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HATHA YOGA FOR AFFECTED CHILDREN'S PSYCHOLOGICAL WELL-BEING FOLLOWING THE NATURAL DISASTERS**Dr. Samudra Senarath**

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Abstract: Natural disasters affect human life short and long-term and usually include multiple stressors that can have different effects on survivors. Children who affected by the natural disasters, increase their psychological problems and mental disorders; anxiety, posttraumatic stress, depression, somatic complains, emotional problems, issues in social relationships and difficulties in education significantly. The objectives of the study were to examine review of empirical literature on the disasters related psychological problems, theoretical aspects of the Hatha yoga and its' physiological and psychological effects, to review the natural disasters related psychological problems,' studies and non-studies with Hatha yoga interventions, to review the relationship and develop hypothesis, that Hatha yoga is as the intervention for psychological well-being for affected children by the natural disasters. Sample survey design and purposive sampling method were employed the present study and data were collected from 17 studies with natural disasters and its psychological consequences. Twenty six empirical articles were

reviewed related on different natural disasters with other psychological problems studies and Hatha yoga interventions. And yoga related literature were examined that theoretical aspects of yoga; Hatha yoga and its psychological and physiological effects. The findings of the study proved that children who have been affected by the natural disasters presented substantial psychological problems. Hatha yoga intervention studies proved that those problems can be decreased significantly. Affected children have shown the changes of negative thoughts; improve the coping skills and increasing concentration and self-control. The present study can be concluded and predicted that there is a relationship between natural disasters related psychological problems and the Hatha yoga interventions. Accordingly it can be suggested that Hatha yoga interventions were the most suitable to decrease the psychological problems of the affected children significantly.

Key words: Natural disasters, Affected Children, Psychological problems, Hatha yoga, Psychological well-being

INTRODUCTION TO THE STUDY

The long history of natural disasters has been continuing since the world began and it can be divided into various types such as landslides, flood, storm, cyclones, hurricanes, earthquake, volcanic eruption, tsunami etc. These disasters affect human life short and long-term and usually include multiple stressors that can have different effects on survivors. Many researches have highlighted that natural disasters occur more in developing countries rather than in developed countries. According to Cater, Revel, Sapir, and Walker (1993) between 1967 and 1991, disasters around the world killed seven million people and affected three billion. During this period, an average 117 million people living in developing countries were affected by disasters each year as compared to about 700,000 in developed countries (a striking ratio of 166:1). A research study has proved that the 37 samples in developing countries showed more severe effects overall ($M=2.9$, $SD=0.8$) than did samples from the USA ($M=2.1$, $SD=0.8$) and other developed countries ($M=2.5$, $SD=0.8$). In comparison to these mean values of natural disasters in developing countries were higher than that of the other developed countries (Norris, 2005). Moreover, in the year from 1978 to 1991 researchers have found most disasters happened in and around Asian countries. Disasters including floods, famine, and hurricanes affected about 146 million people worldwide (Davie, 2005). The majority of those, about 110 million, were affected by severe flooding in India, Bangladesh and China.

The psychological consequences of natural disasters have been studied extensively in empirical aspects. Specific emotional and behavioural responses to stress have been observed and studied by mental health professionals in multiple settings, under different circumstances, over time. These symptoms have become the clinical indicators used for identifying the stress related disorders. Emotional reactions; fear, depression, withdrawal, anger, and physical complaints or symptoms with no medical basis can occur immediately or weeks, months, and years after the traumatic events (Amanda, 2005; Norris, 2002). The most prevalent and common form of psychological disorders in children are anxiety disorders (Bernstein & Borchardt, 1991). The prevalence of anxiety varies as a function of age. One of the main aspects of children can get anxiety disorders affected by the natural disasters (Norris et al., 2002). A research study revealed that children with pre-existing psychological problems, especially anxiety, were more vulnerable to PTSD reactions following natural disaster (La Greca, et al.1996). They also postulated that children who had greater exposure to the disaster showed an increase in anxiety symptoms after the disaster (Bravo, Woodbury, & Ribera; 1990). Further Norris (2005) research study was identified that 19% of the samples showed anxiety or generalized anxiety and difficulties in education and social relationships issues. Therefore, it is important to review the literature for the psychological well-being of children affected by the natural disasters.

OBJECTIVES OF THE STUDY

The objectives of the study were to examine and review the disasters related psychological problems and empirical studies, to examine theoretical aspects of the Hatha yoga; to review the natural disasters related psychological problems and Hatha yoga intervention studies and to develop hypothesis that there is a relationship between the disasters related psychological problems and Hatha yoga interventions.

REVIEW OF LITERATURE

Natural Disaster related Psychological Problems and Empirical Studies

The present study has focused on research studies on the natural disasters including few interventions studies. Conde (2003) pointed out that children who affected by a disaster, the most commonly experienced anxiety symptoms were worry or oversensitivity, negative mood, and fear of failure and criticism and there were no significant ethnic differences across symptomology. Further natural Fire studies showed this descriptive data were used to examine the most commonly reported anxious, depressive, and behavioural symptoms across all children following a fire. Results indicate that the most commonly reported anxiety symptom was worry or oversensitivity ($M = 4.48$, $SD = 3.65$), followed by physiological ($M = 3.39$, $SD = 2.89$) and concentration ($M = 2.17$, $SD = 2.09$) (Conde, 2003). Further this study results presented that relationship between loss and anxious symptoms (3 scales: physiological, worry/ oversensitivity, and concentration) measured by the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985), subtitled "What I Think and Feel". The main effect of loss on anxiety when covarying the impact of negative life events were significant for anxious concentration, ($F(1, 81) = 5.33$, $p = .02$, $Beta = .12$). Similarly, the main effect of loss on anxiety when covarying total support was significant for worry/ oversensitivity, ($F(1, 81) = 4.91$, $p = .03$, $Beta = -.18$); and total anxiety, ($F(1, 81) = 4.78$, $p = .03$, $Beta = -.38$). Additionally, the main effect for loss when covarying total support regarding the fire approached significance for worry/ oversensitivity, ($F(1, 81) = 3.93$, $p = .05$, $Beta = -.29$) (Conde, 2003)

The next study focused on shipping disaster with adolescence using a standardized diagnostic interview and comparisons with a matched control group. Young people ($N = 216$) who as teenagers had survived a shipping disaster-the sinking of the "Jupiter" in Greek waters-between 5 and 8 years previously and 87 young people as matched controls were interviewed. The survivors showed raised rates of diagnosis in a range of anxiety and affective disorders during the follow-up period. The highest rates were among the survivors who had developed PTSD. Onset of anxiety and affective disorders varied between being indefinitely close to the disaster to year's later (Bolton et al., 2000). The other study, a three-year longitudinal study was conducted by Gullone et al., (2001) examined the stability of anxiety over time in children and adolescents. The children and adolescents were recruited from a larger study investigating normative fear (Gullone & King, 1993). The sample consisted of 68 children (38 females and 30 males), between the ages of 10 and 18 years, who lived in Victoria, Australia. The RCMAS is a self-report measure that was used to assess anxiety. Results indicated that self-reported anxiety decreases with age. Younger children and females were found to report higher levels of anxiety than older children and males. Physiological signs of anxiety were also found to decrease over time in younger children, but not older children. Overall, levels of anxiety at the beginning of the study were predictive of anxiety levels after three years (Gullone et al, 2001).

Moreover, Burke et al., (1986) studied the ten months after a blizzard and flood disaster. These were assessed blindly by 6 mental health clinicians for signs of distress, including fear, depression, and anxiety. Children from the flooded area demonstrated more distress than those from the no flooded area. Next was self-report data for 5,687 children (aged 9-19 yrs) were collected approximately 3 months after a hurricane devastated the children's community. Anxiety was measured via the RCMAS, and reports of PTSD symptoms were obtained via the Reaction Index. Significant higher anxiety scores and more PTSD symptoms were found for children experiencing more or more severe

exposure to the hurricane. Girls reported more anxiety and PTSD symptoms than boys, and Black children were more likely than White children to report PTSD symptoms (Lonigan et al., 1991). Swenson et al., (1996) fourteen months after a hurricane, young children who had experienced the storm showed significantly higher anxiety and withdrawal and more behaviour problems than did children who had not experience the storm. Behavioural problems decreased steadily over the six months following the storm. Mothers' distress in the hurricane's aftermath was associated with the longevity of their children's emotional and behavioural difficulties. The Tsunami study in Matara District in Southern Sri Lanka with affected children, (for experimental group directly affected 75, control group not directly affected 61), the RMCAS scale was implemented. There were no significant differences in the overall anxiety scores of children in the two schools. However, the total anxiety scores of male children in the tsunami-affected school were significantly higher than in the non-affected school. Among the RCMAS sub-scales, only the score for concentration anxiety factor was significantly different only in male children between the two schools (Dewaraja, Sato, & Ogawa, 2006). According to above mentioned 17 research studies, it can be concluded that affected children have significant psychological problems.

THEORETICAL ASPECTS OF YOGA

The practice of yoga originated in India over 5000 years ago and the first written mention of yoga comes from the Hindu Vedas dated approximately 2500 BC. Yoga's first influence on the Western world was likely through the America, Germany, Spain, and Britain. Early yoga teachers came from India to the Western world to teach yoga and it reached the attention of the academic world quickly, and was the center of a series of lectures by Carl Jung in 1932. The practice of yoga became much more popular in the Western hemisphere during 1960s (Saper et al., 2004).

In Western Europe, yoga has developed and it focused as body relaxation and autogenously training. In Germany, first yoga school was began in Berlin, 1921 (Jahn, 1990), further it was developed by throughout as therapeutic aspects. Meanwhile, many private yoga schools and the professional associations for yoga teachers were established. It aims to develop training skills, quality of teachers, protection and standardization of those registered members of association. However, three million of yogis are in Germany and 80% of them are women. Although new developments occupy this is increasing with combination of science and practice. Further most of them practice Hatha yoga in this country (Stueck, 2008). Yoga enables a holistic healing of the individual. The philosophy perceives the mind and body as an integrated unity, for which it is considered a mind-body science. Yoga facilitated calm and relax of individuals' mind, strengthens and tunes the body, and brings them into harmony with one another" (Payne & Usatine, 2002, p. 4-5). The focus on yoga theory required a physical yoga practice as a foundation. Many yoga master teachers believe that yoga practice must start with the physical postures, and that a student cannot build to the theory until the physical practice has been established. Swenson (1999) is fond of saying, "99% Practice and 1% Theory" (p7). However, while yoga begins with physical practice, it is important that the yoga practitioner not stop with physical yoga. "Asanas are not the goal; they are a vehicle to access a deeper internal awareness" (Swenson, 1999, p. 7). The ultimate purpose of the physical yoga is to take the individual into the philosophy of yoga. According to Horrigan, (2004) yoga has its roots in the Hindu religion, and while much of core yoga theory speaks to issues generally associated with religion (i.e., inner peace, understanding, awareness, union with self, union with a higher power), yoga is not a religion. "Nor even a philosophy -it is an extremely practical methodology for systematically expanding the

conscious mind. Yoga is the science for overcoming the self-destructive and limiting beliefs and internal programs that keep individual life bound to the experiences of the “Waking State of Consciousness” (MSI, 1995, p. 2). Payne and Usatine (2002) consider yoga a “prescription for good health and stress management,” In western psychology, build up a valuation of science –theoretical foundation of the yoga. From psychological view of the yoga, introduce a way is auto regulations methods as of the stress management. But psychological aspects proved throughout empirical of scientific investigation (e.g., Astin, (1997) investigation eight factors; Piron, (2003) mental health).

METHODS OF THE STUDY

Sample survey design and purposive sampling techniques were implemented for the present study. Data were collected from secondary sources; web documents, empirical journals, text books and 17 studies reviewed with natural disasters related psychological problems. Hatha yoga and its theoretical aspects were discussed within review of literature. Twenty six Hatha yoga intervention studies were reviewed related on natural disasters’ psychological problems as well as other psychological intervention studies were also examined for the establishment of the reliability of the study.

RESULTS OF THE STUDY

Hatha Yoga and Its Psychological and Physiological Effects

The physical discipline of yoga, which came to be called “Hatha Yoga” (literally “ha is sun (Yang) - Tha with moon” (Yin yoga), was outlined further by Swatmarama in the third century BC text, Hatha yoga Pradipika (Iyengar, 1966) Hatha yoga is probably to most common form of the yoga in the Western world and finds frequently also its employment in the therapeutic Setting (Physiotherapy, psychotherapy etc) (Jahn, 1990; Grawe, Donati, Bernauer, 1995). Since the moon and the sun represent to our existence and homeostasis that means recovers of body and spirit of our life (Jahn, 1990).

Hatha yoga represents not only of the body, but addresses themselves also to the energy covering (Pranayama Kosha). And also the mental-emotional covering (Manomaya Kosha) these terms are taken from yoga philosophy. But there are no term equivalents in the Western psychology so far. First attempts on the part of the western psychology of the Transpersonal psychology (e.g., with the energetic psychology) (Callahan, 2002; Gallo, 2000). The Pranayama (breathe exercises) concerns the Asanas so called (body exercises) and, the body exercises are accompanied by the breathe exercises. An important goal of the Hatha yoga is a correct respiration, as basic condition recovers life. The Asanas serves the stimulation of certain physical ranges and achieves thus certain effects. Numerous scientific investigations have confirmed the effectiveness of yoga for human life (Ebert, 1986.) Main effects by Hatha Yoga (Asanas/Pranayama) are stated below Table 1.

Table 1: Main effects of the Hatha Yoga –physiological

<p>Heart circulation system - Reduction of hypertension - Lowering of the Cholesterol level - Lowering pulse.</p>
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<p>Respiratory organs - Improvement of the mental state with asthma patients - Increase of the</p>

respiratory volume - Increase of breathe out length - Increase of the breath notion time - Decrease of cold diseases.

Movement and supporting apparatus – Increase of the general mobility – Reduction of the muscle tonus – Increase of the general Fitness.

Internal organs - positive effect on metabolisms and digesting organs – improved work of the immune system - improved blood circulation - Decrease of stomach intestine complaints.

Nervous system/psyche – Relaxation for stress - Decrease of sleep disturbances - improves blood circulation of brain and (Central Nervous System CNS) - Increase of the concentration ability and the memory - increase of the self-assurance and decrease of fear - Improvement of the mental state (Ebert, 1986).

Arpita (1983) published a recapitulate view from 29 studies to the Hatha Yoga and finds thereby first main effective ranges: 16 studies have proved the effectiveness of Hatha Yoga on the basis of physiology. The physiological indicators are the development of the physical efficiency and the well-being. Reduction of general fearfulness, the development of a positive self-concept, an improved self-actualization as well as a reduction of internal tension and emotional instability were determined by 15 psychological investigations.

Yoga as Relaxation Method

While some researchers may cluster relaxation techniques such as yoga, progressive relaxation, and biofeedback together, Smith (1986) argued that relaxation techniques vary according to the amount of required focus, passivity, and receptivity and must be individually assessed for proper use and effectiveness. He proposed that different types of relaxation require different amounts of these skills, and that certain relaxation forms are more appropriate for beginners, while others may provide different benefits for individuals more skilled in relaxation. His nine-level hierarchy specified the difficulty level of relaxation approaches; progressive relaxation was the easiest form of relaxation (level 1), with yoga stretching (asanas) at level 2, Kundalini yoga (which includes somatic focusing) placed at level 5, and mindfulness meditation techniques placed at level 9 (the most skillful type of relaxation). In a later study, Smith, Amutio, Anderson, and Aria (1996) used factor analysis procedure on data collected from 940 individuals to determine characteristics associated with different types of relaxation. Researchers concluded that while progressive muscle relaxation and massage were associated with feelings of being “distant” and “limp,” yoga stretching was associated with “aware” and “joyful,” and meditation was associated with “aware,” “prayerful,” and “joyful” (Smith et al., 1996, p.67). This supports Smith’s previous hypothesis that different forms of relaxation have unique inherent qualities. Astin (1982) further supports the idea that different forms of relaxation have different qualities and purposes. He supports the traditional yoga philosophy that the physical yoga, asanas, is “preparatory to meditation” (p. 195).

Yoga can practice as short -and long- term, if the practitioners use short -term with 60 minutes and short duration has short relaxation. The short relaxation firstly effect on physical procedures as Vegetative Nervous System, (Parasympathetic, slowing down respiration, pulse), connections to the endocrine system and immune system (among other things immunoglobulin A increasing (IgA)). The depth relaxation focused feelings and thoughts, behavior dismantling of fearless threat in cognitions.

And behavior improvement tendency for more relaxed behavior, however the depth of the relaxation conditions could not be sufficient with a 60-minute yoga program, in order to cause these changes. The physiological effects (relaxation reaction) a reduction of the pulse frequency. Positive effects should have the stress-reducing and/or relaxation-inducing effect of the training meetings on the immune system (e.g., IgA) (Stueck, Meyer, Rigotti, Bauer, 2003; Stueck, 2008).

Furthermore, Astin (1997) proposed that the practice of yoga asanas might help with stress management as a way of teaching the individual to interpret situations more positively. Astin proposed that stress reactions are due to perceptions of the situation. When an individual experiences a painful psychological event, the body physically reacts to this emotional negativity with muscular contraction and physical tension (p. 194). Yoga can teach an individual to “relax into his or her experience” (p. 194), and therefore when the environment does not change, the experience of stress is reduced. In addition, through the practice of physical yoga postures, stretching leads to an increased power of bodily sensation, which yields both increased awareness and neural integration (Astin, 1997). Management of stress-related physical ailments may also occur because yoga has the potential to teach individuals voluntary control of physiological mechanisms, such as heart rate (Telles & Vani, 2002), which may help them to better manage symptoms. According to above mentioned scientific studies can be concluded that Hatha yoga interventions facilitated to individuals’ physical and psychology well-being.

The Hatha Yoga and Relaxation with Yoga Element for Children

This yoga program introduced as EMYK® (Entspannungstraining mit Yogaelementen für Kinder-Relaxation with Yoga Element for Children) and was developed by Stueck 1994-1998, and this was the first scientific based program for children. This is in particular, for children of age 5-10 and older and structures of sessions were divided into 3 types: first relaxation, yoga exercise, and final part, these factors are explained in flowing:

First relaxation: In the beginning, the aim of relaxation was to achieve a stronger inner orientation and prepare for the following yoga exercises. Relaxation in the beginning about 10 minute “Journey through the body” which consists of different concentration tasks on single body parts (e.g., heels, calves, shoulders, arms, backside of the head, face, lower spinal thighs etc). At the end of the concentrated body parts then children practice chest-and stomach-breathing and blowing up balloon (imagine your favorite color, blow it up and blow all worries and fears into the balloon, move your mouth like blowing up the balloon) (Stueck, 1998). In addition to that one of the three breathing techniques that are to be learned throughout training program which are Ujjayi, Nadhi Shodana, and Regular breathing (Stueck, 1998). Furthermore, students are supposed to experience and practice these breathing-exercises on order to reduce stress in everyday life. Notably, in the EMYK program, before the asana exercises breathing techniques are supposed to carry out in the beginning. Because of that Stueck (1998) suggested children can concentrated at the beginning rather than end of the session. Before the beginning of yoga asana children should have to learn psycho education and breathing techniques of the yoga. Children are supposed firstly to talk their emotions and progresses during the exercises and secondly their experiences regarding applicability in their every-day-life (Stueck, 1998).

Yoga Exercise: The relaxation training mainly focuses with exercise (asana) of the Yoga. In order to understand yoga its objectives, aims, and basic rules should discuss as introductory story in the first session. The rules are introduced as “Four Golden Rules of Yoga – Exercises” (Asana); concentrate on the exercise, breath, body exercise must be stable, firm and pleasant and give yourself to time to relax after the exercise, feel into yourself (Stueck, 1998). The yoga part is to be observed within four aspects.

a) Asana–repertory: during the yoga part children will learn 23 asana within 15 sessions. Each asana practiced and repeated often enough and should be conducted as homework. The aim is to get relaxation and improvement of the practicing asana and it is helpful for child self-relaxation.

b) Working with Yoga-series: The training especially focuses on working with “Yoga-series” that means enclosed cycles of movement (e.g., sun dance) and different asana are carried, linked with breathing.

c) Yoga series for autonomous practice: After the yoga session 12 or 13 children can manage alone all yoga-series (asana) individually and autonomously (e.g., Tree, Fish, Bow, Leaf, Spider, Turtle, Candle, Cobra etc).

d) Students as yoga teacher: After the session 11 of yoga, students have confidence to teach other members in the group. Thus, student functions as a yoga-teacher and hence takes over responsibility of the group and its development.

Final Part: The final part includes in playful form and it encourages social contact and integration into the group and reinforces the training efforts. Various massage techniques, meditation exercises, sense- exercises and imagination-journeys are carried out (tapping of the body with sounds, OM-chanting, Balloon games, Leaping lotus flower, Touch games, Trust games, Smell game etc) (Stueck, 1998). Senarath (2009) study, Hatha yoga EMYK was implemented for tsunami affected anxieties children’s to decrease the anxiety in Sri Lanka. Two way ANOVA proved that children anxieties were decreased significantly. The EMYK program is most viable intervention for the disaster affected children’s’ psychological well-being.

EMPIRICAL RESEARCH AND INTERVENTION STUDIES IN HATHA YOGA

Stress: Several research studies support the potential of yoga as a stress reduction mechanism. For instance, yoga training may reduce participants’ perceptions of stress (Latha & Kaliappan, 1991) and reactivity to stress including occupational stress (Gura, 2002 ; Heilbronn, 1992), PTSD (Brown & Gerbarg, 2005b), and even the stress of caring for an individual with a chronic condition (Waelde,Thompson, & Gallagher-Thompson, 2004). Further regular yoga practitioners were found to have lower levels of the stress hormone cortisol in saliva samples (Watanabe, Fukuda, Hara, & Shirakawa, 2002). Long-term yoga participants indicated fewer stressful life events during the past year than did non-yoga practitioners (Venkatesh, Pal, Negi, & Varma, 1994), although this could be due either to differences in perception of stress, differences in lifestyle choices, or differences in another unidentified variable. Controlled long-term studies are needed to understand more on this issue.

The intervention studies in EMYK by Stueck (1998) throughout children reduce the stress in school short -and long -term, suitable to reduce exam anxiety. This study was conducted using 3

measurements time pre, post 1 and post 2 with EG (n=21) and CG (n=27). Pre and post 1 result were bodily troubles, helplessness, and psycho-physical behavior when dealing with stress symptoms was decreased. Static ability to balance oneself was increased. Beside that 3 measurements time results were, emotional balances were increased, feeling of inferiority, extrovert activity, impulsiveness, shyness were decreased in contrast with CG (Stueck, 1998; Stueck, Reschke, Tanjour, & Hartwig, 2002).

Anxiety: Yoga theory and research support it's potential for reducing anxiety, clinical (Miller, Fletcher, & Kabat-Zinn, 1995) and specific (such as examination anxiety, Broota & Sanghvi, 1994). Long-term yoga practitioners were diagnosed as having lower levels of both state and trait anxiety than do non-yoga practitioners (Venkatesh, Pal, Negi, & Varma, 1994). In one study, outpatients with anxiety neurosis, who were provided with yoga training five days per week for three months, showed significant improvement. After the training, 6.7% of yoga subjects were completely symptomatic, as compared to 0% of the medication control group participants (Sahasi, Mohan, & Kacker, 1989). Results may even be immediate, and after just one session of mindful exercise, participants experienced improved mood, including reduced depressive mood and state anxiety (Netz & Lidor, 2003).

Yoga breathing may be useful for restoring a sense of control when an individual is confronted by an anxiety-inducing trigger (Brown & Gerbarg, 2005). Yoga's effectiveness in reducing anxiety may be due to its capacity for lowering excitability and increasing concentration and self-control (Sharma, Yadava, & Hooda, 2005). Sugiura (2004) reported that yoga meditation could benefit the prevention of daily anxieties and found a negative correlation between worry-proneness and the "detached objectivity" (p. 169), which is associated with mindfulness meditation. Raub (2002) reported that different relaxation methods might be more effective for different types of anxiety. They compared the effects of progressive relaxation and Agni yoga on somatic and cognitive anxiety forms in 40 moderately snake phobic subjects. They concluded that progressive relaxation was more effective at reducing somatic anxiety, and that the yoga intervention showed slightly more effect in reducing cognitive anxiety.

The intervention study conducted by Webster (2002) implemented treatment methods for disaster anxiety children and their parents which were trained yoga, relaxation skills and changing negative thoughts into helpful thoughts." Posttest 1 results showed that children were reported their coping skills were improved and also activities as useful reported intervention children and their parents; deep breathing 48.5% by parents 52.2%, changing the negative thoughts 58.1 % and parent 58.3% and relaxation exercise 65.2% in parents 26% (Webster, 2002).

As a group, children who received the intervention emerged with lower rates of self-reported anxiety, as measured at post intervention, compared with those who were in the waitlist as control group. Notably, 75.3 % children in the intervention group who were at risk at pretest showed significant benefit by being involved in the treatment program. That is, they were no longer self-reporting their anxiety symptoms within the clinical range at posttest. At posttest 2 or 12 months follow- up compared to 74.8% of the control group. Telles et. al (2005) study has proved that yoga for affected individuals' to decrease distress symptoms. Similar study doen by Senarath (2009) and this study was also proved that children who affected by the tsunami natural disaster related long term consequences anxiety symptoms, difficulties in education and social relationship difficulties

have been decreased after the three months with Hatha yoga intervention. Experimental group children's anxiety, difficulties in education, and social relationship difficulties were decreased significantly with Hatha yoga intervention in contrast to the control group children. Experimental group children emotional balances were increased significantly.

CONCLUSION

According to reviewed empirical studies it can be concluded that natural disasters' affected children have presented significantly different psychological problems and disorders such as anxiety, stress, posttraumatic stress, emotional problems negative thoughts, relationships issues, difficulties in concentration their studies, low self-esteem and negative self-concept etc. Hatha yoga intervention studies have proved that psychological problems of affected children were decreased, increasing concentration and self-control, changing negative thoughts, and improve coping skills. Further, Hatha yoga intervention studies have shown reduction of general fearfulness, the development of a positive self-concept, as well as a reduction of internal tension and emotional stability substantial. Hatha yoga facilitated calm and relaxes of individuals mind, strengthens and tunes the body, and brings them into harmony with one another. Accordingly, present study can be concluded that Hatha yoga is the most suitable treatment method for disaster affected children's psychological and physiological effects. Excluding non-disasters psychological problems and Hatha yoga interventions studies were also proved that Hatha yoga was the most suitable treatment method to implement for the children's well-being. Researchers further have highlighted that Hatha yoga interventions are the most crucial to implement for the affected children during the short periods of the aftermath and it effects the body and mind relaxation, enhance the children's psychological well-being and prevent the psychological disorders. As suggestion in this study, Hatha yoga intervention can be implemented to all natural disaster's affected children as a non-drugs treatment method as well as with a drug treatment method.

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