

Yoga Practitioners' Emotional Regulation and Empathetic Ability



Psychology

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Krishnamurthy.V.S

PhD Research Scholar, Department of Studies in Psychology, University of Mysore.

Sampathkumar

Assistant professor, Department of studies in Psychology, University of Mysore

ABSTRACT

Yoga may reduce individual's reactivity to emotional experiences and help individuals better modulate their emotions. The current study attempts to understand whether the practice of yoga is associated with enhanced Emotional regulation and empathetic ability. It was hypothesized that the participants with yoga experience would show more skilful emotion regulation and enhanced empathetic ability. Data is obtained from 80 community sample by using semi structured interview schedule, Difficulties in Emotional Regulation Scale and Interpersonal Reactivity Index. The study hypotheses were supported by the study findings, those with yoga experience exhibited increased Emotional regulation and Empathetic ability compared to those had not practiced yoga.

INTRODUCTION

Yoga is a Sanskrit word derived from the word "yuga" meaning to yoke or unite the mind, body, and soul (Iyengar, 1979). Yoga is a practice originating in India, and it encompasses many practices that have the goal of leading to transcendence into bliss. There are four paths of yoga: karma (the yoga of action, the path of selfless service); bhakti (the yoga of devotion); raja (the yoga of controlling the mind, the scientific approach); and, jnana (the yoga of knowledge, the philosophical approach) (Feuerstein, 2001). Raja yoga includes hatha yoga, which is how yoga is most commonly recognized in the West. The eight limbs of raja yoga were compiled by Patanjali in the Yoga Sutras (Raub, 2002). These limbs consist of the yamas (restraints), niyamas (observances), asanas (postures), pranayama (breathing techniques), pratyahara (control of attention), dharana (concentration), dhyana (meditation) and Samadhi (super-conscious state) (Iyengar, 1979). In the West, hatha yoga is most commonly practiced, and it includes asanas (poses/postures) and meditation (Raub, 2002).

Research suggesting the beneficial effects of yoga on psychological health has proliferated in recent years. Many individuals practice yoga to improve mental health conditions (Birdee et al., 2008). According to Yoga Alliance (2005), the national association of yoga instructors, many individuals begin yoga as a method of stress reduction. Yoga's influence on mental health has been researched in many studies (Arias, Steinberg, Banga, and Trestman, 2006; Ospina et al., 2008; Kirkwood, Rampes, Tuffrey, Richardson, & Pilkington, 2005; Pilkington, Kirkwood, Rampes, & Richardson, 2005; Khalsa, 2004; Raub, 2002). However, the extant research does not provide clear evidence of yoga's influence on psychological constructs (Arias et al., 2006). The current study intends to gather more information about the relationship between yoga and emotion regulation and empathy.

As mindfulness is a natural human capacity (Shapiro et al., 2006) and a skill that can be developed through many methods (Bishop et al, 2004), it is useful to study the many ways in which mindfulness can be cultivated. Yoga may be a viable way to cultivate mindfulness.

Yoga can be classified as a form of meditation. Some teach yoga as a physical form of exercise, yet this is not yoga in its entirety. There is also a growing trend to more fully engage with yoga as a spiritual path, beyond a physical exercise (Feuerstein, 2004). The term meditation encompasses a variety of techniques differing in their approach and origin (Goleman, 1988). Yoga is considered a form of concentration meditation, which restricts the focus of the mind (Goleman, 1988). Some have argued that one can develop a mindful state while practicing yoga (Moffitt, Douglas, Cope & Powers, 2002; Kabat-Zinn, 2006).

Mindfulness meditation is another form of meditation that has received a great deal of attention in psychology research (Ospina, 2008). Mindfulness meditation is a technique in which one sits with bare attention, so as to gain insight into the mental habits one has which continue one's own suffering, and cultivate a mindful state of mind (Kabat-Zinn, 1999; Baer, 2003; Hanh, 1974). Shapiro et al. (2006) stated that mindfulness is a natural human capacity, and Bishop et al. (2004) stated that it is a skill that can be developed through many methods. Shapiro and colleagues (2008) compared a mindfulness meditation condition to a concentration meditation and found both groups increased in mindfulness, suggesting that there are different ways to increase mindfulness.

The current study attempted to sample individuals with yoga experience and without yoga experience. A community sample was recruited. It was predicted that those who practice yoga would have enhanced emotion regulation, and empathy.

The review of literature will begin with a discussion of emotion regulation and then the review will focus on the effect of yoga on an emotion regulation strategy. The discussion will then shift to examine empathy and its relationship to yoga.

1.1 Emotion Regulation Strategies

Emotions provide feedback about stimuli an individual encounters (Tooby & Cosmides, 1990). Emotions are multi-dimensional, being influenced by cognitions, experiential changes, physiological responses, and behaviors (Rottenberg & Gross, 2003). Individuals differ in how reactive they are to emotional stimuli. Reactivity can be defined as a response to changes in the internal and external environment (Rothbart & Sheese, 2007), which can encompass affect, physiological response, and behavior, and it can be measured along the dimensions of latency, duration, and intensity of affective, motor, and orienting reactions (Rothbart & Derryberry, 1981). Individual differences in emotional reactivity interact with emotion regulation (Rothbart & Sheese, 2007).

Emotion regulation is the process of shaping which emotions occur, when they occur, and how the experience and expression occurs (Rottenberg & Gross, 2003). Researchers theorize that emotion regulation processes can occur consciously and non-consciously (Bargh & Williams, 2007). The processes can also occur as the emotion develops or is generated (Rottenberg & Gross, 2003). These regulatory strategies can influence the magnitude and type of emotional experience (Diamond & Aspinwall, 2003; Gross, 1998). Allowing for modulation as the emotion is generated aids the individual in appropriately responding to the demands of the environment (Campbell-Sills & Barlow, 2007; Cole, Martin, & Dennis, 2004; Gratz & Roemer, 2004; Gross, 1998; Gross & Munoz, 1995; Thompson, 1994).

There are differing conceptualizations of emotion regulation. Some place focus on the control of emotional experience and expression while reducing emotional arousal (Cortez & Buegental, 1994; Garner & Spears, 2000; Kopp, 1989; Zeman & Garber, 1996). A differing conceptualization focuses on the modulation of emotion (Cole, Michel & Teti, 1994; Thompson, 1994). This approach also focuses on the awareness and evaluation of emotional experience leading to more adaptive emotion regulation (Thompson & Calkins, 1996).

Researchers have found that constriction of emotional expression has been associated with increased physiological arousal (Gross & Levenson, 1997). According to Gross's model (1998), suppression may aid one in reducing outward expression of emotion and, to a degree, the subjective experience for the short term, yet in the long term it is less effective. Also, researchers have suggested that long-term suppression could habituate an individual to emotional stimuli, leading to the development of psychopathology (Wegner & Zankos, 1994; Wenzlaff & Wegner, 2000). Hayes et al. (1996) has also suggested that the effort to avoid internal experiences may underlie many psychological disorders. These findings suggest that a focus on acceptance rather than control may be a more advantageous form of emotion regulation (Gratz & Roemer, 1994). From this viewpoint, changing one's experience of the intensity and duration of the emotion rather than the emotion itself is adaptive (Thompson & Calkins, 1996). Gratz and Roemer (2004) conceptualized emotion regulation as involving four components: "awareness and understanding of emotions, acceptance of emotions, ability to control impulsive behaviours.

According to Buddhist psychology, the source of suffering is the belief that one can control unavoidable life challenges, such as sickness and death (Germer, Siegel, & Fulton, 2005). The first of the four noble truths described by the Buddha is called *dukkha*, which refers to the suffering associated with the constant drive to avoid discomfort and seek pleasure, which can lead to a perpetual feeling of dissatisfaction (Hagen, 1997). In avoiding pain, one is escaping the present moment. The original purpose of mindfulness training is to rigorously train the mind to let go of attachments that cause suffering. This process is intended to be done with compassion, but it may be unpleasant and challenging at times; therefore, mindfulness is not a relaxation technique.

Many have attempted to describe the mindful state. Kabat-Zinn (1999, p. 4) described it as "paying attention in a particular way: on purpose, in the present moment, and behave in accordance with desired goals when experiencing negative emotions, and ability to use situationally appropriate emotion regulation strategies to flexibly modulate emotional responses as desired in order to meet individual goals and situational demands."

A recent meta-analysis of the emotion regulation literature found that there are three emotion regulation strategies considered to be adaptive and three strategies considered to be maladaptive that have been presented in the literature (Aldao, A., Nolen-Hoeksema, S., Schweizer, S., 2010). The three adaptive strategies are reappraisal, problem-solving, and mindfulness/acceptance. The three maladaptive are suppression, avoidance, and rumination. This literature review will focus on the mindfulness and acceptance emotion regulation strategy.

1.2 Empathy

Linehan et al. (2007) proposed that mindfulness might improve interpersonal functioning. This statement is based on Kunzman & Bates's (2003) research that found individuals with high wisdom-related knowledge have more affective involvement, lower affective arousal, and more use of cooperative skills. Linehan et al. (2007) stated that mindfulness is similar to wisdom-related knowledge, in that those high in mindfulness focus more on ef-

fectiveness rather than being right. This study suggested that those who are higher in mindfulness will have less emotional reactivity to a given situation and be more capable of cooperating with another, rather than being entangled in their own emotional experience. This hypothesis also relates to Lynch et al. (2006) and Shapiro's et al. (2006) descriptions of mindfulness as a process of "reperceiving" or a detached experience of the present moment, in which one is fully aware of the happenings, both internally and externally, of the present moment, but also a step removed or in a state of observation of the moment. The more one is able to appropriately modulate one's emotions, the more appropriate one's response can be to a situation. If one is more cooperative, more attentive to others' emotions, and less tied to one's own emotions, then it is possible it may increase one's degree of empathy.

Empathy has several conceptualizations in medical, counseling, and psychology literature. The conceptualization of empathy as an affective and/or cognitive construct has received the greatest amount of attention in empathy literature (Davis, 1994; Smith, 2006). Hollin's (1994) description of empathy most accurately reflects the cognitive construct of empathy by stating that it is "the ability to see the world, including one's own behavior, from another person's point of view" (p. 1240). Jordan, Kaplan, Miller, Stiver, and Surrey (1991) offered a definition more in keeping with the affective conceptualization that "empathy is a complex cognitive and emotional exercise in mutuality, mediated more by interpersonal than by cognitive development."

Gladstein (1983) has attempted to create clearer definitions of both cognitive and affective empathy. Cognitive empathy was defined as, "intellectually taking the role or perspective of another person" (p. 468), and affective empathy was defined as, "responding with the same emotion to another person's emotion" (p. 468) (Gladstein, 1983). These definitions are in keeping with the idea that empathy is an interactive response to a presented stimulus or situation (Batson & Coke, 1981; Davis, 1994). Also, this idea reflects that empathy is seen as a situationally-based response that involves both cognitive and affective responses. Research supports the conceptualization of the unavoidable influence affective and cognitive elements have on one another (Bower, 1983; Hoffman, 1977; 1982; Isen, 1984). Smith (2006) argued "true empathy" integrates the two components, cognitive and emotional empathy. Smith (2006) defined cognitive empathy as "perspective taking" and emotional empathy as "vicarious sharing of emotions" (p. 3). According to Davis' (1980) multidimensional approach to empathy, empathy can be broadly defined as one's emotional reaction to the observed experiences of another, and it involves both the cognitive ability to take another's perspective, as well as the emotional reactivity of the individual.

Much of the research on empathy and emotion regulation has focused on the development of emotion regulation in children. Paivio and Laurent (2001) argued that the empathic responses of a parent are necessary for children to learn to regulate their own emotional experience, and as children mature, they begin to take over the ability to regulate their own emotional experience. Through this process of empathic mirroring of feelings and needs, a child is learning to recognize, label, and describe his or her emotional experience, leading to the ability to self-control and feel interpersonal connectedness. Children also learn to accept and value their emotional experience as a useful tool to guide action and achieve their goals through the process of empathic responsiveness. They learn to lessen or intensify emotion in particular situations to get their needs met, which leads to a sense of mastery and interpersonal competence. The authors go on to discuss that underregulation or overcontrol of emotions in childhood can lead to maladaptive emotion regulation in adulthood.

Eisenberg and Fabes (1990; 1992) stated that one's empathic reactions are partially due to one's level of emotion regulation and those who have high emotion regulation skills tend to be more sympathetic towards others and behave more prosocially. Those with lower levels of emotion regulation are more likely to react with distress to other's negative emotions (Eisenberg & Fabes, 1992), and they tend to avoid dealing with distressing situations (Eisenberg & Fabes, 1990). Eisenberg and colleagues also found children who are emotionally well regulated and prone to sympathetic reactions are social and assertive (Eisenberg, Cameron, Tyron, & Dodez, 1981; Eisenberg, Pasternack, Cameron & Tyron, 1984), while children who are dysregulated and prone to personal distress are less assertive with their peers and more likely to display compliant behaviors (Eisenberg, McCreath & Ahn, 1988; Eisenberg et al., 1981).

This research suggests that the development of emotion regulation begins in childhood, and empathy plays a role in how child learn to emotionally regulate. It also seems that those with better emotion regulation may be more skilled in empathic responding. As mindfulness is seen to be one method of regulating emotions, by maintaining awareness, acceptance, and detachment from emotional experience, one may be more empathic if one is more mindful.

The ability to react in an appropriately responsive manner, rather than an impulsively reactive manner is a key element to adaptive emotion regulation and mindfulness. When one is less reactive, one can be more responsive and receptive to those around him or her. Wachs & Cordova (2007) tested the hypothesis that mindfulness influences intimate relationship satisfaction through improved emotion repertoires. They sampled married couples, and measured mindful awareness, emotion skills (identifying and communicating emotions, empathetic ability, expression of anger and hostility, and emotional control), and marital quality. They found emotion skills and mindfulness are related to marital satisfaction, and these emotion skills fully mediate the relationship between mindfulness and marital quality. This study provided support for the influence of mindfulness on empathy and interpersonal relating.

Barnes et al. (2007) studied the role of mindfulness in romantic relationship satisfaction in response to relationship stress. They found that higher trait mindfulness predicts higher relationship satisfaction and greater capacities to respond constructively to relationship stress. In a second study, they replicated these findings. They also found that mindfulness is found to predict lower emotional stress response and positive change from prior to conflict to after the conflict in perception of relationship. This study provided further support for the theory that mindfulness improves interpersonal relating by allowing individuals more self-control and more ability to respond positively to a partner.

Block-Lerner et al. (2007) examined empathetic responding, specifically perspective-taking and empathetic concern. The authors propose that mindfulness may be a viable way to increase empathy in interpersonal relating. The authors performed a review of literature and found preliminary evidence that suggests mindfulness may have a relationship to facets of empathy, and this relationship needs further examination.

Researchers have also hypothesized three rationales for the effectiveness of mindfulness in improving couples' relationships. Psycho-physiological soothing techniques transfer into a calmer approach to conflicts and challenges. Mindfulness promotes acceptance without judgment, and acceptance may lead to greater compassion for oneself and for others, or empathy. Mindfulness translates into better functioning globally and an enhanced quality of life (Carson, Carson, Gil, and Baucom, 2004).

A more recent study examined the impact of an 8-week randomized control trial of a mindfulness and self-compassion on empathy (Wallmark, Safarzadeh, Daukantaite, & Maddux, 2012). Researchers measured empathy with the perspective taking, empathetic concern, and personal distress subscales on the Interpersonal Reactivity Index (Davis, 1983). The authors reported that those who completed the interventions increased in perspective taking, yet they did not observe changes on the empathetic concern and personal distress subscales from pre- to post-assessment. They noted that empathetic concern is highly correlated with personality traits, and therefore, might not be changed by a brief intervention. They also noted this is a higher-order concept than perspective taking, and a change in perspective taking may lead to an eventual effect on empathetic concern

1.3 Current Study

Researchers have theorized that yoga practice may reduce individuals' reactivity to emotional experiences and help individuals better modulate their emotions (Linehan et al., 2007; Shapiro et al., 2006; Lynch et al., 2006; Raub, 2002). There is limited research about yoga's relationship to psychological constructs, yet there are studies that use yoga as a method of improving mental health, with encouraging results (Arias, Steinberg, Banga, and Trestman, 2006; Ospina et al., 2008; Kirkwood, Rampes, Tuffrey, Richardson, & Pilkington, 2005; Pilkington, Kirkwood, Rampes, & Richardson, 2005; Khalsa, 2004; Raub, 2002; Thien et al., 2000). Yoga has also been utilized as a mindfulness intervention (Beddoe, 2009; Uebelacker et al., 2010; Shelov et al., 2008) and found to increase mindfulness (Uebelacker et al., 2010). The current study attempts to build on this research and more clearly understand the relationship yoga has to emotion regulation and empathetic ability. Yoga involves physical movement, and there is compelling evidence about the positive influence of exercise on mental health (Scully et al., 1998; McAuley, 1994). The study will examine yoga's relationship to emotion regulation and empathy is different from the relationship of exercise to these variables. Previous researchers have examined if mindfulness is the mechanism through which individuals gain beneficial outcomes after practicing mindfulness skills (Shapiro et al., 2006; 2008 Lynch et al., 2008).

The current study investigated the effects of yoga practice on Emotional regulation and empathetic ability in a community sample and this sample consisted of those that had practice yoga before and those that had not

1.4 Hypothesis:

After controlling for demographic variables that would have a significant relationship with either the dependent variables, it is hypothesized that individuals with yoga experience will report more skilful emotion regulation and higher empathetic ability than those without yoga experience.

Method

This study employed a descriptive survey design, with yoga practice, Emotional Regulation and Empathetic ability operationalized by the participants' responses to Difficulties in Emotional Regulation scale and and Interpersonal Reactivity Index respectively.

2.1 Participants

Two samples were collected for the current study. A community sample that was collected in order to gather information about participants both with and without yoga experience. The goal was to recruit 60 participants who had practiced yoga from the community. But 46 individuals were ultimately recruited to participate in this study (who were Practiced Yoga for at least 5 years) and 46 participants from the community who had not practiced yoga before, including individuals' ages 18 to 58 individuals completed the study in its entirety.

2.2 Measures

Participants were given two standardized measures: Difficulties in Emotion Regulation Scale and Interpersonal Reactivity Index (Empathetic Ability). Additionally, the participants were asked demographic questions and questions about their yoga experience.

Demographical Details

Ten demographic questions were included. The participants' age, sex, race/ethnicity was gathered. Additionally, participants were asked to identify their marital status, income, year in school, education level, religion and the frequency of their religious service attendance.

Emotion Regulation.

The *Difficulties in Emotion Regulation Scale* (DERS; Gratz & Roemer, 2004) is a trait measure of emotion regulation. The DERS is a 36-item measure that assesses an individual's typical levels of emotion dysregulation in six domains. These domains are as follows: 1) Nonacceptance of Emotional Responses represents "a tendency to have negative secondary emotional responses to one's negative emotions, or nonaccepting reactions to one's distress" (example item: "When I'm upset, I feel guilty for feeling that way."), 2) Difficulties Engaging in Goal-Directed Behavior reflects "difficulties concentrating and accomplishing tasks when experiencing negative emotions" (example item: "When I'm upset, I have difficulty getting my work done."), 3) Impulse Control Difficulties represents "difficulties remaining in control of one's behavior when experiencing negative emotions" (example item: "When I'm upset, I become out of control."), 4) Lack of Emotional Awareness represents "an inattention to, and lack of awareness of, emotional responses" (example item: "When I'm upset, I acknowledge my emotions." (reverse scored)), 5) Limited Access to Emotion Regulation Strategies reflects "the belief that there is little that can be done to regulate emotions effectively once an individual is upset" (example item: "When I'm upset, my emotions feel overwhelming."), and 6) Lack of Emotional Clarity represents "the extent to which individuals know (and are clear about) the emotions they are experiencing" (example item: "I have difficulty making sense out of my feelings.") (Gratz & Roemer, 2004, p.47).

Preliminary research supports its use as a multidimensional assessment of these six conceptually relevant dimensions of emotion regulation. DERS is the only existing measure that captures all six of the dimensions currently thought to best represent the construct of emotion regulation (Gratz & Roemer, 2004). This measure has previously been tested with a nonclinical college student sample (Gratz & Roemer, 2004). The DERS has high internal consistency ($\alpha = .93$) and good test-retest reliability ($p = .88$). Additionally, the measure has been tested with Generalized Anxiety Disorder (Salters-Pedneault et al., 2006), Panic Disorder (Tull, 2006), and Borderline Personality Disorder (Gratz, Rosenthal, Tull, Lejuez, et al., 2006; Gratz et al., 2006; Gratz & Gunderson, 2006).

Empathetic Ability.

Interpersonal Reactivity Index (IRI; Davis, 1980) is a 21-item Likert scale measuring three domains of empathetic ability, averaged to create a global measure of empathy. Higher scores indicated greater empathic capacity. The IRI is the most widely used instrument for the assessment of empathy. It is a multidimensional measure of empathy, based on the conceptualization that empathy is composed of separate but related constructs. Past empathy research findings have indicated that empathy is a complex construct consisting of both cognitive and affective components (e.g., Brems, 1989; Gladstein, 1983; Hoffman, 1977; Shantz, 1975; Strayer, 1987). In order to conduct empathy research from a multidimensional perspective, Davis (1980) developed the Interpersonal Reactivity Index (IRI). The IRI measures

both cognitive and emotional components of empathy (Davis, 1980, 1983a, 1983b, 1996). The scale consists of four subscales that reflect a developmental progression of empathy, beginning with personal distress and advancing to perspective taking, empathetic concern, and fantasy. The Perspective Taking and Empathetic concern scales measured the constructs of interest in this study; therefore, the other two subscales were excluded.

The Perspective Taking subscale measures cognitive empathy. This subscale is designed to measure the respondent's capacity to "adopt spontaneously the psychological point of view of others" (Davis, 1983b, p. 224). An example of an item in the PT subscale is "Before criticizing somebody, I try to imagine how I would feel if I were in their place" (Davis, 1996, p. 56).

The Empathic Concern (EC) subscale measures "other-oriented feelings of sympathy and concern for unfortunate others" (Davis, 1983a, p. 224). This subscale is strongly related to altruistic behavior as well as "emotional reactivity and selfless concern for others" (Davis, 1983a, p. 123). "I am often quite touched by things that I see happen" is an example from the EC subscale of the IRI (Davis, 1996, p. 56).

Internal reliability estimates for the IRI have ranged from alpha coefficients of .70 to .78. Test-retest reliability estimates have ranged from .61-.71 (Davis, 1980). In other studies, coefficient alphas were also calculated demonstrating the reliability of the four subscales of the IRI in corresponding to structural loadings on factors (Davis, 1980). Alphas of .80 for the Empathic Concern scale and .79 for the Perspective Taking scale were found (Davis, 1980) and similar coefficient alphas for each of the four subscales were found in more current research on the hierarchical structure of the IRI (Pulos, Elison, & Lennon, 2004). The IRI has demonstrated construct validity (Davis & Franzoi, 1991; Bernstein & Davis, 1982; Davis, 1983), convergent validity, and discriminant validity (Davis, 1983a, 1983b, 1994). The factor structure of the IRI has demonstrated stability over time and across various, diverse samples (Davis, 1983a, 1983b).

Yoga Experience.

The Yoga Experience section included open-ended, multiple choice, Likert, and checklist selection questions about the participants' yoga practice. Yoga experience was measured in four ways: number of years practicing yoga, number of hours practicing yoga, frequency of yoga practice in a month, and the importance of yoga to participants. For the first measure of yoga experience, participants were asked to enter the number of years they had practiced yoga in their lifetime. Also in an attempt to measure lifetime amount of yoga experience, a multiple choice question was asked in which participants endorsed the number of hours they had practiced yoga. A fourth measure of experience was frequency of practice in an average month's time. Again, the ranges of the frequency of practice were discrete and did not overlap, responses ranged from 0 to over 10 times a month. Participants were also asked to rate the importance of yoga to them in their lives on a Likert scale, ranging from not at all important (1) to extremely important (5).

In order to explore if the style of yoga participants practice had an influence on the dependent variables, they were asked to endorse any and all of the style of yoga they have done. Additionally, participants were asked to endorse any and all types of meditation they have practiced including both insight and concentration techniques. Participants were also asked two open questions: how their practice has been helpful to them and if yoga helps, they manage stress and difficult emotions.

3. Results and Analysis

In the current study the researcher intended to examine the influence of yoga practice on Emotional regulation and empa-

thetic ability, the data is obtained by using an interview schedule, Difficulties in emotional Regulation Scale and Interpersonal Reactivity Index and analysed as follows to test the hypothesis,

Table 1:
Shows the Mean, SD and t ratio on DERS of two groups who had practiced yoga and who had not practiced yoga

Variable	Difficulties in Emotional Regulation			t-ratio
	N	Mean	SD	
With yoga practice	46	73.0	1.66	32.50**
Without yoga practice	46	93.76	4.0	
Total	92			32.50**

Table 1 Shows the Mean, Sd and t ratio on DERS of two groups i.e who had practiced yoga and who had not practiced yoga. The group with yoga practice has obtained a mean score of 73.00 with its SD of 1.66 and the group without yoga practice has obtained a mean score of 93.76 with its SD of 4.0 on DERS. This result clearly indicates that the group with yoga practice has obtained lesser mean (mean 73.00) compared to the group without yoga practice (Mean 93.76) on Difficulties in Emotional Regulation scale (DERS) hence The group without yoga practice exhibited more difficulties in Emotional regulation compared to the sample group who had practiced yoga.

Table 2
Shows the Mean, SD and t ratio on Empathetic ability of two groups with yoga practice and without yoga practice

Variable	Empathetic ability			t-ratio
	N	Mean	SD	
With yoga practice	46	49.83	3.73	14.2**
Without yoga practice	46	38.89	3.61	
Total	92			14.2**

Table shows the mean, SD and t ratio on Empathetic ability of two groups' i.e with yoga practice and without yoga practice. The group with yoga practice has obtained a mean score of 49.83 with its SD of 3.73 and the group without yoga practice has obtained a mean score of 38.89 with its SD of 3.61 on Interpersonal Reactivity Index which measures an Empathetic ability. The group with yoga practice has obtained a greater mean compared to the group without yoga practice; hence the sample with yoga practice has shown enhanced empathetic ability compared to the group without yoga practice.

3.1 Hypothesis testing;

In the present study it is hypothesized that individuals with yoga experience will report more skilful emotion regulation and higher empathetic ability than those without yoga experience. Table 1 show The Mean, SD and the t ration on DERS of two groups, in which clearly indicates that the sample with yoga practice have got greater mean score compared to the sample who had not practiced yoga, In order to find out the level of significant mean difference, an independent sample t test was calculated and the obtained t ratio is 32.50 which is highly significant (P value >0.01), hence the findings clearly shows that the sample group who practiced yoga have shown lesser difficulties in their Emotional regulation compared to the sample group who had not practiced yoga. In the Table 2, it is shown the Mean, SD and the t ration on Empathetic ability of two groups , in which it shows the sample group with yoga practice has obtained a greater mean score on Interpersonal Reactivity Index compared to the sample group without yoga practice and to find out the level of significance of mean difference, an independent sample t test was calculated and the obtained t ratio is 14.28, which is significant (P value >0.01), hence the findings clearly indicates that the sample group with yoga practice has exhibited enhanced empa-

thetic ability compared to the group which had not practiced yoga. The findings of this study supported to the hypothesis of the study that individuals with yoga experience will report more skilful emotion regulation and higher empathetic ability than those without yoga experience.

3.2 Conclusions:

The findings of the current study are as follows

* Individuals with yoga experience have skilful emotion regulation than those without yoga experience.

* Individuals with yoga experience have higher empathetic ability than those without yoga experience.

3.3 Limitations and Suggestions:

- In the present study, it has not considered the effect of range of yoga practice on dependent variables, further careful analysis is required to know how the range of yoga practice like from no yoga practice to expertise level would influence on Emotional regulation and an Empathetic ability.
- In the present study, Emotional regulation was assessed by considering the difficulties in Emotional regulation but this construct also can be explained in detail by considering approaches of Emotional regulation.
- The present study consists a small sample size, hence the generalization of the findings are restricted.
- In the present study only the yoga practice has been considered where as a particular type of yoga an individual practicing would have a significant influence on the emotional regulation and an empathetic ability, hence further research is required to see how a particular type of yoga could contribute for skilful emotional regulation and enhanced empathetic ability

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