoga uno va tomando conciencia de uno mismo, entonces por lo menos tú siendo una niña, una mujer, ves ese lugar a altas horas de la noche (...) y ya con más claridad de pensamiento, obviamente vas a evitar coger ese camino, porque te puede suceder algo*” Excerpt obtained from the coding node “sexual aggressions” with a total saturation of 18 references, this node is part of the focus groups performed before and after the intervention.

Figure 8. Word clouds for the topic “sexual aggression” mentioned during the focus groups performed before and after the intervention, respectively ²⁴



One last issue related to aggression, impulsiveness, conflicts and fights is the fact that some residents of Ciudad Equidad tend to be aggressive towards the guards. This topic was discussed during the focus groups where participants mentioned that although it had happened, it was not very common. Participants mentioned that the main reason why there were aggressions against guards was that there were misunderstandings between people wanting to enter a particular block and the guards not allowing them.

“That maybe because they don’t let someone in or because the security guard said something to him, they didn’t like him, those are the aggressions that happen and then they began cursing” (Participant, pre intervention focus group, Block 8, Santa Marta, October 22, 2015).²⁵

It is worth highlighting that although this type of aggression is not common in Ciudad Equidad, during the focus groups performed posterior to the intervention some participants mentioned they considered that practicing yoga would act as an effective tool to enhance cordiality between residents of the housing complex as well as towards security guards, as described in the following quote:

“Yes of course [yoga can help people have better relationships with security guards] because in this way the person can control their character, their temper, and can be very respectful towards others, that he has to behave and should follow rules, so [yoga] would help him a

²⁴ Word clouds generated with NVIVO 11.0 from the coding node “Sexual Aggressions” with a total saturation of 18 references, this node is part of the focus groups performed before and after the intervention data set.

²⁵ “*Que de pronto o porque no lo dejan pasar, o porque el vigilante le llamó la atención, no les gustó, esas son las agresiones que hay y ahí se van a palabras*”. Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

lot” (Participant, post intervention, focus group, Block 8, Santa Marta, December 10, 2015).²⁶

As you can see in Table 9 (below), which is a summary of the references used by variable for the focus groups before and after to the intervention, in the case of sexual aggressions, fights and conflicts, the references reduced significantly. Although there is an increase in domestic violence references, this is not due to an increase in the variable. Instead, it is because of a post-intervention group discussion that occurred in block 3 about a violent household in which participants suggested members of the household should get into the program.

Table 9. Frequency of the total number of references by variable used during the focus groups, which took place before and after the intervention

Frequency of references		
	Focus groups prior to the intervention	Post intervention Focus Group intervention
Sexual aggressions	14	4
Fights and conflicts	114	63
Domestic violence	17	20

In summary, the data collected demonstrates that there are incidents of fights and conflicts among neighbors or within families with and without weapons in Ciudad Equidad, as well as domestic violence. To a lesser degree there are also gang fights, sexual aggressions and aggressions against guards. More importantly, the results regarding aggressiveness, impulsiveness, conflicts and fights demonstrate that participants perceive yoga was an effective tool for the reduction of conflicts in their lives. They feel yoga helped them manage their rage, be more understanding, and therefore to react violently less frequently than before the intervention. Furthermore, those who participated in the yoga sessions considered that if people who tend to get involved in conflicts practiced yoga, there would be a significant reduction in the number of fights in the housing complex they live in. The following zoom of the cartographic exercise in Block 3 held after the intervention demonstrates the changes mentioned, and brought about by the yoga sessions (see Figure 9 below).

²⁶ “Claro que sí [el yoga puede ayudar a que las personas tengan relaciones más cordiales con los vigilantes], porque así la persona puede controlar el carácter, controlar su genio y puede ser respetuoso con los demás, que tiene que comportarse y que debe cumplir normas. Entonces, [el yoga] le ayudaría bastante” Excerpt obtained from the coding node “fights and conflicts” with a total saturation of 177 references, this node is part of the focus groups performed before and after the intervention.

Figure 9. Zoom of social cartography exercise from Block 3 (after the intervention)



Figure 9, is an example of the changes caused by the intervention because it shows how during the post intervention focus groups in Block 3 participants highlighted (by underlining the dove, which was used as the symbol for conviviality and peacefulness in the focus groups held before the intervention). Furthermore, in figure 9 it can be seen how the symbol for domestic violence (drawn inside of one of the houses, with a blue marker) has been crossed out, as well as the symbols for fights with weapons (represented by the purple broken bottle drawing), and fights between neighbors (represented by the drawing of the two green faces yelling at each other) too.

4.2 Emotional Intelligence

Data regarding emotional intelligence was collected via the semi-structured interviews done after the yoga intervention. These interviews tackled two aspects of emotional intelligence. The first aspect deals with the comprehension of feelings and refers to whether or not the individual is able to properly comprehend his or her emotional state, for example, and be able to say what he or she is feeling in a particular moment. The second aspect is emotional regulation, which refers to an individual's ability to regulate and manage his or her emotions properly.

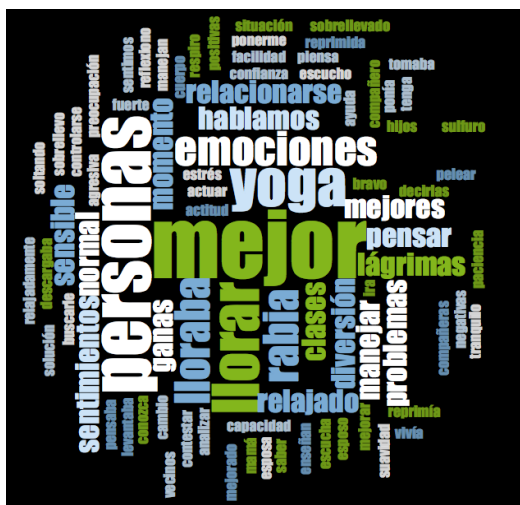
In general, participants stated that practicing yoga helped them to better understand and manage their emotions. Figure 10 and Table 10 (below) show that in relation to emotional intelligence, participants mentioned during the semi-structured interviews that they felt more capable of understanding or communicating what they were feeling in any given moment. Furthermore, participants mentioned they were able to express what they were feeling in a more confident manner. For example, if they wanted to cry they would do so without feeling ashamed or embarrassed. The following quotes were extracted from the semi-structured interviews to illustrate this topic:

“Because before I would come and let out all my anger at any moment, now in order not to become so aggressive I become quiet and start crying, you become more sensitive” (Participant, Post

intervention semi-structured interview, Block 7 - Santa Marta, December 10, 2015).²⁷

“... as I told you before, I lived repressed, I would hold in anything I felt, not anymore! Now if I don’t like something I just say it, I start talking about what I’m feeling, before I didn’t even talk to my husband and now we do talk” (Participant, Post intervention semi-structured interview, Block 7 - Santa Marta, December 10, 2015).²⁸

Figure 10. Word cloud for the topic “Emotional Intelligence” from the post-intervention semi-structured interviews²⁹



It is important to highlight how in Figure 10 the most common word used during the post semi-structured interviews is “better”. This is relevant because it implies that changes have occurred from how people felt before the yoga intervention and after, and more importantly it implies it was a positive change. In the other hand, it is important to understand that words such as “crying”, “cried” or “rage” can have positive or negative connotations in the results depending of the context in which they are used. For this assessment and in this case, they were all used to exemplify positive aspects of the intervention. For example, participants mentioned they sometimes used to cry without understanding the reason why, but that now they are more likely to feel connected to what they are feeling and therefore comprehend it better, which in turn promotes a better emotional regulation.

²⁷ “Porque, o sea, antes yo venía y descargaba la rabia en cualquier momento, ahora para no ponerme agresiva me callo y me pongo a llorar, se pone uno como más sensible”. Excerpt obtained from the coding node “emotional intelligence” with a total saturation of 28 references, this node is part of the semi-structured interviews performed after the intervention.

²⁸ “... como te dije, vivía reprimida, cualquier cosa me la tragaba, ¡ya no! Ahora si no me gusta algo lo digo y con los sentimiento también, ya me pongo a hablar sobre ellos, yo antes no hablaba con mi esposo y ahora sí hablamos”. Excerpt obtained from the coding node “emotional intelligence” with a total saturation of 28 references, this node is part of the semi-structured interviews performed after the intervention.

²⁹ Word clouds generated with NVIVO 11.0 from the coding node “Emotional Intelligence” with a total saturation of 28 references, this node is part of the post-intervention semi-structured interview data set.

Table 10. Frequency of words used associated with the variable “emotional intelligence” for the post-intervention semi-structured interviews. Words related to Figure 10

Word	Frequency
Mejor (better)	6
Personas (people)	5
Llorar (crying)	4
Yoga (yoga)	4
Emociones (emotions)	3
Lloraba (cried)	3
Rabia (rage)	3

Also related to emotional intelligence during the interviews, the researchers asked the participants about their interpersonal relationships with family members, friends and neighbors. The results showed that practicing yoga seemed to help individuals have better quality relationships. Furthermore, it was observed that participants enjoyed doing a group activity and felt they grew closer to neighbors given the fact they participated in the intervention together. Some of the questions asked in regard to relationships with the people in the housing complex community were: Did you enjoy the experience of participating in a group activity?; Do you think that practicing yoga helped you establish more cordial relationships with your neighbors? The following quotes extracted from the interviews exemplify what participants thought of being part of a group activity. As previously mentioned, most of them enjoyed the fact that they met new people and neighbors.

“We have always been good neighbors but we have gotten closer because of that [yoga], because we talk, we share experiences, this and that” (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).³⁰

“[The yoga classes] have taught us to get to know ourselves better as neighbors, and that has strengthened our ties, and if you know your neighbor and you know that he or she is not the person that you thought they were, obviously there are not going to be any conflicts” (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).³¹

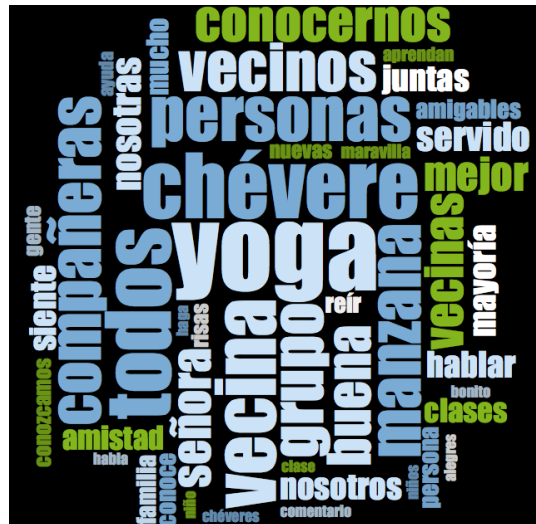
One of the questions related to the emotional intelligence thematic block in the semi-structured post intervention interviews was: did you enjoy the fact yoga is performed as a group activity with other residents of your block? All the comments and answers related to this

³⁰ “Nosotras siempre hemos sido buenas vecinas, pero nos hemos unido más a través de eso [yoga], porque compartimos las experiencias, hablamos que esto, que lo otro”. Excerpt obtained from the coding node “relationships with community members” with a total saturation of 114 references, this node is part of the semi-structured interviews performed after the intervention.

³¹ “[Las clases de yoga] han hecho que nos conozcamos mejor como vecinos y eso ha hecho que hagamos mejores vínculos, y si uno conoce el vecino y sabe que no es la persona que uno cree es obvio que no van a haber conflictos”. Excerpt obtained from the coding node “relationships with community members” with a total saturation of 114 references, this node is part of the semi-structured interviews performed after the intervention.

question were positive, as it shown in Figure 11; participants mentioned it was “cool” (*chévere*) to participate in a group activity with other members of the block as well as that it helped them to know each other better and become “better neighbors”. Related to this it is important to highlight that better interpersonal relationships imply higher levels of emotional intelligence, particularly in terms of emotional regulation.

Figure 11. Word cloud for the topic “relationships with community members” from the post intervention semi-structured interviews³²



As previously mentioned, emotional regulation is related to better relationships, the following quotes extracted from a post intervention semi-structured interview exemplifies why this is the case. This is an example given by a participant who feels that being better able to control or regulate her emotions allows her to react less violently towards her kids. Ultimately, these changes will likely lead to better relationships between mother and children and therefore a reduction in domestic violence for this particular example.

“When the kids did something, something that I didn’t like, I would become angry and I would hit them with whatever I had, now I think, I become angry, but I breathe, relax, I punish them but not as before, when I used to hit them” (Participant, post intervention semi-structured interview, Block 6, Santa Marta, December 9, 2015).³³

In terms of interpersonal relationships in general, the intervention seemed to have helped all participants to get along better with family members, friends, and neighbors. Figure 12 and Table 11 (below) show these results, which indicate that due to improvements in emotional regulation, participants became better able to establish cordial relationships and enhance the

³² Word cloud generated with NVIVO 11.0 from the coding node “Relationships with community members” with a total saturation of 114 references, this node is part of the post-intervention semi-structured interview data set.

³³ “Cuando los niños hacían algo así, algo que no me gusta, yo cogía rabia y les pegaba con lo que tuviera. Ya pienso, cojo la rabia, pero respiro, me relajo, los regaño, pero no como antes que les pegaba”. Excerpt obtained from the coding node “interpersonal relationships” with a total saturation of 60 references, this node is part of the semi-structured interviews performed after the intervention.

quality of their interpersonal relationships. The following quote extracted from a semi-structured interview summarizes the results regarding emotional regulations and its relation to better relationships according to one participant.

“Well, I think I have told you everything that I have seen, as I have said, it has given us tranquility, it has made us get to know each other better, it has made us better neighbors, better people. Personally, I have become a better mother, a better wife, because I can now control myself and my negative emotions and all those things” (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).³⁴

Figure 12. Word cloud for the topic “interpersonal relationships” from the post-intervention semi-structured interviews³⁵



From Figure 12 is also important to highlight the words such as “better”, “help” and “talk” show there was a perceived change by participants when comparing their relationships with for example their husband or their children. Furthermore, this change is also seen in words displayed in the word clouds that are in past tense, such as: “hit”, and “yelled”. Participants mentioned during the interviews that before the intervention had taken place they would hit their children more often than after the intervention. They also expressed that they used to argue, discuss and yell at their partners more frequently before.

³⁴ “Bueno, yo creo que ya te he contado todo lo que yo he visto, como te digo, nos ha dado tranquilidad, nos ha hecho conocer mejor, nos ha hecho mejores vecinos, mejores personas. A mí me ha hecho mejor mamá, mejor esposa porque ya controlo un poco más esas emociones negativas y todas esas cosas”. Excerpt obtained from the coding node “interpersonal relationships” with a total saturation of 60 references, this node is part of the semi-structured interviews performed after the intervention.

³⁵ Word cloud generated with NVIVO 11.0 from the coding node “interpersonal relationships” with a total saturation of 60 references, this node is part of the post-intervention semi-structured interview data set.

Table 11. Frequency of words used associated with the variable “interpersonal relationships” for the post-intervention semi-structured interviews. Words related with Figure 12

Palabra	Conteo
Hijos (children)	15
Rabia (rage)	14
Yoga (yoga)	11
Mucho (a lot)	10
Hablar (talking)	8
Esposo (husband)	7

Other quotes that show that participants’ emotional intelligence, and therefore, their interpersonal relationships have improved include the following, which have been extracted from the semi-structured interviews. Moreover, the following excerpts also show that for example for one of the participants of the intervention, the reason she improved her relationship with her kid was because she was physically feeling better from a common headache she used to have.

“... Everything was a pain, the girl hadn’t said a word and I would reprimand her, I yelled at her because I was stressed and I had a headache all the time, and now that doesn’t happen anymore because I don’t have a headache anymore” (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).³⁶

In the case of the participant who mentioned the excerpt below, her relationships (particularly with her partner) also improved after the intervention, but as she explains she perceived the improvement was because she is now more able to think past the problem, analyze it, and control herself instead of reacting immediately.

“Also with my partner I have overcome things a little because we used to have a little problem over something, you know, now I always breathe, I overcome, if he becomes angry I let him get over it and then we talk” (Participant, post intervention semi-structured interview, Block 7, Santa Marta, December 10, 2015).³⁷

In conclusion, in terms of emotional intelligence, the participants of the intervention experienced changes in relation to the two main aspects tackled in the post intervention semi-structured interviews, which were: comprehension of feelings and emotional regulation. The following excerpt shows, for example, how a participant feels more in touch with her emotional

³⁶ “...todo era un fastidio, no me había dicho la niña algo y yo ya la regañaba, la gritaba porque yo estaba estresada y pasaba con un dolor de cabeza todo el tiempo, y ya, ya eso no pasa porque ya no tengo el dolor de cabeza”. Excerpt obtained from the coding node “interpersonal relationships” with a total saturation of 60 references, this node is part of the semi-structured interviews performed after the intervention.

³⁷ “También con mi compañero he sobrellevado un poco las cosas, porque antes teníamos un poquito de problemas por algo, tú sabes, siempre. Ahora no, ya respiro, sobrellevo, si él se pone bravo yo lo dejo que se le quite la rabia y después es que hablamos”. Excerpt obtained from the coding node “interpersonal relationships” with a total saturation of 60 references, this node is part of the semi-structured interviews performed after the intervention.

self and considers that since she started practicing yoga she answers in a more secure and positive manner.

“[Since I started to practice yoga] I feel safer when I am talking, when I relate to people, I answer with greater self-confidence and with a more positive attitude” (Participant, post intervention semi-structured interview, Block 6, Santa Marta, December 9, 2015).³⁸

In relation to this topic, it is also important to highlight that if the intervention has the possibility of enhancing general emotional intelligence in those residents who practice yoga, and this in turn promotes better relationships with family, friends, and neighbors as it was seen from the data collected; this could mean that yoga does work as a feasible tool for reducing general violence in Ciudad Equidad. It would begin having an effect in small social groups such as families, with spouses getting along better and mothers being more patient with their kids, and continue expanding its impact into first the blocks where the intervention potentially would be held, and then hopefully to Ciudad Equidad as a whole.

4.3 Coping Strategies

“... since I began practicing yoga I have noticed that it helps me to analyze situations, doing the postures has worked for me...”
(Participant, post semi-structured interview Block 3, Santa Marta, December 9, 2015).³⁹

In terms of coping strategies, this study seeks to identify whether or not practicing yoga helped individuals to analyze and reflect more when confronted with difficult situations⁴⁰ Particular to the case of residents in Ciudad Equidad, this would be relevant because they are people who have to get adapted suddenly to a completely different life style from what they were used to, plus the fact they would have to start co-existing with people who come from different contexts. Furthermore, as it was previously mentioned, many of the residents in Ciudad Equidad have been affected by Colombia’s internal conflict, by being forcefully displaced from where they used to live and additionally to live below the poverty line. This challenging set of conditions highlights the importance it carries for residents in Ciudad Equidad to be able to cope properly.

Some of the questions used in the semi-structured interviews regarding this topic included: Do you think that practicing yoga has had a positive impact on the way you react when confronting a problem? In regards to this question a common answer was that yoga helped them

³⁸ “[Desde que practico yoga] me siento más segura cuando estoy hablando, cuando me relaciono contesto con seguridad y una actitud más positiva”. Excerpt obtained from the coding node “emotional intelligence” with a total saturation of 28 references, this node is part of the semi-structured interviews performed after the intervention.

³⁹ “Tantas cosas que se le pasan a uno por la mente, entonces yo he visto que desde que empecé a ir a la yoga he reflexionado bastante, los ejercicios me han servido...”. Excerpt obtained from the coding node “coping strategies” with a total saturation of 45 references, this node is part of the semi-structured interviews performed after the intervention.

⁴⁰ Information obtained from the coding node “coping strategies” with a total saturation of 45 references, this node is part of the post-intervention semi-structured interview data set.

relax and they were better able to react properly to the situations they were encountering. This is because they could think clearly about what was happening, why, and think of a better solution rather than to react immediately. The quotes below exemplify the results previously mentioned:

“... when you are relaxed, you take everything in an easier manner and you think about the best solution for a given situation: ‘ok, if I cannot do it this way, I will find another solution’, but without fighting, yelling and insulting people” (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).⁴¹

A relevant and positive aspect of what participants in the intervention considered to be the perceived changes caused by the yoga practice, in terms of better reactions when confronting a problem (observed in the excerpts previously shown), is that, generalized improvements in coping strategies in residents of the particular block in which the intervention was held also promote better emotional wellbeing. Being better able to react towards problems or develop resiliency factors, such as self-awareness is an important asset when confronted to harsh environments and situations.

Furthermore, it is interesting to see how one of the participants of the intervention considers yoga helped her realize that a same situation or problem can be solved in different ways (see the following excerpt). This coping strategy is called “search for alternatives”, which is a cognitive strategy where the individual decides to analyze the causes of the problem and generate a solution rather than just sink with a feeling of sadness and anger that could immobilize him or her (Londoño et al., 2006).

“Worrisome situations mostly, problems, things that you sometimes have to deal with, and you think there’s no solution, but at the yoga class you feel that you can solve the problem and that there are solutions” (Participant, post intervention semi-structured interview, Block 7, Santa Marta, December 10, 2015).⁴²

“Positive reevaluation” of problems is another coping strategy, which the intervention seeks to enhance in order to improve general wellbeing of the residents in Ciudad Equidad. Related to this, during the semi-structured interviews, which were held after the intervention participants mentioned that since they began going to yoga, they would in fact think of what could be the positive side of the difficult situations they were confronted with. Being able to identify positive aspects in difficult situations encourages positive thoughts, which in turn act in favor when the individual deals with the problematic (Londoño et al., 2006). The excerpt below

⁴¹ “... estando ya uno relajado, todo lo toma como con más suavidad y piensa más cuál es la mejor salida a la situación que haya: ‘Bueno, si ya no se pudo de este modo, buscarle otra solución’, pero sin pelear, sin gritar y sin ofender a los demás”. Excerpt obtained from the coding node “coping strategies” with a total saturation of 45 references, this node is part of the semi-structured interviews performed after the intervention.

⁴² “Momentos de preocupación, más bien, como preocupaciones, cositas que a veces uno no tiene, a veces uno cree que no tienen solución, pero en el momento de las clases de yoga si siente uno que sí puede y hay soluciones”. Excerpt obtained from the coding node “coping strategies” with a total saturation of 45 references, this node is part of the semi-structured interviews performed after the intervention.

is an example, of what could be identified from the interviews in relation to positive reevaluation to problems:

“... Well, I was one of those people who did not think, I acted straight away... and since I started going to yoga now I think first and then I act” (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).⁴³

Another important aspect related to coping skills, is the fact that being able to cope tends to be associated with effective conflict resolutions techniques and given the objective of the intervention this would promote higher levels of conviviality among neighbors and general co-existence in a housing complex that groups individuals with highly different backgrounds.

4.4 Perceived Stress

Stress and perceived changes in stress were measured with the semi-structured interviews, which were performed after the intervention. Participants answered the questions: Has the way you perceive and deal with stress changed? Do you feel less stressed-out after a yoga session? Do you think that practicing yoga has helped you channel your energy? In general, and as it is observed in the following quotes, participants felt that the yoga intervention was an effective tool that helped them deal with and minimize stress. Furthermore, participants say they felt more relaxed and tranquil than they did before taking part in the intervention.

“... Now I take things lightly, not like before when I used to be stressed all the time, I didn’t want anyone to talk to me or tell me anything” (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).⁴⁴

Participants appreciated the fact they considered yoga practice helped them to be less stressed. Being less stressed or being better able to cope with high levels of perceived stress is important for individuals’ general well-being because stress causes feeling of anguish or even fear and may have physical consequences in the body such as back pain or headaches, as it was discussed during the interviews. It is important to highlight that as it can be seen from the excerpts of the semi-structured interviews; feeling less stress implied positive changes for the participants in other aspects of their lives. For example, a participant mentioned she did not like people to tell her anything until, she began practicing yoga and feeling less stressed. Moreover, some participants also mentioned that they felt generally better because they have learned how to handles stress, and that they have even felt better in terms of physical pain they used to have, which was attributed to high stress levels.

⁴³ “Bueno, yo era una de las personas que no pensaba, yo actuaba de una vez, que pan, pan y pan, y desde que fui al yoga yo primero miro, y ahí sí actúo”. Excerpt obtained from the coding node “coping strategies” with a total saturation of 45 references, this node is part of the semi-structured interviews performed after the intervention.

⁴⁴ “... ya tomo las cosas como más livianas, no como antes que vivía estresada, yo no quería ni que me hablaran ni que me dijeran nada”. Excerpt obtained from the coding node “stress” with a total saturation of 50 references, this node is part of the semi-structured interviews performed after the intervention.

“Yes, of course, you feel more liberated. How do I explain it? It is as if something had left me, I don’t know, something heavy, dark inside of me” (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).⁴⁵

The following quote is important to highlight and interesting in the sense that it relates two of the variables discussed throughout this qualitative assessment: coping skills and perceived stress. The participant who said it, not only considers that she has experienced changes in her stress level due to the yoga intervention, but she also implies that she has learned how to deal with stress. She consciously decides to stop thinking on what is stressing her so that she does not get “sick” from stress.

“Yes, yes it has changed the stress a lot, sometimes I would feel a lot of stress, now I calm down, close my eyes, think, concentrate, I stop thinking about things that stress me, because stress makes you sick, now with yoga I don’t get as stressed as I used to” (Participant, post intervention semi-structured interview, Block 6, Santa Marta, December 9, 2015).⁴⁶

“What has changed? I used to suffer from a lot of stress, and I was always in pain and would get a lot of headaches, and since I started yoga classes, well, I’ve felt better” (Participant, post intervention semi-structured interview, Block 7, Santa Marta, December 10, 2015).⁴⁷

In relation to stress, it is also worth mentioning that the majority of the participants agreed in that they all have stressful lives and that the yoga intervention helped them to reduce the stress they felt. As shown Figure 13 and Table 12 (below), some of the most frequent words utilized during the interviews related to perceived stress were: stressed (10), relax (5), changes (4), better (4) and de-stressed (3). This clearly shows that participants consider that due to the intervention they have changed in their perceived level of stress. They mentioned during the interviews how they felt more relaxed than before having the opportunity to participate in the yoga classes. They also mentioned yoga was what helped them to get de-stressed and to calm down. Figure 13 also includes words such as: breathing, which was mentioned when referring to what participants had learned during the yoga sessions, that has helped them to deal with stress.

⁴⁵ “Claro que sí, se siente uno como más liberado. ¿Cómo te digo? Es como si me hubiesen quitado, no sé, algún peso, algo oscuro dentro de mí”. Excerpt obtained from the coding node “stress” with a total saturation of 50 references, this node is part of the semi-structured interviews performed after the intervention.

⁴⁶ “Sí, sí ha cambiado mucho el estrés, a veces me estresaba mucho, ahora me relajo, cierro los ojos, pienso, me concentro, dejo de pensar en las cosas que me estresan, porque el estrés, sea como sea, lo enferma a uno demasiado, ahora con el yoga no me estreso así como antes”. Excerpt obtained from the coding node “stress” with a total saturation of 50 references, this node is part of the semi-structured interviews performed after the intervention.

⁴⁷ “¿Qué cambios? Que yo sufría de mucho estrés, mantenía con unos dolores. Abundante dolor de cabeza y desde que entré a las clases de yoga, pues me he sentido mejor”. Excerpt obtained from the coding node “stress” with a total saturation of 50 references, this node is part of the semi-structured interviews performed after the intervention.

Figure 13. Word cloud for the topic “stress” for the post-intervention semi-structured interviews⁴⁸



In addition to what has been previously mentioned it is important to highlight that when talking about stress participants mentioned their relationships with family, children and neighbors (see Figure 13 and Table 12) because they consider that being able to manage stress also has an impact on how they act towards people in their daily life.

Table 12. Frequency of words used associated with the variable “stress” for the post intervention semi-structured interviews. Words related to Figure 13

Word	Frequency
Estrés (stress)	29
Yoga (yoga)	15
Estresada (stressed)	10
Vecina (neighbor)	6
Relaja (relaxes)	5
Cambios (changes)	4
Mejor (better)	4
Desestresado (de-stressed)	3

As a general conclusion of the data collected it must be mentioned that participants suggested that practicing yoga was beneficial for their wellbeing. More precisely, all of the participants of the study said they had experienced positive changes from the yoga sessions. They considered it had helped them control their aggressiveness and impulsiveness, and therefore, get less involved in conflicts and fights, as well as to regulate their emotions, which resulted in better interpersonal relationships. Furthermore, participants considered that the intervention caused effective improvements in their coping strategies and perceived stress reduction. Overall, the results are encouraging given that participants experienced positive changes in all the studied variables; therefore, the intervention seems to be feasible and effective

⁴⁸ Word cloud generated with NVIVO 11.0 from the coding node “stress” with a total saturation of 50 references, this node is part of the post-intervention semi-structured interview data set.

in enhancing individual wellbeing (physical and emotional) and as a result creating better levels of cordiality and co-existence among neighbors and reducing violence.

As previously mentioned, three main issues arose from the interviews regarding perceptions of the yoga experience: (1) physical effects, (2) psychological effects, and (3) body awareness. Furthermore, it is worth highlighting that participants of the study considered yoga to be an effective tool for reduction of violence and enhancement of cordiality and better co-existence among neighbors.

4.5 The experience of practicing yoga

In terms of the perception of the yoga experience, participants were asked to answer questions such as: What was the best part of practicing yoga? And, how did you feel after a yoga session? The results shown in Figure 14 and Table 13 below exhibit how all participants found the activity to be beneficial to their overall wellbeing. For example, most of them mentioned how yoga helps them alleviate physical pain, such as headaches or back pain. In terms of psychological effects, participants mentioned feeling more relieved and calm. It is also important to note that most of the participants mentioned how practicing yoga made them feel more relaxed.

Figure 14. Word cloud for the topic “the yoga experience” for the post intervention semi-structured interviews⁴⁹

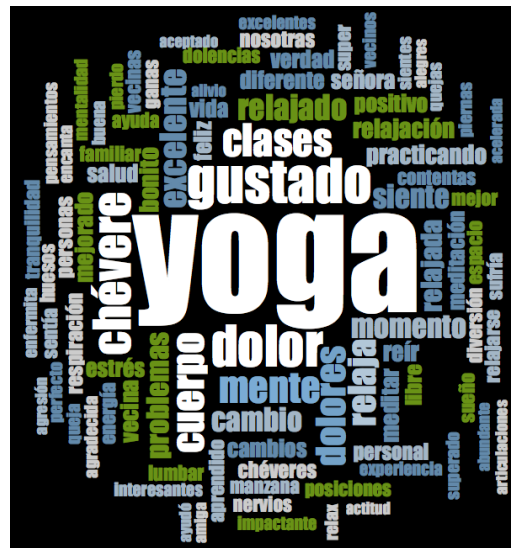


Table 13 below, which displays the frequency of words shown in the word cloud of Figure 14 has as one of the most common words the word pain and aching, so it is important to mention that this is not because people felt pain or ache during the session but on the contrary they considered practicing yoga has generally alleviated them from such feelings. Moreover, the words fun (20), likable (24), and excellent (12) were also frequently used because all the participants said they had enjoyed the intervention and got only positive things out from it.

⁴⁹ Word cloud generated with NVIVO 11.0 from the coding node “yoga experience” with a total saturation of 281 references, this node is part of the post-intervention semi-structured interview data set.

Table 13. Frequency of words used associated with the variable “the yoga experience” for the post-intervention semi-structured interviews. Words related to Figure 14

Word	Frequency
Yoga (yoga)	74
Gustado (likable)	24
Dolor (pain)	22
Chévere (fun)	20
Clases (sessions)	16
Cuerpo (body)	16
Mente (mind)	15
Dolores (aching)	14
Relaja (relaxes)	13
Excelente (excellent)	12

Some quotes that represent the perceptions of the yoga experience and how it helped reduce physical pain, improve psychological wellbeing and enhance body awareness include the following:

“... Those classes are cool because you relax a lot and you leave the class with a different state of mind (Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).⁵⁰

“... There is change (...) in the state of mind, you feel different and you start to look at life differently, like relieved, as if someone had taken a weight from me, a shadow, I don’t know what”(Participant, post intervention semi-structured interview, Block 3, Santa Marta, December 9, 2015).⁵¹

It is interesting and relevant to mention that both excerpts shown above mention changes in the “state of mind”, which is encouraging given that ultimately what is aimed with the intervention for it to be effective, is changing individuals general wellbeing, to achieve a generalized wellbeing in the blocks of Ciudad Equidad, therefore a healthier community which potentially also turns out to be a safer and less violent setting. The fact that the intervention had a perceived impact in the participants’ state of mind, hints to the fact that yoga practice could be a powerful and effective tool in changing the environment in blocks 3, 6, 7 and 8 of Ciudad Equidad. Moreover, the following two excerpts make reference to positive changes experienced by participants. One-participant mentions a positive change in her physical wellbeing (less headache and aching bones), while another one clearly stated she felt spiritually and emotionally “good”.

⁵⁰ “... *Esas clases son chéveres porque uno se relaja mucho, ya de ahí sale como con otra mentalidad diferente*”. Excerpt obtained from the coding node “yoga experience” with a total saturation of 281 references, this node is part of the post-intervention semi-structured interview data set.

⁵¹ “... *Hay un cambio (...) en el estado de ánimo, uno se siente diferente y empieza uno a ver la vida como diferente, como aliviada, es como si me hubiesen quitado un peso de encima, una sombra, no sé qué cosas*”. Excerpt obtained from the coding node “yoga experience” with a total saturation of 281 references, this node is part of the post-intervention semi-structured interview data set.

“It helps, yes, a great deal. Because I used to suffer from aching bones, headache and now I’m much better, I don’t get them often, and they were strong migraines. (Participant, post intervention semi-structured interview, Block 8, Santa Marta, December 10, 2015).⁵²

“Yes, of course, spiritually, emotionally I feel good. I feel better, because I feel more relaxed, more tranquil, about everything”. (Participant, post intervention semi-structured interview, Block 8, Santa Marta, December 10, 2015).⁵³

One of the questions from the semi-structured thematic block that asked about the experience of practicing yoga was: What did you liked about practicing yoga? One participant answered that what she liked was to learn how to breathe. This is an important finding given that it seems as a small or even insignificant change but, on the contrary, from the data collected it is known that by learning how to breathe people also learn how to think before acting impulsively, or to analyze situations and reach different alternatives. Furthermore, breathing also helped participants to obtain better sleep at night and enhanced coping skills and emotional regulation, which in turn promoted better interpersonal relationships and emotional health in general.

“I like that you learn how to breathe, breathing makes you conscious of your movements, the body, everything” (Participant, post intervention semi-structured interview, Block 6, Santa Marta, December 9, 2015).⁵⁴

Another question included in the thematic block of “the experience of practicing yoga” was related to how participants felt right after the session was over. Figure 15 (below) displays in the form of word cloud the most common sensations felt by participants after practicing yoga. It is exciting to highlight that all of the feelings and sensations mentioned during the interviews were positive. In general terms it shows that participants feel yoga helps them calm down, relax, be tranquil and to feel happier. Additionally, participants also mentioned feeling clearheaded and rested.

⁵² “Ayuda claro, sí, bastante. Porque yo sufría mucho de dolor en los huesos, de dolor de cabeza y ahora, bastante bien, no me da mucho, y eso que era migraña”. Excerpt obtained from the coding node “yoga experience” with a total saturation of 281 references, this node is part of the post-intervention semi-structured interview data set.

⁵³ “Claro, sí, espiritualmente, emocionalmente me siento bien. Me siento mejor, porque ya me siento más relajada, más tranquila en todo”. Excerpt obtained from the coding node “yoga experience” with a total saturation of 281 references, this node is part of the post-intervention semi-structured interview data set.

⁵⁴ “Me ha gustado que uno aprende a respirar. La respiración lo hace a uno consciente de sus movimientos, del cuerpo, de todo”. Excerpt obtained from the coding node “yoga experience” with a total saturation of 281 references, this node is part of the post-intervention semi-structured interview data set.

Figure 15. Word cloud for the topic “sensations after yoga” for the post intervention semi-structured interviews⁵⁵



Some of the benefits practicing yoga had on the participants, which have not yet been mentioned, are better fitness, slight weight loss and a more active and energetic attitude in general. One of the participants mentioned even a better night sleep.

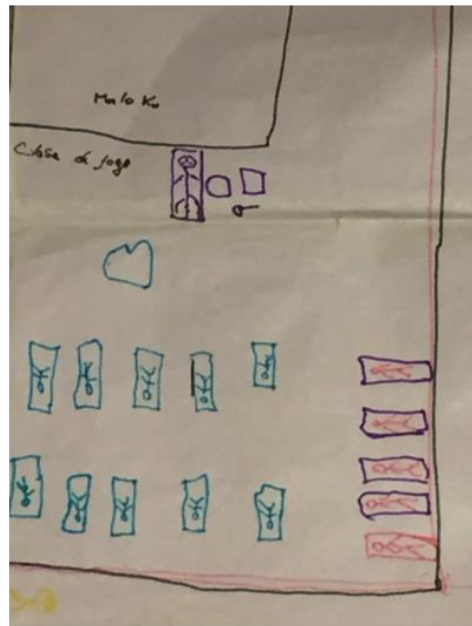
“Now I sleep well at night, before it used to be one, two, or three in the morning and I was tossing and turning in bed, now I get a whole night’s sleep” (Participant, post intervention semi-structured interview, Block 8, Santa Marta, December 10, 2015).⁵⁶

Participants say that yoga makes them feel better overall, and that it would bring positive changes to anyone who tries it. Furthermore, it is worth highlighting that the experience of going to a yoga session and being part of a class could help these individuals engage and feel part of a functional community, and not feel isolated. Figure 16 below was obtained from the cartographic map of Block 6 and represents the yoga class held inside the *maloca*. There is a heart drawn between the yoga professor (in purple) and the yoga participants that during the focus groups it was meant to represent the class is considered a safe and secure environment.

⁵⁵ Word cloud generated with NVIVO 11.0 from the coding node “sensations after yoga” with a total saturation of 76 references, this node is part of the post-intervention semi-structured interview data set.

⁵⁶ “Yo ya tengo mi sueño tranquilo, yo a veces era la una, las dos de la mañana, las tres de la mañana y yo en esa cama dando vueltas, y ahora desde que me acuesto un solo sueño”. Excerpt obtained from the coding node “yoga experience” with a total saturation of 281 references, this node is part of the post-intervention semi-structured interview data set.

Figure 16. Zoom in of the cartographic map of Block 6 (after the intervention)



Moreover, the fact participants feel better after practicing yoga is further exemplified by the following excerpt of a woman who participated in the intervention and states the intervention had an impact on her that has helped her to stop crying. She also mentions she did not know why that used to happen to her.

“It has helped me a lot because sometimes I used to wake up crying, simply crying, I don’t know why, I don’t know what it is, but ever since I started going to the yoga classes that doesn’t happen to me anymore” (Participant, post intervention semi-structured interview, Block 8, Santa Marta, December 10, 2015).⁵⁷

4.6 The perceived effectiveness of yoga for violence reduction

After the yoga intervention was over, participants were asked (during the semi-structured interviews) to consider if yoga practice in Ciudad Equidad could be used as an effective tool for the reduction of conflicts and the enhancement of individuals’ physical and emotional wellbeing, which is one of the research questions this assessment aimed to answer.⁵⁸ Some of the responses to the questions are shown below.

“I believe that it would improve co-existence [among neighbors]. Here there is not a proper coexistence among neighbors, I believe that it

⁵⁷ “Me ha ayudado bastante, porque yo a veces me levantaba con ganas de llorar, de llorar, no sé por qué, y o sea yo lloraba, lloraba y lloraba y no sé qué será eso, no sé, no sé qué será, pues desde que estoy asistiendo a las clases de yoga se me ha quitado eso”. Excerpt obtained from the coding node “yoga experience” with a total saturation of 281 references, this node is part of the post-intervention semi-structured interview data set.

⁵⁸ Information obtained from the coding node “perceived effectiveness of yoga” with a total saturation of 99 references, this node is part of the post-intervention semi-structured interview data set.

would improve, it would help us to treat each other better” (Participant, post intervention semi-structured interview, Block 6, Santa Marta, December 9, 2015).⁵⁹

“I would like [yoga] to be available for other people who come here, I would like them to have the opportunity that we had, so that they don’t become people who live with anger, or who spend time fighting, practicing yoga is really good, and it would heal them” (Participant, post intervention semi-structured interview, Block 6, Santa Marta, December 9, 2015).⁶⁰

Also related to the topic of whether residents of Ciudad Equidad who participated in the study consider or not yoga to be an effective strategy to reduce violence in their blocks, it must be mentioned that as discussed throughout the different sections of the results and analysis, participants constantly mentioned that the positive changes they experienced are expected to be experienced by whoever practices yoga. For example, in the section where changes in aggressiveness were mentioned, there were also remarks done in terms of the fact that participants thought youngsters who have a lot of free time, or gang members or even people who are constantly in fights should practice yoga in order for them to feel better and stop getting involved in violent acts.

The importance of the perceived changes attributed by participants to yoga lies on the implications of these results for practice. This study provides additional support to previous research suggesting that yoga may be an effective approach for reducing aggressiveness, and perceived levels of stress and promoting emotional regulation and better use of coping skills to deal with difficult situations. Therefore, the contribution of this study is extending previous findings to demonstrate preliminary evidence for feasibility and effectiveness with a Latin American population of individuals living in extreme poverty in a social housing complex.

Additionally, the changes perceived by the participants of the study in terms of, if they considered yoga to be an effective tool for the reduction of violence in their blocks of Ciudad Equidad have implications for social housing coordinators and construction companies working in violent social housing complexes in Colombia. These findings demonstrate that participation in yoga sessions is perceived as a feasible and potentially effective program for enhancing physical and emotional wellbeing and reducing violence among individuals living in challenging settings and conditions such as Ciudad Equidad.

As a general conclusion of the results and analysis section please refer to Table 14 below, which displays the total number of references for each of the nodes used in both: the focus groups (held before and after the intervention) as well as the semi-structured interviews

⁵⁹ “Yo creo que mejoraría la convivencia [entre vecinos]. Aquí hay muy mala convivencia, yo creo que mejoraría, ayudaría como a tratarnos mejor”. Excerpt obtained from the coding node “perceived effectiveness of yoga” with a total saturation of 99 references, this node is part of the post-intervention semi-structured interview data set.

⁶⁰ “Me gustaría [el yoga] para otras personas, que si es el caso llegan a venir, que tengan la oportunidad que nosotros tuvimos para que no sean personas así que cojan rabia, que se pasen peleando. Que eso es muy bueno, el yoga los compone”. Excerpt obtained from the coding node “perceived effectiveness of yoga” with a total saturation of 99 references, this node is part of the post-intervention semi-structured interview data set.

(held only after the intervention). This final node count table clearly demonstrates that the four (4) category nodes that are the more important for participants are: 1) Fights and conflicts, 2) Impulsiveness and aggressiveness, 3) Relationships with community members, and 4) Yoga experience. All of these thematic categories (analytic nodes) obtained a total number of references above 100.

Table 14. Total number of references for each of the nodes used in the analysis of results

Nodes		Total number of references
Focus groups		
Sexual aggressions		18
Fights and conflicts		177
Domestic violence		37
Semi-structured interviews		
Impulsiveness and aggressiveness		106
Emotional intelligence		28
	Relationships with community members	114
	Interpersonal relationships	60
Coping strategies		45
Stress		50
Yoga experience		281
	Sensations after yoga	76
Perceived effectiveness of yoga		99

In relation to Table 14 (above) it is important to highlight that the total node count reflects how this qualitative assessment showed yoga to be a feasible and effective strategy that might be used to reduce violence in Ciudad Equidad in the long term. Furthermore, relating it to the research questions it displays that the general experience of Ciudad Equidad residents in the yoga intervention program was positive and that they experienced perceived changes in the variables assessed, particularly in terms of fights and conflicts (177 references) impulsiveness and aggressiveness (106 references), and relationships with community members (114 references). These experienced changes are highly important given that improvements in those variables imply an improvement in reduction of violence in Ciudad Equidad. Moreover, participants perceived that yoga can, in fact, be effective in reducing general violence in their neighborhood as it can be seen from the analytic node “perceived effectiveness of yoga” with a total node count of 99 references.

5. Conclusions and policy recommendations

So, how do we know it was the yoga? The answer to this question is twofold: first, all participants attributed the perceived changes to the yoga sessions, this was made easier for them given that this qualitative study compared the same group of individuals before and after the intervention, keeping all other variables the same. Second, when individuals were directly asked about whether they felt practicing yoga had changed their relationships, self-image, or general reactions, they agreed it had been the case. Furthermore, it is worthwhile to highlight that all participants thought the changes in their wellbeing, which according to them were caused by the yoga, would probably also be seen in other people who may be part of the intervention in the

future. The majority of the participants then suggested that individuals who are known to be violent or unproductive young people who are not currently studying or working be invited and encouraged to participate in yoga.

With regards to public policy, this article seeks to help bridge the gap between research and public health initiatives focused on the prevention of violence in high-poverty communities and, particularly, in social housing complexes, which in Colombia have been known to be unsafe environments where violent behaviors and fights are a daily occurrence. The proposed intervention is a result of the current qualitative assessment that identified the positive changes participants perceived the yoga practice had on their general wellbeing and also incorporated the voices of the participants themselves. The assessment was also able to identify that a participant who practiced yoga during the time the intervention was held in Ciudad Equidad considered it to be a feasible and effective strategy to reduce violence in their block by making individuals feel together physically and emotionally speaking.

The importance of the data therefore relies on the fact that the proposed intervention is based on evidence collected in the present study and supported by previous research around the world. Additionally, given the current sociopolitical context in Colombia, interventions that enhance general wellbeing with the goal of reducing violence and crime are highly relevant. Although supported by previous research, the results of this paper are highly innovative in the sense that they seek to ameliorate the high rates of violence by changing individuals' behavior by shaping their underlying values and abilities. For example, enhancing self-control and fostering emotional intelligence as well as helping participants become more reflective and develop deliberate decision-making skills.

One of the strengths of this study was the use of qualitative instruments to assess general experiences of practicing yoga for residents of Ciudad Equidad and if there were any changes experienced. The current study contributes to the literature as well, given it was performed with a Latin American sample and it seeks to assess the feasibility and potential effectiveness of a public health approach to reduce violence in Colombia, a highly relevant topic given the current sociopolitical context of the country. However, as previously mentioned several limitations constrain generalization. Given the limitations, but still rewarding and encouraging preliminary results identified, future investigations on the topic are encouraged. These may wish to involve random assignment of participants to an intervention or control group to evaluate in an experimental manner the practice of yoga as a tool to foster emotional and physical wellbeing for the reduction of general violence in public social housing complexes for residents who live under stressful conditions and/or with psychiatric symptomology.

Conclusively, given the obtained and previously discussed results, it is recommended that public policy in Colombia that seeks to decrease the violence in social housing complexes begins to incorporate techniques and interventions that enhance individuals' physical and emotional wellbeing, such as yoga practice. This proposed alternative seeks to mold people's antisocial and aggressive behaviors by helping them reduce their levels of perceived stress, anger, and impulsiveness and promote effective coping strategies, emotional regulation, and feelings of tranquility and peace.

This public health approach is aimed at solving the problem of current violence in social housing complexes, such as Ciudad Equidad and consists of four basic elements: First, the problem was defined. This was done using the baseline cartographic focus groups that aimed to understand how the current situation in Ciudad Equidad was before any strategy was tried. Second, risk and protective factors for people living in Ciudad Equidad under the violent and challenging conditions were identified from previous literature on the topic. For example, it was established that feelings of anger, and stress put people at risk of perpetrating violence and on the other hand feeling good and being able to cope properly with difficult situations and regulate emotions protect people from experiencing or perpetrating violence. This helped identified where prevention efforts should be focused and was the key to develop de idea of implementing yoga.

Third, the yoga strategy developed was tested to determine perceived effectiveness. Fourth and last, given the encouraging results of this preliminary study which tested the strategy, further research into the impact of yoga on individuals' wellbeing as a tool to decrease violence and crime rates and enhance wellbeing in contexts where exposure to violence is common, yoga practice is encouraged and warranted. It is important to consider the widespread adoption of yoga practice as a public policy approach to reduce violence by promoting wellbeing in social housing complexes in Colombia.

Although most people may not think of yoga as a violence reduction strategy, that becomes effective by enhancing individuals' physical and emotional wellbeing, the current study supports and encourages the use of this alternative activity as a policy strategy to achieve the reductions in violence needed in social housing complexes in Colombia. Living in a high poverty environment and being exposed to violence tends to promote the existence of stress, dysfunctional coping skills, reduced emotional regulation and aggressiveness among other negative psychological and physical consequences in individuals living under the poverty line. This in turn, tends only to worsen living conditions as well as negatively affecting overall wellbeing. Given the current situation of violence and reduced emotional and physical health in settings such as Ciudad Equidad in Santa Marta, Colombia, yoga practice is encouraged to be continued being studied and implemented as a tool that can change people's lives and improve their communities by promoting peace, happiness and tranquility.

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Appendix

Appendix 1. Reasons for the participants to desert the yoga program in Ciudad Equidad

Reason why individuals deserted the program	Number of individuals	Percentage (%)
Did not pick up with the yoga sessions after having attended a few	15	6,47
Incompatibility with work Schedule	16	6,90
Lack of interest	13	5,60
Other studies or sports training	19	8,19
Personal health or health of a relative	16	6,90
Left Ciudad Equidad	8	3,45
Not possible to contact	2	0,86

Appendix 2. Spanish version of the semi-structured interview guide

Preguntas para entrevistas semiestructuradas (*posterior a la intervención de yoga*):

Pregunta central:

¿Qué cambios ha generado el yoga en su vida? ¿Los cambios han sido positivos o negativos? En caso de no haber percibido cambios, ¿por qué cree que no hubo cambios en su vida?

1. La experiencia de la práctica del yoga

Pregunta central: ¿Qué fue lo que más disfrutó de practicar yoga? ¿Volvería a hacerlo? En caso de no haberle gustado practicar yoga: ¿qué no le gustó?

2. Sensaciones después de practicar yoga

Pregunta central: ¿Cómo se sintió después de practicar yoga?

Preguntas de seguimiento. ¿Usted considera que se sintió mejor después de practicar yoga? ¿Usted considera que el yoga afectó de manera positiva su estado de salud emocional y/o física? ¿Nos podría dar un ejemplo o una descripción de algún cambio que usted sintió después de las sesiones de yoga?

3. Control de impulsividad y agresividad

Pregunta central: ¿En qué cree que el yoga le ha ayudado? ¿Considera usted que después de practicar yoga usted comenzó a pensar más antes de actuar?, en caso de que la respuesta sea afirmativa ¿podría dar un ejemplo puntual que le haya sucedido recientemente? ¿Cree usted que el yoga le ayuda a relajarse? *Pregunta de seguimiento* ¿Cree que practicar yoga le ayuda a manejar la rabia?

4. Estrés

Pregunta central: ¿Cómo percibes el estrés actualmente? ¿Ha cambiado la manera como percibes y como manejas el estrés? ¿Podrías dar un ejemplo?

Preguntas de seguimiento: ¿Usted le recomendaría a un amigo la práctica del yoga para ayudarlo a relajarse y sentirse más tranquilo? ¿Las personas que viven o interactúan constantemente con usted le han dicho que lo ven más calmado? ¿Usted se siente menos estresado después de practicar yoga? ¿Considera que el yoga le ayudó a canalizar mejor su energía?

5. Reacciones frente a los problemas

Pregunta central: ¿Cree que el yoga impactó de manera positiva la forma de reaccionar ante problemas? ¿Cómo? ¿Considera que practicar yoga le ayuda a usted a pensar en alternativas de acción frente a problemas? *Preguntas de seguimiento:* ¿El yoga le ayuda a analizar ambos lados de un problema: lo bueno y lo malo?

6. Relaciones interpersonales

Pregunta central: ¿Considera que practicar yoga puede cambiar o mejorar sus relaciones interpersonales? ¿Por qué? ¿Sus amigos o familiares le han dicho que han identificado un cambio en su temperamento después de las sesiones de yoga? ¿Usted siente que el yoga le ayuda a no comportarse de forma hostil con las demás personas? *Pregunta de seguimiento:* ¿Usted considera que en general se relaciona bien con las demás personas? ¿Si no es el caso, cree usted que el yoga le podría ayudar a lograrlo?

7. Regulación emocional

Pregunta central: ¿Considera que después de practicar yoga usted podía definir con mayor facilidad sus sentimientos? ¿Por qué? ¿El yoga le ayuda a contener su ira? ¿Cómo? *Pregunta de seguimiento:* ¿Considera que si al estar bravo usted practica yoga eso le podría ayudar a cambiar su estado de ánimo y sentirme mejor?

8. Relaciones entre grupos de personas

Pregunta central: ¿Le gustó la experiencia de hacer una actividad en grupo? ¿Usted cree que haber practicado yoga le ayudará a establecer relaciones más cordiales con sus vecinos? ¿Cómo?

9. Efecto multiplicador

Pregunta central: ¿Usted siente que gracias al yoga usted le puede transmitir tranquilidad a las personas con las que conviven? ¿Cómo lo haría? *Pregunta de seguimiento:* si la mayoría de personas en su barrio practicasen yoga ¿usted cree que habría menos violencia?

Appendix 3. Original Spanish version of the cartographic guide

1) Variables para guiar la actividad de cartografía social (para establecer la línea de base espacial desde el punto de vista de la comunidad).

**Sugerencias para la facilitadora del ejercicio:

1) Firmar consentimiento/asentimiento, si no lo han hecho previamente.

2) Pedir permiso para grabar audio (y video si desean) de la actividad.

3) Prender la grabadora, decir la hora, fecha y lugar, y, para facilitar el proceso de transcripción, acercar la grabadora a cada persona que interviene. Se recomienda utilizarlo como si fuera un micrófono, que también señala quien tiene la palabra en ese momento de la conversación grupal.

4) Todo el mundo que participará en la dinámica se presenta en la grabadora.

5) El primer paso del proceso cartográfico es realizar el mapa base (*base map*). ¿Cuáles son los límites de la manzana? ¿Cómo podemos representar visualmente a la manzana? ¿Cuáles son los referentes espaciales que hacen el mapa un espacio reconocible para cada participante?

6) Colectivamente llenarán este cuadro de símbolos (alguien de la comunidad debe asumir el rol de llenar el cuadro con los símbolos que se seleccionan entre todos). Esta conversación nos dará información interesante sobre cómo la comunidad, a nivel colectivo de la manzana, representa visualmente a cada variable que nos interesa indagar. La facilitadora debe moderar la conversación y negociación entre actores de la comunidad y estimular la conversación alrededor de la selección de los símbolos. Por ejemplo, ¿por qué escogieron un cuchillo para representar a riñas?

7) Después de terminar el cuadro, todos los participantes empiezan a ubicar cada símbolo en el mapa (debe haber múltiples marcadores de cada color para que puedan ubicar cada categoría simultáneamente). La facilitadora debe moderar la conversación y negociación entre actores de la comunidad y estimular la conversación alrededor de la ubicación de los símbolos/categorías.

8) Después de terminar el ejercicio de mapeo de cada categoría, la facilitadora debe moderar una conversación utilizando el mapa con insumo para estimular comentarios a acerca de los problemas de violencia y convivencia en la manzana. La idea es generar extractos o *quotes* para la línea de base cualitativa que nos servirá para la publicación.

Variable	Símbolo	Descripción
Lugares de paz y seguridad		Marca los lugares donde te sientes en paz, segura/o y/o tranquila (aguamarina).
Lugares de convivencia		Marca los lugares donde hay comprensión y respeto entre vecinos (negro).
Zonas de conflicto		Marca los lugares donde has observado o vivido algún conflicto en tu barrio (rojo).
Lugares donde nunca voy		Marca los lugares que evitas. ¿Por qué? (naranja).
Lugares de peligro		Marca los lugares donde te sientes insegura/o o donde sientes peligro en el barrio (azul oscuro).
Lugares de riñas		Marca los lugares donde has observado o participado en riñas en el barrio (rosado).
Consumo o venta de SPA		Marca los lugares donde hay problemáticas de drogas en el barrio (amarillo).
Peleas con armas		Marca los lugares donde ha habido peleas con armas en el barrio (color diferente).
Peleas violentas entre vecinos		Marca los lugares donde hayan ocurrido peleas violentas con vecinos (color diferente).
Peleas entre pandillas		Marca los lugares donde se hayan presentado peleas entre pandillas (color diferente).
Agresiones sexuales		Marca los lugares donde se hayan presentado agresiones sexuales en el barrio (color diferente).
Robos		Marca los lugares donde se hayan presentado robos (color diferente).
Asaltos en viviendas		Marca los lugares donde se hayan presentado asaltos a viviendas (color diferente).
Violencia intrafamiliar		Marca los lugares donde se haya presentado violencia intrafamiliar (color diferente).
Agresiones contra vigilantes		Marca los lugares donde se hayan presentado agresiones contra vigilantes (color diferente).
Daños en bienes privados y comunes		Marca los lugares donde se hayan presentado daños en bienes privados y comunes (color diferente).
Consumo y venta de sustancias psicoactivas		Marca los lugares donde se presenta consumo y venta de sustancias psicoactivas (color diferente).

Appendix 4. Original Spanish version of the codebook used for coding cycles

Libro de códigos		
Código	Definición	Ejemplo
Lugares de paz y seguridad	Lugares donde te sientes en paz, segura/o y/o tranquila/o	"Bueno sí, hay lugares, por lo menos en algunas manzanas, que se sienten en paz después de haber hecho uno yoga. O uno ya, como está relajado ve las cosas con tranquilidad, no con tanta violencia" (participante, grupo focal posintervención, manzana 8, Santa Marta, diciembre 10, 2015).
Lugares de convivencia	Lugares donde hay comprensión y respeto entre vecinos	"En la maloca es donde tenemos la convivencia" (participante, grupo focal posintervención, manzana 6, Santa Marta, diciembre 9, 2015).
Zonas de conflicto	Lugares donde has observado o vivido algún conflicto en tu barrio/manzana.	"Sí, allá arriba, (...) él vino y le partió la pierna a la muchacha (pasa un vehículo), y ese pocotón de gente, entonces en esa pelea, en ese pocotón de gente, peleó un muchachito de diecisiete años con él, dicen" (participante, grupo focal preintervención, manzana 6, Santa Marta, octubre 22, 2015).
Lugares donde nunca voy	Lugares que evitas	"De aquel lado hay una finca donde hay, no sé, hay caballos, cosas y hay personas ricas, y [está] prohibido el paso" (participante, grupo focal preintervención, manzana 7, Santa Marta, octubre 22, 2015).
Lugares de peligro	Lugares donde te sientes insegura/o o donde sientes peligro en el barrio/manzana	"... detrás de la reja está el monte, ahí nosotras estamos entre la supuesta clínica y ahí hay un monte en la mitad, ese es un lugar de peligro" (participante, grupo focal preintervención, manzana 3, Santa Marta, octubre 23, 2015).
Lugares de riñas	Lugares donde has observado o participado en riñas en el barrio/manzana	"Y ya no, o sea no se ven esas riñas, esas peleas entre vecinos, ya ha calmado todo eso y el yoga nos ha ayudado bastante a todas" (participante, grupo focal posintervención, manzana 6, Santa Marta, diciembre 9, 2015).
Consumo o venta de sustancias psicoactivas	Lugares donde hay problemáticas de drogas en el barrio/manzana	"A mí [me] toca ir todos los días por esa quebrada. Uno le coge miedo, por lo que como hay mucha persona metiendo vicio, le da miedo que la vayan a hacer un daño a uno" (participante, grupo focal posintervención, manzana 6, Santa Marta, diciembre 9, 2015).
Peleas con armas	Lugares donde ha habido peleas con armas en el barrios/manzana	"Yo digo que ha disminuido el uso de palos y picos de botella en peleas, porque como ya casi no se ven así, esas riñas como al principio, que nos entregaron las casas. Eso era despelote tras despelote, pero ahora ya ha disminuido bastante" (participante, grupo focal posintervención, manzana 8, Santa Marta, diciembre 10, 2015).

Peleas violentas entre vecinos	Lugares donde hayan ocurrido peleas violentas con vecinos	“Allí en el parque, en el parque, se han agarrado por los hijos” (participante, grupo focal preintervención, manzana 6, Santa Marta, octubre 22, 2015).
Peleas entre pandillas	Lugares donde se hayan presentado peleas entre pandillas	“Hay que invitarlos [a los miembros de las pandillas] a que hagan yoga para que tengan entretención en otra cosa y no tirarse piedras, ni estar peleando por cosas innecesarias (...). Hay que mejorarlos, hay que controlarlos e invitarlos a que hagan yoga...” (participante, grupo focal posintervención, manzana 8, diciembre 10, 2015).
Agresiones sexuales	Lugares donde se hayan presentado agresiones sexuales en el barrio	"No. Ellos no hacen yoga. Ellos lo que hacen es fumar, fumar y fumar. Deberían de meterlos [a] todos en la cárcel, porque ellos no tienen nada que hacer. Da miedo que se vayan a pasar de eso, y vayan a coger una niña y la vayan a violar ahí. Una zona peligrosa [la quebrada]" (participante, grupo focal posintervención, manzana 6, Santa Marta, diciembre 9, 2015).
Robos	Lugares donde se hayan presentado robos	“Sí, yo sí he escuchado, por allá arriba enfrente de tu casa se robaron la bicicleta. En pleno día, por acá atrás. De casualidad esa señora se vino para el yoga y se le metieron, y se le robaron” (participante, grupo focal posintervención, manzana 6, Santa Marta, octubre 9, 2015).
Asaltos en vivienda	Lugares donde se hayan presentado asaltos a viviendas	“Ya eso se acabó. Ya aquí eso no se ve. Ya de pronto se fueron, una, dos, tres casas. Pero ya no” (participante, grupo focal posintervención, manzana 8, Santa Marta, octubre 10, 2015).
Violencia intrafamiliar	Lugares donde se haya presentado violencia intrafamiliar	“Yo tenía esa forma de maltratar a mis hijos: gritando, todo era gritando y cada vez que yo les iba a hablar, ellos enseguida se exaltaban. Pero ya no, ya he cogido más tranquilidad” (participante, grupo focal posintervención, manzana 6, Santa Marta, diciembre 9, 2015).
Agresiones contra vigilantes	Lugares donde se hayan presentado agresiones contra vigilantes	“Claro que sí [el yoga puede ayudar a que las personas tengan relaciones más cordiales con los vigilantes], porque así la persona puede controlar el carácter, controlar su genio y puede ser respetuoso con los demás, que tiene que comportarse y que debe cumplir normas. Entonces, eso [el yoga] le ayudaría bastante” (participante, grupo focal posintervención, manzana 8, Santa Marta, Diciembre 10, 2015).
Daños a bienes privados y comunes	Lugares donde se hayan presentado daños en bienes privados y comunes	“Y en la maloca, pues, también, algunos daños de estos mismos muchachos. Se encargaron de dañar como las lámparas, las puertas de los baños y cosas así, pero eso también se ha ido recuperando” (participante, grupo focal

		posintervención, manzana 3, Santa Marta, diciembre 10, 2015).
La experiencia de practicar yoga	Le gusta o no la práctica del yoga	“Me gustaría [el yoga] para otras personas, que si es el caso llegan a venir, que tengan la oportunidad que nosotros tuvimos para que no sean personas así, que cojan rabia, que se pasen peleando; que eso es muy bueno, el yoga los compone” (participante, entrevista semiestructurada posintervención, manzana 6, Santa Marta, diciembre 9, 2015).
Las sensaciones al practicar yoga	Percepción de sensaciones en el cuerpo y en la mente	“... en el yoga uno va tomando conciencia de uno mismo entonces por lo menos, tú siendo una niña, una mujer, ves ese lugar a altas horas de la noche (...) y ya con más claridad de pensamiento, obviamente vas a evitar coger ese camino, porque te puede suceder algo” (participante, grupo focal, posintervención, manzana 6, Santa Marta, diciembre 9, 2015).
Agresividad	Agresión física, agresión verbal, ira y hostilidad (Buss & Perry, 1992)	“Porque, o sea, antes yo venía y descargaba la rabia en cualquier momento, ahora para no ponerme agresiva me callo y me pongo a llorar, se pone uno como más sensible” (participante, entrevista semiestructurada, posintervención, manzana 7, Santa Marta, diciembre 10, 2015).
Estrés	Percepción de estrés, angustia y frustración	“Sí, sí ha cambiado mucho el estrés, a veces me estresaba mucho. Ahora me relajo, cierro los ojos, pienso, me concentro, dejo de pensar en las cosas que me estresan, porque el estrés, sea como sea, lo enferma a uno demasiado. Ahora con el yoga no me estreso como antes” (participante, entrevista semiestructurada, posintervención, manzana 6, Santa Marta, diciembre 9, 2015).
Estrategias de <i>coping</i>	Reevaluación positiva: estrategia cognitiva que busca aprender de las dificultades, identificando los aspectos positivos del problema. Es una estrategia de optimismo que contribuye a tolerar la problemática y a generar pensamientos que favorecen a enfrentar la situación. Búsqueda de alternativas: estrategia cognitiva en la que se busca analizar las causas del problema y generar alternativas de solución (Londoño et al., 2006)	“... estando ya uno relajado, todo lo toma como con más suavidad y piensa más cuál es la mejor salida a la situación que haya: ‘bueno, si ya no se pudo de este modo, buscarle otra solución’, pero sin pelear, sin gritar y sin ofender a los demás” (participante, entrevista semiestructurada, posintervención, manzana 3, Santa Marta, diciembre 9, 2015).

<p>Relaciones interpersonales con sus amigos y familiares (confianza)</p>	<p>Confiabilidad: se refiere al grado en que las personas comparten información con otras. Lo que indica confianza en que la información no será utilizada en su contra y adicionalmente cree que otros sienten esa misma confianza en él o ella (Hoy y Tschannen-Moran, 1999)</p>	<p>“Con mis hijos también, hablo más con ellos. Les digo las cosas con más calma, porque también esa era otra cosa, que yo explotaba con ellos más que todo. Cualquier cosa ¡ahí está!, y ahora soy más calmada” (participante, entrevista semiestructurada, posintervención, manzana 8, Santa Marta, diciembre 10, 2015).</p>
<p>Inteligencia emocional (compresión y regulación de emociones)</p>	<p>Comprensión: comprendo bien mis estados emocionales. Regulación: soy capaz de regular los estados emocionales correctamente (Fernández-Berrocal et al., 2004)</p>	<p>“Porque, o sea, antes yo venía y descargaba la rabia en cualquier momento, ahora para no ponerme agresiva me callo y me pongo a llorar, se pone uno como más sensible” (participante, entrevista semiestructurada, posintervención, manzana 7, Santa Marta, diciembre 10, 2015).</p>
<p>Relaciones con su comunidad</p>	<p>Benevolencia: se refiere a la creencia de que otras personas de la comunidad se preocupan por uno y que cuidaría y protegería el buen nombre de uno, y actuaría protegiendo a la persona (Hoy y Tschannen-Moran, 1999)</p>	<p>“Nosotras siempre hemos sido buenas vecinas, pero nos hemos unido más a través de eso, ya porque compartimos las experiencias, hablamos: que esto, que lo otro” (participante, entrevista semiestructurada, posintervención, manzana 3, Santa Marta, diciembre 9, 2010).</p>
<p>Percepción de la efectividad del yoga para la construcción de tejido social y disminución de violencia en el vecindario</p>	<p>Si la mayoría de personas en su barrio/manzana practican yoga: ¿usted cree que habría menos violencia y mejor convivencia entre vecinos? El impacto que el yoga tiene en los individuos que asisten a las clases en sus niveles de agresión, estrés, estrategias de <i>coping</i> y regulación emocional puede o no promover un ambiente en Ciudad Equidad, con menos violencia y mejor convivencia entre vecinos</p>	<p>“Bueno, yo creo que ya te he contado todo lo que yo he visto. Como te digo, nos ha dado tranquilidad, nos ha hecho conocer mejor, nos ha hecho mejores vecinos, mejores personas. A mí me ha hecho mejor mamá, mejor esposa, porque ya controlo un poco más esas emociones negativas y todas esas cosas” (participante, entrevista semiestructurada, posintervención, manzana 3, Santa Marta, diciembre 9, 2010).</p>

Appendix 5. Original informed consent form in Spanish

Consentimiento informado

Título del proyecto de investigación: Proyecto Samshakti – Yoga para la convivencia

Programa piloto que busca contribuir en las habilidades de convivencia de los habitantes del complejo de vivienda, Ciudad Equidad Etapa II (Santa Helena), en la ciudad de Santa Marta, a través de sesiones de yoga, que brinden herramientas necesarias para la resolución pacífica de conflictos y fortalecimiento del tejido social.

Investigador principal: Amy Ritterbusch

Coinvestigadores: María Adelaida López, Natalia Quiñones y Laura Liévano

Patrocinadores: Agencia Nacional para la Superación de la Pobreza Extrema y Fundación Bolívar Davivienda

Introducción

Nos dirigimos a usted para informarle sobre un estudio de investigación en el que se le invita a participar. El proyecto Samshakti consiste en un estudio aleatorio de los efectos del yoga en personas residentes del complejo de vivienda Ciudad Equidad Etapa II (Santa Helena), en la ciudad de Santa Marta, Colombia. La intención del presente documento, cuya copia se le entrega, es que usted reciba la información suficiente para que pueda evaluar si quiere o no participar en este estudio.

Participación voluntaria

Debe saber que su participación en este estudio es voluntaria y que puede decidir no participar o cambiar su decisión y retirar el consentimiento (y por ende retirarse del estudio) en cualquier momento.

Propósito / Objetivos

El propósito de la investigación consiste en explorar la efectividad del yoga en el fortalecimiento de capacidades de las personas de la Red Unidos en el reconocimiento y respeto de las diferencias, y la solución pacífica de conflictos que faciliten la construcción de tejido social.

Descripción de actividades

Aplicación de encuestas y entrevistas con un componente cartográfico (instrumentos).

Las encuestas y entrevistas las aplicarán personas entrenadas, que leerán en voz alta las preguntas del formato que se entregará a cada uno de los participantes. Usted podrá realizar

cualquier pregunta que tenga respecto de los formatos, de las preguntas que se leen por parte de los investigadores, o de cualquier información adicional que requiera.

Intervención

Los participantes del estudio deberán ser mayores de 14 años de edad y serán aleatoriamente ubicados en el grupo de control o en el grupo de tratamiento. Aquellos que sean seleccionados para el grupo de tratamiento asistirán a 20 sesiones de una hora media de yoga que se llevarán a cabo entre una y dos veces semanales durante tres meses. Los instructores están entrenados para realizar las clases, con lo cual se garantiza la seguridad y comodidad de los participantes. Los participantes tienen la instrucción de realizar ejercicio hasta el punto en que resulte cómodo para su cuerpo. En las prácticas de yoga se realizarán sesiones donde se practicarán *asanas* (posturas físicas), *pranayamas* (respiración), *yoga nidra* (relajación profunda) y *meditación*.

Riesgos e incomodidades

En general al practicar yoga usted puede presentar riesgos o incomodidades comunes con el ejercicio moderado. Algunos de estos riesgos son: molestias en cuello, rodillas, espalda y hombros. También se podrían presentar dolores o lesiones musculares o en las articulaciones.

Confidencialidad

La información que se recoja en desarrollo de la investigación será conocida únicamente por los investigadores, la Corporación Dunna, la Agencia Nacional para la Superación de la Pobreza Extrema y la Fundación Bolívar Davivienda. Los nombres de los participantes no serán revelados de manera alguna en los resultados de la investigación.

Compensación en caso de lesión

Los participantes recibirán compensación en caso de lesión que se derive directamente de la investigación, de acuerdo con las leyes y políticas vigentes para la Corporación Dunna. El daño directo debe ser aprobado por un médico contratado por la Corporación Dunna para este propósito.

Compensación

No se prevé compensación económica/ monetaria por su participación en este proyecto. Si tiene alguna pregunta durante o después de que termine el estudio, usted puede llamar a Amy Ritterbusch al teléfono 3394949 ext. 4725 o escribir al correo electrónico a.ritterbusch@uniandes.edu.co.

En caso de presentarse algún problema asociado a la investigación, usted también puede contactar al Comité de Ética de la Universidad de los Andes. Teléfono 3394949 Ext. 2073 o al correo electrónico comite-etica-investigaciones@uniandes.edu.co.

¿Quisiera usted participar en el estudio?

Sí _____ No _____

¿Podemos grabar las actividades en audio y/o video?

Sí _____ No _____

(En caso afirmativo, usted participará en la selección del material audiovisual)

¿Podemos publicar fotografías en las que usted aparezca, mapas y otra información en el producto académico?

Sí _____ No _____

(En caso afirmativo, usted participaría en la selección del material a publicar: fotografías, mapas, etc.).

Firma del participante

Fecha

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