

**COMPARATIVE STUDY OF YOGA AND NON-YOGA GROUP ON  
WILLINGNESS TO FORGIVE**

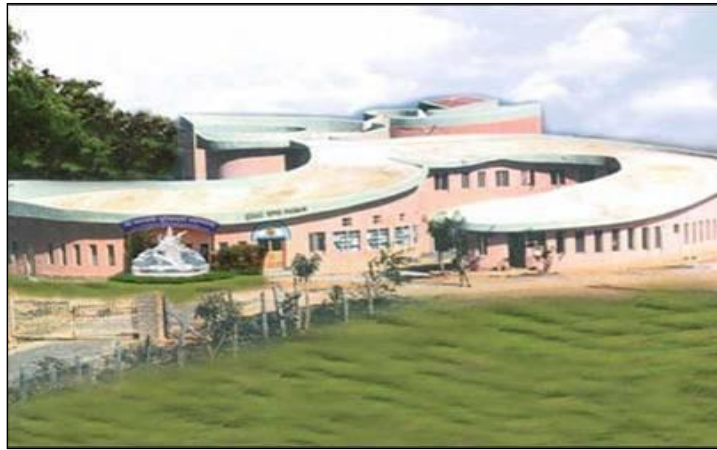
*Dissertation Submitted by*

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*Under the guidance of*

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*Towards the partial fulfilment of*

**MASTER OF SCIENCE IN YOGA THERAPY (M. Sc. Yoga Therapy)**

**June 2019**



**To**

**SWAMI VIVEKANANDA YOGA ANUSANDHANA SAMSTHANA  
(Declared as Deemed University under Section 3 of the UGC Act, 1956)**

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# **D E C L A R A T I O N**

I, hereby declare that this study was conducted by me at Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA), Bengaluru, under the guidance of Dr. Raghavendra Bhat, S-VYASA University Bengaluru. I also declare that the subject matter of my dissertation “**COMPARATIVE STUDY OF YOGA AND NON-YOGA GROUP ON WILLINGNESS TO FORGIVE**” has not previously formed the basis of the award of any degree, diploma, or similar titles.

**Mr. Sujit Narayanan Nair**

**(Candidate)**

**Date:**

**Place:**

## ACKNOWLEDGEMENT

A successful study requires the guidance of who is an expert in that field. Firstly I would like to express my gratitude to the divine power, persons and all surroundings which guided and supported directly and indirectly throughout the tenure of the study.

I am extremely thankful to **Swami Vivekananda Yoga Anusandhana Samsthana (SVYASA)** for offering me the opportunity for preparing and completing the study and allowing to utilizing resources.

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I am also thankful to dear classmates MSCYT2017, MSCYT2018 batch, and BAMS college Principal and students for their co-operation, patience and support.

I would like to take this opportunity to extend our warm thoughts to my family and friends and whosoever helped me with their inspiration and support in making this research a wonderful learning experience.

## **CERTIFICATE**

This is to certify that Mr. Sujit Narayanan Nair is submitting this literature review “**Concept of Forgiveness**” and Experimental Research on “**COMPARATIVE STUDY OF YOGA AND NON-YOGA GROUP ON WILLINGNESS TO FORGIVE**”, towards the partial fulfillment of the requirement for the Master of Science in Yoga By Swami Vivekananda Yoga Anusandhana Samsthana (SVYASA) and this is a record of work carried out by him in this Institute.

Place: Bangalore

Date:

Dr. Raghavendra Bhat

Guide

Dr Rajesh S K

Co-Guide

**STANDARD INTERNATIONAL TRANSLITERATION CODE USED TO  
TRANSLITERATE SANSKRIT WORDS**

a	=	अ	ña	=	ञ	pa	=	प
ā	=	आ	ca	=	च	pha	=	फ
i	=	इ	cha	=	छ	ba	=	ब
ī	=	ई	ja	=	ज	bha	=	भ
u	=	उ	jha	=	झ	ma	=	म
ū	=	ऊ	ñ	=	ञ	ya	=	य
ṛ	=	ऋ	ṭa	=	ट	ra	=	र
ṝ	=	ॠ	ṭha	=	ठ	la	=	ल
e	=	ए	ḍa	=	ड	va	=	व
ai	=	ऐ	ḍha	=	ढ	śa	=	श
o	=	ओ	ṇa	=	ण	ṣa	=	ष
au	=	औ	ta	=	त	sa	=	स
m̐	=	अं	tha	=	थ	ha	=	ह
ḥ	=	अः	da	=	द	kṣa	=	क्ष
ka	=	क	dha	=	ध	tra	=	त्र
kha	=	ख	na	=	न	jña	=	ज्ञ
ga	=	ग						
gha	=	घ						

## ABSTRACT

**Background:** Ancient Indian yoga text, *Haṭha Yoga Pradīpikā* describes ten rules of conduct called as “Yama”. One of them is “Forgiveness” or ‘Kshma”. “Forgiveness” actually means the ability to let experiences go from the mind and not to hold on to memories of past events. It means living in the present. This yama is not only for the sake of other people, it is more for your own benefit. If you can forgive, life becomes more pleasant and harmonious. Forgiveness brings happiness and lightness to your heart.

**Methods:** In the current study, we made an effort to understand difference between the ability to forgive in yoga and non-yoga subjects. Questionnaire named Heartland Forgiveness Scale (HFS) was used which comprises of total 18 questions including 6 questions of HFS Forgiveness of Self, 6 questions of HFS Forgiveness of Others and 6 questions of HFS Forgiveness of Situations. Yoga group and Control group both had 60 participants each. There was a significant difference between yoga group and control group in all HFS scores. HFS total score, HFS Forgiveness of Self subscale score, HFS Forgiveness of Others subscale score, and HFS Forgiveness of Situations score, was significantly higher in yoga group compared to control group.

**Results:** An independent-samples t-test was performed to determine if there were differences in HFS scores of yoga group and control group. There were no outliers in the data, as assessed by inspection of a boxplot. Data were tested for normality using Shapiro-Wilk’s test. HFS score total and all subscales were normally distributed ( $p > .05$ ). There was a homogeneity of variances, as assessed by Levene's test for equality of variances. There was a significant difference between yoga group and control group in all HFS scores as assessed by Independent-samples t-test.

HFS total score [  $t(118) = 4.52, p < .0001$  ], HFS Forgiveness of Self subscale score [  $t(118) = 3.15, p < .001$  ], HFS Forgiveness of Others subscale score [  $t(118) = 3.65, p < .0001$  ], and HFS Forgiveness of Situations score [  $t(118) = 3.78, p < .0001$  ], was significantly higher in yoga group compared to control group.

**Conclusion:** There was a significant difference between yoga group and control group in all HFS scores. HFS total score, HFS Forgiveness of Self subscale score, HFS Forgiveness of Others subscale score, and HFS Forgiveness of Situations score, was significantly higher in yoga group compared to control group.

**Keywords:** Yoga, Forgiveness, Heartland Forgiveness Scale

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# Chapter 1

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## 1. INTRODUCTION

“Forgiveness” (yogic term “Kshama”) is one of the ten rules of conduct (Yama) mentioned in the ancient Indian yogic text, Haṭha Yoga Pradīpikā. These ten rules of conduct are Non-violence, Truth, Non-stealing, Continenence (being absorbed in pure state of consciousness), Forgiveness, Endurance, Compassion, Humility, Moderate diet and Cleanliness. “Forgiveness”, or “Kshama” actually means the ability to let experiences go from the mind and not to hold on to memories of past events. It means living in the present. This Yama is not only for the sake of other people , it is more for your own benefit. If you can forgive, life becomes more pleasant and harmonious, whereas revenge brings anger and remorse and creates karma, forgiveness bring happiness and lightness to your heart. (Hatha Yoga Pradipika, Ch:1 V:16 (ii). According of Bhagwad Gita, Chapter 16 , Verse 3 , Sublimity, Forgiveness, External purity, bearing enmity to none and absence of self-esteem – these are the people born with the divine endowments.

The Heartland Forgiveness Scale (HFS) was first developed in 1998, and the current version was finalized in 1999. In 2003, the HFS was published in *Positive Psychological Assessment : A Handbook of Models and Measures* in a chapter by Laura Y. (Thompson and C.R. Snyder, 2003) . In 2005, Thompson et al. published an article in the *Journal of Personality*. The article included the HFS and a series of six studies regarding the psychometric properties of the HFS. (Thompson et al, 2005). The article contains psychometric data.

# Chapter 2

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## 2. ANCIENT LITERATURE REVIEW ON FORGIVENESS

### 2.1 Introduction

Forgiveness (yogic term “Kshama”) is one of the ten rules of conduct (Yama) mentioned in the ancient Indian yogic text, Haṭha Yoga Pradīpikā. These ten rules of conduct are Non-violence, Truth, Non-stealing, Continenence (being absorbed in pure state of consciousness), Forgiveness, Endurance, Compassion, Humility, Moderate diet and Cleanliness. “Forgiveness”, or “Kshama” actually means the ability to let experiences go from the mind and not to hold on to memories of past events. It means living in the present. This Yama is not only for the sake of other people, it is more for your own benefit. If you can forgive, life becomes more pleasant and harmonious, Whereas revenge brings anger and remorse and creates karma, forgiveness bring happiness and lightness to your heart. (Hatha Yoga Pradipika, Ch:1 V:16 (ii). According of Bhagwad Gita, Chapter 16, Verse 3, Sublimity, Forgiveness, External purity, bearing enmity to none and absence of self-esteem – these are the people born with the divine endowments.

### 2.2 Aim and Objectives

The present literary review was conducted to understand the effect of yoga on willingness to forgive.

### 2.3 Materials and Methods

#### 2.3.1 Source material

Haṭha Yoga Pradīpikā

Bhagavad Gita

#### 2.3.2 Methods

The above mentioned traditional text was studied to compile the authentic information on Forgiveness. The verses related to the present topic were collected and compiled and presented in a systematic way.

## 2.4 Descriptions of Forgiveness

*Hatha Yoga Pradepika* Chapter 1, Verse 16 (ii)

अहिंसा सत्यमस्तेयं ब्रह्मचर्यं क्षमा धृतिः ।

दयार्जवं मितहारः शौचं चैव यमा दश ॥

*Ahiṁsā satyamasteyani brahmacaryani kṣamā dhṛtiḥ ।*

*dayārjavani mitahāraḥ śaucani caiva yamā daśa । ।*

*Forgiveness (Kṣhama)* is one of the ten rules of conduct Yamas mentioned in the ancient Indian yogic text, *Haṭha Yoga Pradīpikā*. These ten rules of conduct are *Non-violence, truth, non-stealing, continence (being absorbed in a pure state of consciousness), forgiveness, endurance, compassion, humility, moderate diet and cleanliness.*

**In Bhagvad Gita – Chapter 16 Verse 3**

तेजः क्षमा धृतिः शौचमद्रोहो नातिमनिता ।

भवन्ति सम्पदं दैवीमभिजातस्य भारत ॥३॥

*Tejaḥ kṣamā dhṛtiḥ śaucamadroho nātimanitā ।*

*bhavanti sampadani daivīmabhijātasya bhārata । ।3। ।*

Sublimity, forgiveness, fortitude , external purity, bearing enmity to none and absence of self-esteem – these are ‘O Arjuna, the marks of him, who is born with the divine endowments.

**Benefits of Forgiveness**

**Physical**

According to Mayo Clinic ([www.mayoclinic.org](http://www.mayoclinic.org)) forgiveness brings with it plenty of health benefits, including improved relationships, decreased anxiety and stress, lower blood pressure, a lowered risk of depression, and stronger immune and heart and health. Letting go of negative emotions can often have a remarkable impact on the body. Keeps away the eye strain by improving the stamina of eye muscles and by giving deep relaxation to them. It makes the eyes clear, bright and radiant. It cleanses the tear glands and purifies the optical system. According to Wisdom Times [www.wisdomtimes.com](http://www.wisdomtimes.com) Forgiveness lowers cortisol and boosts immune function. One feels more relaxed and centered, and won't get sick as easily once we have let go for good with forgiveness.

## **Therapeutic**

According to Wisdom Times ([www.wisdometimes.com](http://www.wisdometimes.com)) Lower blood pressure, Stress reduction, Less hostility, Better anger management skills, Lower heart rate, Lower risk of alcohol or substance abuse, Fewer depression symptoms, Fewer anxiety symptoms, Reduction in chronic pain, More friendships, Healthier relationships, Greater religious or spiritual well-being, Improved psychological well-being

## **Spiritual**

According to [www.thesacredconnect.com](http://www.thesacredconnect.com) benefits of forgiveness are mentioned in the article – “The Sacred Connect” - by – “Vidagdha Madhav Das. These are “tolerance, fortitude and forgiveness – these qualities are born of a person with divine destiny, O Bharata (Bhagavad Gita 16.3) . Bhagavad Gita teaches that the quality of forgiveness is inherent in the life of a person who understands the spiritual truths. One sees every situation as an opportunity to grow spiritually. Spiritual growth is based upon our ability to thank God in all circumstances – even in adversities and reversals. And because every soul is a part of God, one learns see all the souls with compassion, understanding and forgiveness. It helps to develop intense concentration and improves memory. It helps to develop a strong will-power. It is an excellent preparation for meditation.

## **Limitations**

While “Forgiveness is sometimes a wonderful thing, hasty forgiveness can be a weakness”, says Murphy, who wrote the book “Getting Even : Forgiveness and its Limits”. Showing mercy means reducing or eliminating the punishment completely , while being willing to forgive doesn’t necessarily negate retribution.

# Chapter 3

## 3. REVIEW OF SCIENTIFIC LITERATURE

<b>Authors</b>	<b>Sample</b>	<b>Intervention</b>	<b>Results &amp; Conclusion</b>
(Thompson et al., 2005)	Participants were students at a large, public, midwestern university (N=499) participated.	The Pilot HFS consisting of 90 items were generated to tap the current authors' definition of forgiveness.	Analyses suggested that although the factors of forgiveness of self, others, and situation were clearly differentiable, there was also a nontrivial amount of valence-specific variance in item responses.
(Thompson et al., 2005)	Study 2 participants (N=1111) were students at a large, public, mid western university who participated in partial fulfillment of a psychology course requirement (see Table 1 for additional sample information). Complete	Participants were administered the HFS, an 18-item, self-report measure of dispositional forgiveness (see Appendix A). It consists of three, six-item subscales that measure forgiveness of self (items 1 to 6), forgiveness of others (items	Descriptive statistics, internal consistency estimates, and correlations between the HFS subscales are displayed in Table 2. The HFS demonstrated satisfactory internal consistency as measured by Cron-

	<p>responses were obtained from 1103 persons.</p>	<p>7 to 12), and forgiveness of situations (items 13 to 18). Respondents indicate the extent to which each item is true or false of them using a 7-point scale with four verbal anchors: 1-Almost Always False of Me, 3-More Often False of Me, 5-More Often True of Me, and 7-Almost Always True of Me. The HFS total scale and subscale scores are calculated by summing the items on each scale, with the nine negatively worded items (2, 4, 6, 7, 9, 11, 13, 15, and 17) being reverse-scored.</p>	<p>bach's alpha.</p>
<p>(Thompson et al., 2005)</p>	<p>Participants were students at a large, public, mid-western university (N=504) who participated in partial</p>	<p>Four measures of dispositional forgiveness were administered. Mauger et al.'s (1992) Forgiveness of Self and</p>	<p>Initial analyses revealed no significant differences in HFS scores between men and women. Thus, all analyses</p>

	fulfillment of a psychology course requirement	Forgiveness of Others scales each consist of 15 true/false items designed to measure the forgiveness of self and others, respectively.	were conducted with these groups combined.
(Langman & Cheung, 2013)	Recruited 99 Hong Kong college students from the City University of Hong Kong (52 females, 45 males, 2 with missing gender records; average age = 29.13; SD = 6.02). Participants received partial course credit for their participation.	When participants arrived at the testing site, they read and signed the informed consent form. Then they completed a set of questionnaire that included a scale for happiness and a scenario (the order was happiness first and scenario second).	Found forgiving to be positively associated with happiness. More important, the interaction suggests that the group status effect on forgiveness varies across happiness levels. Namely, unhappy individuals showed a clear group status effect on forgiveness; they were significantly less forgiving when the victims were in group members than when the victims were out group members, $t(53) = 3.84, p < 0.001$ . However, happier individuals demonstrated no

			group status effect on forgiveness: they forgave the perpetrator whether the victims were ingroup or outgroup members, $t(42) = 0.15$ , $p = 0.89$ .
(Jiang, Yue, Lu, & Yu, 2014)	A convenience sample of hemodialysis patients was recruited from five third-level general hospitals in Chengdu city, Sichuan province. Participants matching the following inclusion criteria were adopted for this study: (1) patients with ESRD (2) whose treatment lasted more than 3 months, (3) who knew about and agreed to participate in this study, and (4) who were above the ages of 18. The exclusion criteria were as follows: (1) hemodialysis patients with	In a descriptive cross-sectional study conducted from September to December 2017, 457 hemodialysis patients from 5 hospitals filled out the Heartland Forgiveness Scale, Interpersonal Reactivity Index-C, Kidney Disease Questionnaire, and general information. The data were analyzed using SPSS, and structural equation modeling was used to address the relationships among empathy, forgiveness, and health-related QOL	Empathy was significantly positively associated with health-related QOL. The proposed model had a good fit to the data. Forgiveness was found to play a partial mediating role between empathy and health-related QOL. Conclusion. The results imply that empathy significantly directly and indirectly influences health-related QOL. Empathy among hemodialysis patients should be monitored and effectively managed to improve positive

	infectious diseases such as hepatitis B, hepatitis C, syphilis and HIV and (2) hemodialysis patients with cognitive impairment or inability to communicate normally.		effects on their health-related QOL. Nurses should consider implementing empathy interventions with an emphasis on building forgiveness strategies to help hemodialysis patients improve their health related QOL
(Ye et al., 2018)	796 turkish university students (430 women, 366 men) with a mean age of 20.6 yr. (SD = 2.1).	The turkish version of the hfs, the ruminative response scale (rrs), and the satisfaction with life scale (SWLS) were administered. Additionally, a confirmatory factor analysis was conducted to assess the fit of the standard three-factor solution of the hfs.	The results suggested that the turkish version of the hfs had adequate internal consistency, criterion validity, and reflected the standard three-factor structure, indicating that it can be reliably used to measure forgiveness among a turkish sample.
(Mcgrath, 2007)	Fifty-eight (18 male and 40 female) introductory psychology students at Carleton University participated in	Upon arrival at the laboratory, participants were greeted and told that they would be participating in a study about	No effects of gender were found in this or subsequent studies. As such, we collapsed across this variable and it will

	<p>Experiment 1.</p>	<p>relationships. After granting consent to participate, participants were given a packet that contained an instruction page informing the participants that they would be reading about a situation friends might find themselves in. They were then asked to read the situation and imagine that the event had actually happened to them. The situation participants read was adapted from one of the transgression narratives created by Berry, Worthington, Parrott, O'Connor, and Wade (2001) to assess forgiveness of interpersonal transgressions. The scenarios were created as a useful tool for both basic and intervention research from a variety of theoretical</p>	<p>not be discussed in subsequent analyses. A one-way ANOVA also did not yield a significant effect of perceived severity by condition, <math>F(1, 56) = 1.85, p &gt; .18</math>. Participants in the temporally distant condition (<math>M = 6.50, SD = 1.71</math>) did not perceive the transgression to be any less severe than did participants in the temporally close condition (<math>M = 5.76, SD = 1.71</math>).</p>
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		<p>perspectives. The scenario chosen depicts a friend who offered to drop off an application for a much sought after job. The friend, however, failed to do so before the deadline, thus eliminating the participant from the competition. It is important that this event was framed as occurring either 2 years ago or about 1 month ago.</p>	
<p>(Gordon, Burton, &amp; Porter, 2004)</p>	<p>A sample of 121 women residing in both urban and rural domestic violence shelters filled out a series of questionnaires evaluating demographic information, severity of violence, attributions for violence, psychological constraints (or investment), and forgiveness of the partner.</p>	<p>The Acts of Forgiveness Scale (Drinnon, Jones, &amp; Lawler, 2000) is a 45-item instrument measuring how much forgiveness an individual currently reports about specific betrayal.</p>	<p>Initial examination of the data revealed normal distributions for all variables except the self-attributions, acts of forgiveness, and intent to return. These variables were positively skewed, indicating that the majority of the participants did not intend to forgive or return to their</p>

			partners, nor were they engaging in self-blame for the abuse.
(Thielmann, Hilbig, & Niedtfeld, 2014)	From a total sample of 841 participants, 559 (66%) fulfilled the criteria for inclusion, namely (a) completion of all tasks in less than 90 minutes, (b) no repeated participation, and (c) at least a “good” grasp of the German language. Within the final sample (82% female, aged 15 to 76 years, $M = 31.2$ , $SD = 10.8$ ), 297 (53%) participants worked on the strategy variant and 262 (47%) participants worked on the game variant of the UG. Most of the participants were employees (29%) or university students.	Given that our hypotheses included expected null effects and aiming for sufficient statistical power to test these conclusively nonetheless, we opted for a large- scale Web-based study, adhering closely to the standards for Web- based experimenting (Reips, 2002a, 2002b). Personality traits, including HEX- HH and HEX- AG, were assessed using the 60- item German version of the HEXACO Personality Inventory- Revised (HEXACO- 60; Ashton & Lee, 2009)	For all data analyses, we specified a Type I error of $\alpha = .05$ . Directional hypotheses were evaluated based on one-tailed p values. All analyses were repeated with age, education, and the four remaining HEXACO dimensions (apart from HEX- HH and HEX- AG) as control variables. However, all results held. The present study provides further evidence that impaired reactive co-operation (i.e., a dispositional tendency to retaliate) contributes to the social problems related to BPD. Further specifying the

			<p>implications of prior research, BP features are not associated with problems in co-operation per se as individuals with high levels of BP features do not show deficits in active cooperation (or underlying traits representing a predisposition toward non-exploitation). BPD treatment should thus focus on interventions to facilitate forgiveness, patience, and non-retaliation rather than aiming to induce more fairness, greed avoidance, or non-exploitation.</p>
(Rahmati & Poormirzaei, 2019)	<p>Co-relational study was conducted on 170 nurses working in Kerman hospitals during 2016–2017 who were selected based on convenience random sampling.</p>	<p>Edmondson psychological safety and Thompson Heartland forgiveness scale were used for data collection. Data were analyzed through Pearson correlation coefficient and</p>	<p>The results indicated that psychological safety has a significant relationship with self?forgiveness (<math>p = 0.0001</math>) and other?forgiveness (<math>p = 0.04</math>). Further, only self</p>

		multiple regression model.	forgiveness could significantly predict 0.07 of psychological safety variance ( $p = 0.003$ ). Conclusions: Self-forgiveness skill can improve the nurses' psychological safety and reduce the harms caused by job pressures by reinforcing positive psychological factors. It is recommended to teach forgiveness skill through holding in service classes to staff and study the relationship between psychological safety with other social life skills among nurses.
(Taylor, Bates, & Dean, 2011)	One hundred and seventy-six primarily (71%) Australian participants ranging in age from 18 to 68 years ( $M = 43.60$ , $SD = 12.07$ ).	Completed an online survey of the Self-Assessed Wisdom Scale (SAWS; Webster, 2003, <i>Journal of Adult Development</i> , 10, 13–22; 2007, <i>International Journal of Aging and Human</i>	Results indicated that the dimensional structure of the SAWS, but not the 3D-WS, replicated, and the 3D-WS, but not the SAWS, was contaminated by a social

	<p>Development, 65, 163–183), the Three-Dimensional Wisdom Scale (3D-WS; Ardel, 2003, Journal of Gerontology: Psychological Sciences, 52B, 15–27), the Heartland Forgiveness Scale (Thompson et al., 2005, Journal of Personality, 73, 313–360), Ryff’s (1989, Journal of Personality and Social Psychology, 57, 1069–1081) measure of psychological well-being (PWB), and a measure of social desirability (BIDR; Paulhus, 1984, Journal of Personality and Social Psychology, 46, 598–609). indicated that the dimensional structure of the SAWS, but not the 3D-WS, replicated, and the 3D-WS, but not the SAWS, was</p>	<p>desirability response bias.</p>
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		contaminated.	
(Luskin, 2004)	This randomized study of 259 adults compared effects of a six-session (90 minutes each) manual-based cognitive behavioral intervention with a wait-listed control group with assessments at baseline, post-test, and 4.5-month follow-u	The forgiveness methodology used in the Forgiveness Project was tested and showed effectiveness with the families of victims of political violence,44 mothers whose sons were murdered,45 patients with moderate hypertension* and financial service advisors after the stock market crash of 2000.	In each case, the forgiveness intervention led to improvement in physical, psychological, and/or business outcomes. Lower blood pressure was found only with hypertensive patients who were angry at baseline. The financial service advisors showed less stress, increased positive emotion and improved sales after forgiveness training. The people who had lost family members to violence showed significant decreases in stress, depression and hurt and significant increases in physical vitality, optimism, and forgiveness.

<p>(Caruso, 2010)</p>	<p>Experiment 1 : One hundred sixteen participants were approached in undergraduate dining halls at Harvard University and asked to complete a short survey.</p>	<p>Experiment 1: Participants read a brief scenario that described a new vending machine that the Coca-Cola Company was purportedly developing.</p>	<p>Experiment 1 : Participants in the future condition reported that the machine was less fair than participants in the past condition, <math>t(114) \geq 2.32</math>, <math>p \downarrow .03</math>. In addition, those in the future condition reported that the thought of the machine made them feel more negative emotion than those in the past condition, <math>t(114) = 1.99</math>, <math>p \downarrow .05</math>.</p>
<p>Experiment 2 : One hundred seventy-six participants were approached at various public places on the University of Chicago campus and asked to complete a short questionnaire.</p>	<p>Experiment 2 : Participants read that a major news outlet recently discovered the test of a controversial pricing policy by online retailer Amazon.com.</p>	<p>Experiment 2 : The results revealed the predicted Temporal Frame // Temporal Distance interaction on fairness judgments.</p>	
<p>Experiment 3 : One hundred thirty-three people completed this experiment for a chance to win one of two \$100 prizes. An advertisement for the study was posted on several public list forums at the University of Chicago, and an e-mail</p>	<p>Experiment 3 : Participants read a description, based on actual events, of how writers who worked for network television shows had gone on strike in November 2007 because they felt they were being treated unfairly.</p>	<p>Experiment 3 : participants in the future condition thought</p>	

	<p>advertisement was sent to an online study pool maintained by the school.</p> <p>Experiment 4 : Eighty-nine people completed a short online questionnaire.</p> <p>Experiment 5 : One hundred twenty-one people were approached in a train station in Boston, MA and asked to complete a questionnaire in exchange for a candy bar.</p> <p>Materials</p>	<p>Experiment 4 : Participants read a brief scenario that asked them to consider two psychology experiments that differed in the amount of compensation they offered (modeled after Blount &amp; Bazerman, 1996).</p> <p>Experiment 5 : Participants read a description of the Ultimatum Game (Güth, Schmittberger, &amp; Schwarze, 1982), in which Player 1 is given a monetary allocation to divide with Player 2 in any way Player 1 sees fit. If Player 2 accepts the offer, the players receive the proposed amounts. If Player 2 rejects the offer, both players receive nothing.</p>	<p>that the decision to go back on the air was less acceptable than participants in the past condition, <math>t(131) // \geq 3.57, p \uparrow .001</math>.</p> <p>Experiment 4 : the participants themselves seemed to be relatively more concerned with fairness than (their own) profit when considering a future opportunity to make money than a past one.</p> <p>Experiment 5 : Participants reported that the unfair offer in the future made them feel more negative than the unfair offer made in the past, <math>t(119) // \geq 2.30, p \uparrow .03</math>, and rated the future offer as less fair than the past offer,</p>
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			t(119) // 2.50, p ↓ .02 (see Table 3). These judgments of fairness translated into their intended behavior: Participants reported that they would be more likely to reject a future unfair offer than a past one, t(119) // ≥2.60, p ↓ .02.
(Wei, Ma, & Wang, 2015)	<p>Experiment 1 :</p> <p>Fifty-four university students (29 men, 25 women; Mage = 22.17 years) from a university in north China participated in this experiment in exchange for US\$1.50 compensation each. They were randomly assigned to the cold and warm temperature groups.</p> <p>Experiment 2 :</p> <p>Sixty university students (28 men, 32 women; Mage = 22.20</p>	<p>Experiment 1 :</p> <p>For the cold group, an electronic heating pad was placed in the refrigerator for 30 min; for the warm group, the pad was plugged in ('high' heat setting) for 3 min, then unplugged</p> <p>questionnaire with 10 adjective pairs (good/bad, high/ low quality, like/dislike, first class/low grade, pleasant/unpleasant, attractive/unattractive,</p>	<p>Experiment 1 :</p> <p>All analyses controlled for gender, which has been shown to influence interpersonal processes (Frieze &amp; Li, 2010), but no significant gender difference was detected in any experiment reported here. The removal of the gender covariate from analyses did not substantially alter the results. Thus, this variable is not discussed in subsequent text.</p>

	<p>years) from a university in north China participated in this experiment in exchange for US\$1.50 compensation each. They were randomly assigned to four groups according to a 2 (temperature: Cold vs. warm) x 2 (social context: Positive vs. negative) between-subjects design.</p> <p>Experiment 3 : One hundred and fifty university students (54 men, 96 women; M age = 25.01 years) from a university in north China participated in this experiment in exchange for US\$2.00 compensation each. They were randomly assigned to six groups according to a 3 (temperature: Cold vs. warm vs. room) x 2</p>	<p>interesting/uninteresting, beautiful/ugly, comfortable/uncomfortable to touch, cheap/expensive) on a 7-point bipolar scale.</p> <p>Experiment 2 : For the cold groups, a cup was placed in the refrigerator for 30 min; for the warm groups, a cup was filled with hot water and emptied after 3 min. The experimenter was blinded to cup temperature in the same way as in experiment 1.</p> <p>Experiment 3 : Temperature manipulation was checked in a manner similar to that used in Experiment 2 (1 = very cold, 10</p>	<p>Experiment 2 : The finding that social context had a significant main effect on interpersonal outcomes is in line with the argument from social exchange theory (Blau, 1964) that individuals are willing to return favours to maintain balanced relationships and equalize exchange (Gouldner, 1960). In Experiment 2, the quality of service offered by the deliveryman greatly influenced participants' willingness to do a favour for him. More importantly, we found no significant main effect of physical warmth/coldness, suggesting that physical temperature alone cannot determine interpersonal</p>
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	<p>(social context: Positive vs. negative) between-subjects design.</p>	<p>= very warm). ANOVA revealed significant differences among the three groups, <math>F(2,147) = 247.54, p &lt; .001</math>. Specifically, the average rating of participants in the warm groups (<math>M = 8.14, SD = 1.23</math>) was significantly higher than that of those in the control group, <math>M = 5.22, SD = 1.59; t(98) = 10.26, p &lt; .001</math>, and the control group rating was significantly higher than that of the cold group, <math>M = 2.40, SD = 0.97; t(98) = 10.69, p &lt; .001</math>. These results showed that temperature manipulation was successful. At the end of the experiment, participants were asked to complete the Positive Affect and Negative Affect Schedule (Watson, Clark, &amp; Tellegen,</p>	<p>warmth. We found a significant interaction effect between physical temperature and social context, showing that the relationship between physical and interpersonal warmth differed according to social context. The findings of Experiment 2 are consistent with our hypotheses that physical warmth increases interpersonal warmth in a positive social context (in which the original interpersonal interaction contains elements of help and consideration), whereas physical coldness increases interpersonal warmth in a negative social context (in which the original interpersonal interaction</p>
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		<p>1988). Cronbach's <math>\alpha</math> values for positive and negative affect were .878 and .898, respectively.</p>	<p>contains a careless mistake).</p> <p>Experiment 3: The results of Experiment 3 replicated those of Experiment 2. We found significant interactive and main effects of social context, but no significant main effect of temperature. More importantly, Experiment 3 revealed significant differences from the control (room temperature) group in the interpersonal outcomes of physical warmth/coldness in positive and negative social contexts. Use of the hostility-related dependent variable (likelihood of making a complaint) provided support for our hypotheses: Physical warmth reduced the likelihood</p>
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			<p>that participants would make a complaint and physical coldness increased this likelihood in the positive social context, whereas physical warmth increased the likelihood of making a complaint and physical coldness reduced this likelihood in the negative social context. In accordance with previous research (Fay &amp; Maner, 2014), we also found that temperature had no effect on affect and that differences in hostile responses were not due to affect.</p> <p><b>CONCLUSION :</b> The current study showed that the effect of physically experienced temperature on</p>
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			<p>interpersonal outcomes is dependent on social context. Physical experience leads to physiological arousal, and the social context determines how this arousal relates to a particular interpersonal outcome. In positive social contexts, physical warmth increases interpersonal warmth and physical coldness reduces interpersonal warmth; in negative social contexts, these relationships are reversed. By introducing the role of social context in the grounding of abstract interpersonal processes in concrete physical experiences, we believe that our findings shed light on the broader perspective of embodied cognition.</p>
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# Chapter 4

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## **4. AIMS & OBJECTIVE**

### **4.1 Aim and objectives of the study**

- To study the willingness to forgive using the questionnaire “Heartland Forgiveness Scale” in yoga practitioners and non-yoga practitioners.
- To compile the concept of Forgiveness from Haṭha Yoga Pradīpikā and Bhagwad Gita.

### **4.2 Rationale for the study**

To study the effect of Yoga on willingness to forgiveness using questionnaire “Heartland Forgiveness Scale” as no studies is done by taking Yoga as an intervention with regard to Forgiveness.

### **4.3 Hypothesis of the study**

- The practice of Yoga may increase willingness to forgive.

### **4.4 Null hypothesis**

- The practice of Yoga may not increase willingness to forgive.

# Chapter 5

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## 5. METHODS

### 5.1 Participants

#### 5.1.1 Sample size:

Yoga Group: Sixty normal healthy volunteers comprising of 30 females and 30 male were studied.

Control Group: Sixty normal healthy people comprising of 30 females and 30 male volunteers were studied.

#### 5.1.2 Age range and gender:

Normal healthy 120 (Yoga Group – 60 and Control Group – 60) including male and female volunteers with ages ranging from 18 – 34 years (group mean age  $\pm 22.01$  S.D;  $\pm 3.39$ ) were studied.

#### 5.1.3 Source:

The students undergoing different yoga courses (for yoga group) and Bachelor in Ayurveda Science (for control group) at Swami Vivekananda Yoga Anusandhana Samsthana, Bengaluru were recruited for the study.

#### 5.1.4 Inclusion criteria:

- (i) Normal healthy female and male volunteers with ages ranging from 18 – 35 years.
- (ii) Willingness to participate in the trial.

#### 5.1.5 Exclusion criteria:

- i. People above 35 years of age not included.

#### 5.1.6 Ethical consideration:

The study protocol was explained to the participants and their signed consent was obtained.

### 5.2 Assessment

The Heartland Forgiveness Scale (HFS) is an 18-item, self-report questionnaire designed to assess a person's dispositional forgiveness (i.e., one's general tendency to be forgiving), rather than forgiveness of a particular event or person. The HFS consists of items that reflect a person's tendency to forgive him or herself, other people, and situations that are beyond anyone's control (e.g. a natural disaster).

Four scores are calculated for the HFS. There is a score for the Total HFS and a score for each of the three HFS subscales (HFS Forgiveness of Self-subscale, HFS Forgiveness of Others subscale, and HFS Forgiveness of Situations). Scores for the Total HFS can range from 18 to 126. Scores for the three HFS subscales can range from 6 to 42.

### **Total HFS**

One's score on the Total HFS indicates how forgiving a person tends to be of oneself, other people, and uncontrollable situations. Higher scores indicate higher levels of forgiveness, and lower scores indicate lower levels of forgiveness.

A score of 18 to 54 on the Total HFS indicates that one is usually unforgiving of oneself, others, and uncontrollable situations.

A score of 55 to 89 on the Total HFS indicates that one is about as likely to forgive, as one is not to forgive oneself, others and uncontrollable situations.

A score of 90 to 126 on the Total HFS indicates that one is usually forgiving of oneself, others, and uncontrollable situations.

### **HFS Subscales**

One's score on the three HFS subscales indicate how forgiving a person tends to be of oneself (HFS Forgiveness of Self), other people (HFS Forgiveness of Others), or situations beyond anyone's control (HFS Forgiveness of Situations). Higher scores indicate higher levels of forgiveness, and lower scores indicating lower levels of forgiveness.

A score of 6 to 18 on HFS Forgiveness of Self, HFS Forgiveness of Others, or HFS Forgiveness of Situations indicates that one is usually unforgiving of oneself, other people, or uncontrollable situations, respectively.

A score of 19 to 29 indicates that one is about as likely to forgive as to not forgive oneself, other people, or uncontrollable situations, respectively.

A score of 30 to 42 indicates that one is usually forgiving of oneself, other people, or uncontrollable situations, respectively.

### **HFS Scoring Instructions**

Four scores are calculated for the Heartland Forgiveness Scale (HFS) :

#### **Total HFS (items 1 – 18)**

HFS Forgiveness of Self-subscale (items 1 – 6)

HFS Forgiveness of Others subscale (items 7 – 12)

HFS Forgiveness of Situations subscale (items 13 – 18)

**To Score the HFS**

1) Scores for items 1, 3, 5, 8, 10, 12, 14, 16 & 18 are the same as the answer written by the person taking the HFS. Scores for items 2, 4, 6, 7, 9, 11, 13, 15 and 17 are reversed. For example, an answer of 1 is given a score of 7 and answer of 7 is given a score of 1. Refer to the tables below for more information about scoring individual items.

2) To calculate the Total HFS, HFS Forgiveness of Self, HFS Forgiveness of Others and HFS Forgiveness of Situations, sum the values for the items that compose each scale or subscale (with appropriate items being reverse scored). Scores for the Total HFS can range from 18 to 126. Scores for each of the three HFS subscales can range from 6 to 42.

Scoring

Items 1, 3, 5, 8, 10, 12, 14, 16 and 18

Person's Answer	Item Score
1	1
2	2
3	3
4	4
5	5
6	6
7	7

Reverse Scoring

Items 2, 4, 6, 7, 9, 11, 13, 15 and 17

Person's Answer	Item Score
1	7
2	6
3	5
4	4
5	3
6	2
7	1

The seven point scale is as mentioned below:

Almost Always False of Me – 1 and 2

More Often False of Me - 3 and 4

More Often True of Me – 5 and 6

Almost Always True of Me – 7

Detailed instructions were given to the participants before starting the test.

### **5.3 Design**

Cross Sectional Study Design was used in the present study. Each participant of Yoga group and Control group duly filled the Heartland Forgiveness Scale questionnaire.

### **5.4 Intervention**

#### **Yoga Group**

Subjects practicing Yoga for minimum one year are included in this study. Heartland Forgiveness Questionnaire was duly filled by each subject. Subjects comprised of 60 in numbers consisting of 30 females and 30 males are included in the study.

#### **Control Group**

Subjects not at all practicing Yoga are included in this study. Heartland Forgiveness Questionnaire was duly filled by each subject. Subjects comprised of 60 in numbers consisting of 30 females and 30 males are included in the study.

### **5.5 Data extraction**

Scoring the Heartland Forgiveness Scale test gives three types of raw scores (i) forgiveness for self, (ii) forgiveness for others, and (iii) forgiveness based on the situations beyond one's control.

### **5.6 Data analysis**

Statistical analysis was done using R Statistics (3.6). Data were tested for Normality using Shapiro-Wilks Test. Independent Sample T Test was performed to determine the difference between Yoga and Control Group.

# Chapter 6

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## 6. RESULTS

Yoga group and Control group both had 60 participants each. Group mean values and standard deviations are presented in below Table 1.

An independent-samples t-test was performed to determine if there were differences in HFS scores of yoga group and control group. There were no outliers in the data, as assessed by inspection of a boxplot. Data were tested for normality using Shapiro-Wilk's test. HFS score total and all subscales were normally distributed ( $p > .05$ ). There was a homogeneity of variances, as assessed by Levene's test for equality of variances. There was a significant difference between yoga group and control group in all HFS scores as assessed by Independent-samples t-test.

HFS total score [  $t(118) = 4.52, p < .0001$  ], HFS Forgiveness of Self subscale score [  $t(118) = 3.15, p < .001$  ], HFS Forgiveness of Others subscale score [  $t(118) = 3.65, p < .0001$  ], and HFS Forgiveness of Situations score [  $t(118) = 3.78, p < .0001$  ], was significantly higher in yoga group compared to control group.

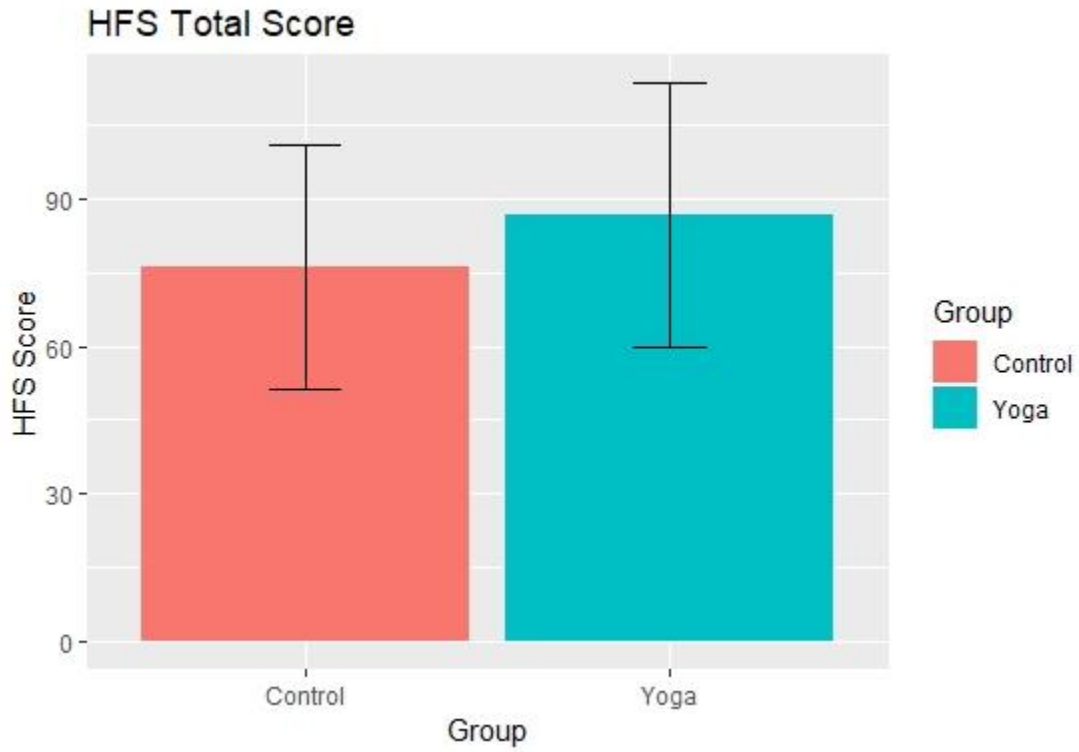
Table 1: HFS score in yoga and control group. Values presented below are group mean  $\pm$  standard deviation

Yoga group compared with Control group, Independent samples t test, \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$

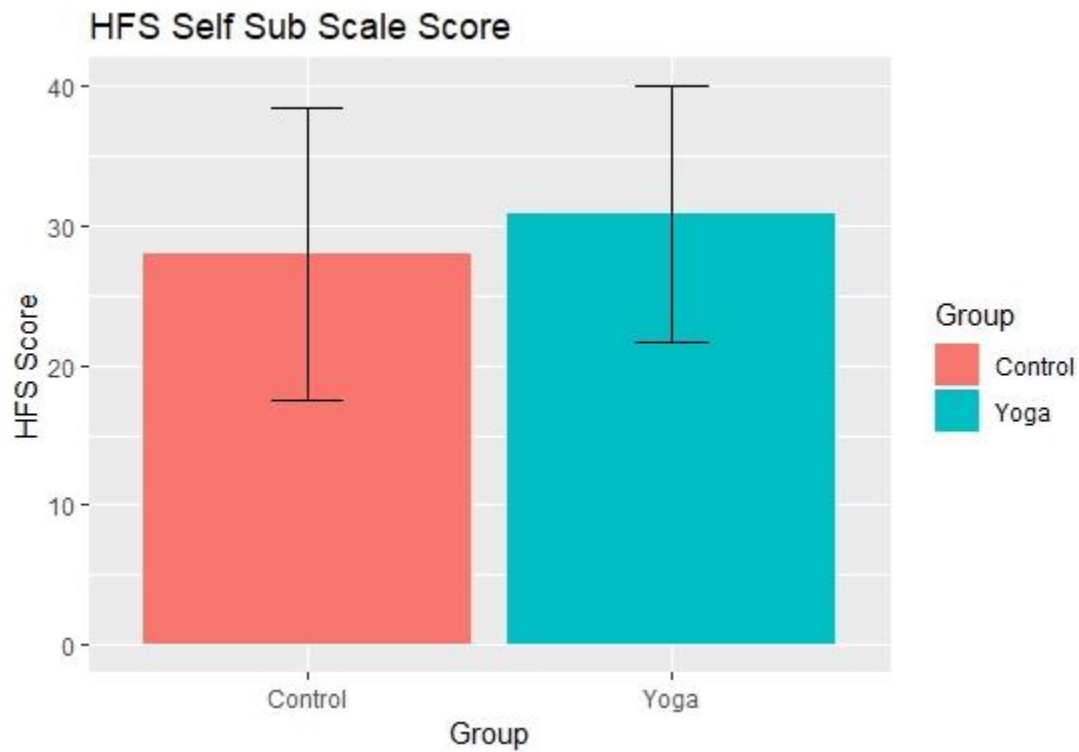
<b>Variables</b>	<b>Yoga group</b>	<b>Control group</b>
<b>HFS total score</b>	86.80 $\pm$ 13.38	76.18 $\pm$ 12.36 ***
<b>HFS Forgiveness of Self subscale</b>	30.85 $\pm$ 4.61	28.01 $\pm$ 5.23 **
<b>HFS Forgiveness of Others subscale</b>	30.57 $\pm$ 5.65	26.7 $\pm$ 5.95 ***
<b>HFS Forgiveness of Situations</b>	25.38 $\pm$ 5.46	21.47 $\pm$ 5.88 ***

Yoga group compared with Control group, Independent samples t test, \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$

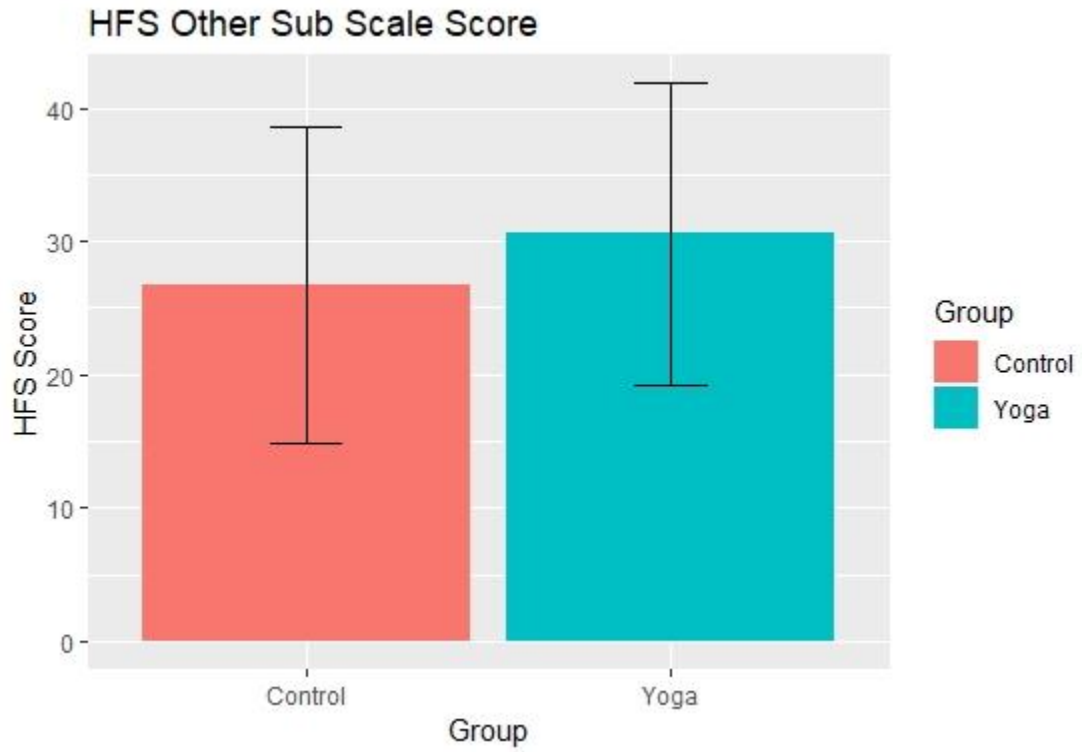
Graph 1. HFS total score in Yoga group and Control group



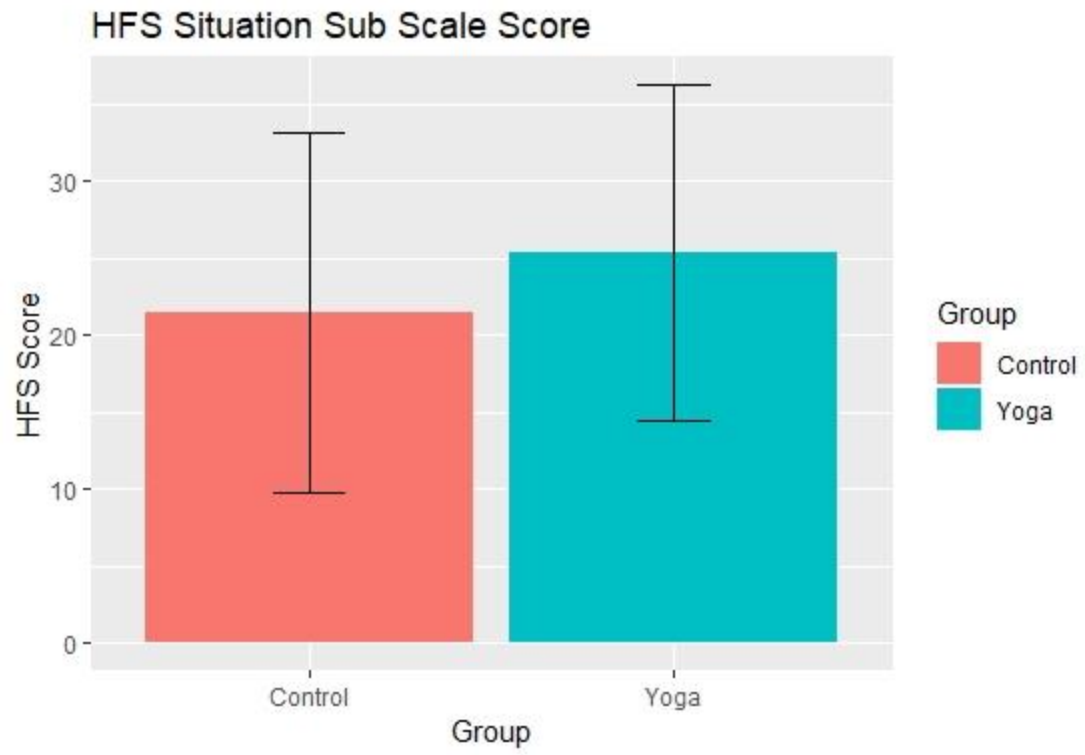
Graph 2. HFS Forgiveness of Self subscale in Yoga group and Control group



Graph 3. HFS Forgiveness of Others subscale in Yoga group and Control group



Graph 4. HFS Forgiveness of Situations subscale in Yoga group and Control group



# Chapter 7

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## 7. DISCUSSIONS

In the current study, we made an effort to understand difference between the ability to forgive in yoga and non-yoga subjects. There was a significant difference between yoga group and control group in all HFS scores. HFS total score, HFS Forgiveness of Self subscale score, HFS Forgiveness of Others subscale score, and HFS Forgiveness of Situations score, was significantly higher in yoga group compared to control group.

The Heartland Forgiveness Scale (HFS) is an 18-item, self-report questionnaire designed to assess a person's dispositional forgiveness (i.e., one's general tendency to be forgiving), rather than forgiveness of a particular event or person. The HFS consists of items that reflect a person's tendency to forgive him or herself, other people, and situations that are beyond anyone's control (e.g., a natural disaster).

Four scores were calculated for the HFS. There is a score for the Total HFS and a score for each of the three HFS subscales (HFS Forgiveness of Self subscale, HFS Forgiveness of Others subscale, and HFS Forgiveness of Situations). Scores for the Total HFS can range from 18 to 126. Scores for the three HFS subscales can range from 6 to 42 (Thompson and C.R. Snyder, 2003), (Thompson et al, 2005).

One's score on the Total HFS indicates how forgiving a person tends to be of oneself, other people, and uncontrollable situations. Higher scores indicate higher levels of forgiveness, and lower scores indicate lower levels of forgiveness. One's score on the three HFS subscales indicate how forgiving a person tends to be of oneself (HFS Forgiveness of Self), other people (HFS Forgiveness of Others), or situations beyond anyone's control (HFS Forgiveness of Situations). Higher scores indicate higher levels of forgiveness, and lower scores indicating lower levels of forgiveness (Thompson and C.R. Snyder, 2003) , (Thompson et al, 2005).

In the current study, the total HFS scores in yoga group is significantly higher than the control group. A score of 18 to 54 on the Total HFS indicates that one is usually unforgiving of oneself, others, and uncontrollable situations. A score of 55 to 89 on the Total HFS indicates that one is

about as likely to forgive, as one is not to forgive oneself, others, and uncontrollable situations. A score of 90 to 126 on the Total HFS indicates that one is usually forgiving of oneself, others, and uncontrollable situations. In the current study, the total HFS scores is 86.8 and 76.18 in yoga and control group respectively. The scores suggest that yoga practitioners and non-yoga subjects both are likely to forgive, however yoga group appears to forgive more.

A score of 6 to 18 on HFS Forgiveness of Self subscale, HFS Forgiveness of Others subscale, or HFS Forgiveness of Situations subscale indicates that one is usually unforgiving of oneself, other people, or uncontrollable situations, respectively. A score of 19 to 29 indicates that one is about as likely to forgive as to not forgive oneself, other people, or uncontrollable situations, respectively. A score of 30 to 42 indicates that one is usually forgiving of oneself, other people, or uncontrollable situations, respectively. In the present study, HFS Forgiveness of Self subscale is 30.85 and 28.01 respectively. This suggests yoga group usually forgiving of oneself whereas control group likely to forgive. HFS Forgiveness of others subscale is 30.57 and 26.7 respectively suggesting yoga group usually forgiving of others whereas control group likely to forgive others. HFS Forgiveness of Situations subscale is 25.38 and 21.47 respectively suggesting yoga group usually forgiving of situations whereas control group likely to forgive others.

In future, it is worth exploring forgiveness in long-term yoga practitioners and its association with their personality types. In conclusion, forgiveness is more in yoga group compared to control group.

# Chapter 8

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## **8. APPRAISAL**

### **8.1 Summary and Conclusion**

In the current study, we made an effort to understand difference between the ability to forgive in yoga and non-yoga subjects. There was a significant difference between yoga group and control group in all HFS scores. HFS total score, HFS Forgiveness of Self subscale score, HFS Forgiveness of Others subscale score, and HFS Forgiveness of Situations score, was significantly higher in yoga group compared to control group.

### **8.2 Implication of the study**

Willingness to forgive is one of the very important qualities. Yoga has shown to increase forgiveness. Hence, it can bring social harmony by inculcating Virtues.

### **8.3 Limitations of the study**

One of the main limitations of the study is that we have assessed only willingness to forgive using Heartland forgiveness scale. Other related qualities viz, compassion, aggression and personality types are not assessed. It would be been more informative if was added.

### **8.4 Suggestions for the future**

In future, it is worth exploring forgiveness in long-term yoga practitioners and its association with their personality types. In conclusion, forgiveness is more in yoga group compared to control group.

# Chapter 9

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# Chapter 10

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## 10.APPENDIX

### APPENDIX-1 INFORMED CONSENT FORM

**Title of the project** : Comparative study of Yoga and Non Yoga Group on willingness to forgive.

**Investigator** : Sujit Narayanan Nair,M.Sc.,(Yoga Therapy) Candidate

**Name of the guides** : Raghavendra Bhat, M.Sc., Ph..D.

**The purpose of the study** : To study the willingness to forgive using the questionnaire “Heartland Forgiveness Scale” in yoga practitioners and non-yoga practitioners.

**Procedure for measurement:**Heartland Forgiveness Scale Questionnaire is used to assess the participant’s willingness to forgive. The Questionnaire consists total 18 questions comprising 6 questions on forgiveness of self, 6 questions on forgiveness on others and 6 questions on forgiveness with regard to situations.

**Please note:** You can withdraw from the study at any point of time unconditionally.

I have understood the all above and consent voluntarily to participate in the study.

Place\_\_\_\_\_

Date\_\_\_\_\_

**Signature of the Participant**

**APPENDIX-2 THE HEARTLAND FORGIVENESS SCALE (HFS)**

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Gender: \_\_\_\_\_

**Educational qualification:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Experience in Yoga (in months):** \_\_\_\_\_

**The Heartland Forgiveness Scale (HFS)**

**Directions:** In the course of our lives negative things may occur because of our own actions, the actions of others, or circumstances beyond our control. For some time after these events, we may have negative thoughts or feelings about ourselves, others, or the situation. Think about how you **typically** respond to such negative events. Next to each of the following items write the number (from the 7-point scale below) that best describes how you **typically** respond to the type of negative situation described. There are no right or wrong answers. Please be as open as possible in your answers.

1	2	3	4	5	6	7
	Almost Always		More Often		More Often	Almost Always
	False of Me	False of Me		True of Me		True of Me

\_\_\_\_ 1. Although I feel badly at first when I mess up, over time I can give myself some slack.

\_\_\_\_ 2. I hold grudges against myself for negative things I've done.

\_\_\_\_ 3. Learning from bad things that I've done helps me get over them.

\_\_\_\_ 4. It is really hard for me to accept myself once I've messed up.

\_\_\_\_ 5. With time I am understanding of myself for mistakes I've made.

\_\_\_\_ 6. I don't stop criticizing myself for negative things I've felt, thought, said, or done.

- \_\_\_ 7. I continue to punish a person who has done something that I think is wrong.
- \_\_\_ 8. With time I am understanding of others for the mistakes they've made.
- \_\_\_ 9. I continue to be hard on others who have hurt me.
- \_\_\_ 10. Although others have hurt me in the past, I have eventually been able to see them as good people.
- \_\_\_ 11. If others mistreat me, I continue to think badly of them.
- \_\_\_ 12. When someone disappoints me, I can eventually move past it.
- \_\_\_ 13. When things go wrong for reasons that can't be controlled, I get stuck in negative thoughts about it.
- \_\_\_ 14. With time I can be understanding of bad circumstances in my life.
- \_\_\_ 15. If I am disappointed by uncontrollable circumstances in my life, I continue to think negatively about them.
- \_\_\_ 16. I eventually make peace with bad situations in my life.
- \_\_\_ 17. It's really hard for me to accept negative situations that aren't anybody's fault.
- \_\_\_ 18. Eventually I let go of negative thoughts about bad circumstances that are beyond anyone's control.

**APENDIX-3RAW DATA TABLE**

**DATA - YOGA GROUP**

Sno	Name	Age	Gender	Group	Self	Others	Situations	Total
1	Pooja K.	22	Female	Yoga	31	27	27	85
2	Parichiti Saha	22	Female	Yoga	28	35	24	87
3	Nagaveni Ch	27	Female	Yoga	33	35	29	97
4	Prity Prajapati	23	Female	Yoga	23	22	17	62
5	Priyanka Sarkar	21	Female	Yoga	28	31	27	86
6	Pooja Verma	24	Female	Yoga	33	28	23	84
7	Rachna Raj	25	Female	Yoga	23	26	22	71
8	Anubha Saini	21	Female	Yoga	28	20	21	69
9	Pooja Singh	21	Female	Yoga	28	21	18	67
10	Hemal Ashar	22	Female	Yoga	32	24	15	71
11	Rishu Sharma	23	Female	Yoga	37	34	28	99
12	N. Subhashri	24	Female	Yoga	36	32	26	94
13	Vandana	22	Female	Yoga	29	28	20	77
14	Krupa Thakkar	28	Female	Yoga	33	32	30	95
15	Monisha Mondal	22	Female	Yoga	36	31	27	94
16	Indubala	22	Female	Yoga	31	30	19	80
17	Swati Galiyav	20	Female	Yoga	29	27	23	79
18	SujanaBista	28	Female	Yoga	30	38	27	95
19	Shreelakshmi A.P.	27	Female	Yoga	34	21	20	75
20	M. Jibanlata Devi	25	Female	Yoga	27	25	25	77
21	Jyoti Devi	26	Female	Yoga	27	24	23	74
22	Phurailatpani Annie	25	Female	Yoga	31	39	30	100
23	K.M. Avanu	18	Female	Yoga	31	38	26	95
24	P. Meghana	23	Female	Yoga	28	32	27	87
25	Anushka P. Nair	21	Female	Yoga	26	23	21	70
26	AyushiBanzal	23	Female	Yoga	34	35	31	100

27	Lopamudra Naik	21	Female	Yoga	38	33	35	106
28	KapseSharyu	23	Female	Yoga	36	41	34	111
29	Preeti Hegde	24	Female	Yoga	16	21	15	52
30	SreyaNandy	21	Female	Yoga	30	30	25	85
31	Sridhar R.	25	Male	Yoga	28	32	25	85
32	Srihari Maiti	23	Male	Yoga	33	38	31	102
33	K. Dileep Kumar	34	Male	Yoga	35	28	28	91
34	Abhishek Yadav	24	Male	Yoga	36	31	31	98
35	Arvind Kumar	28	Male	Yoga	33	33	33	99
36	Anant Gopal	22	Male	Yoga	28	39	30	97
37	Kaviyaranan G	23	Male	Yoga	32	36	35	103
38	Sooraj Santhosh	25	Male	Yoga	36	35	35	106
39	Krishna Bharadwaj N	22	Male	Yoga	40	33	22	95
40	KiritiBhusan Ghosh	30	Male	Yoga	31	39	35	105
41	Kalyan Maity	25	Male	Yoga	30	32	24	86
42	Surajit Kar	25	Male	Yoga	39	42	33	114
43	Rahul Singh	27	Male	Yoga	30	33	33	96
44	Lokesh R	24	Male	Yoga	37	31	26	94
45	Chaitanya Sharma	22	Male	Yoga	35	24	21	80
46	Sagar Walad	34	Male	Yoga	27	27	26	80
47	Dinesh	24	Male	Yoga	37	33	29	99
48	Amandip Singh	23	Male	Yoga	23	31	23	77
49	Prakash S.	22	Male	Yoga	30	28	21	79
50	Naveen Kumar H	23	Male	Yoga	31	30	20	81
51	Devesh	28	Male	Yoga	34	32	25	91
52	Bikash Kumar Purohit	28	Male	Yoga	36	41	35	112
53	Likhith Raj	22	Male	Yoga	34	33	20	87
54	Anuj	21	Male	Yoga	28	24	24	76
55	Premkumar	24	Male	Yoga	24	28	26	78
56	Sonu Maurya	30	Male	Yoga	26	32	22	80

57	AraykshthSahani	29	Male	Yoga	31	28	20	79
58	Kushagra Trivedi	24	Male	Yoga	28	32	19	79
59	Ameya Patil	21	Male	Yoga	24	18	21	63
60	ParameshwarSom	33	Male	Yoga	29	28	15	72
<b>Mean</b>					<b>30.85</b>	<b>30.57</b>	<b>25.38</b>	<b>86.80</b>
<b>SD</b>					<b>4.61</b>	<b>5.65</b>	<b>5.46</b>	<b>13.38</b>

### DATA – NON-YOGA GROUP

Slno	Name	Age	Gender	Group	Self	Others	Situations	Total
1	Munni Kumari	20	Female	Control	25	28	22	75
2	Monika	20	Female	Control	24	19	19	62
3	Architha J	19	Female	Control	36	27	30	93
4	Arpitha J	19	Female	Control	35	19	25	79
5	Sultana	20	Female	Control	29	21	25	75
6	Mubashira	18	Female	Control	28	29	23	80
7	Albin Gogoi	20	Female	Control	27	15	21	63
8	Medha Sharma	19	Female	Control	23	18	23	64
9	Kavita Singh	20	Female	Control	23	20	10	53
10	Rachana K	19	Female	Control	34	39	24	97
11	Yashaswini S	19	Female	Control	18	32	16	66
12	Rehna Rajesh	19	Female	Control	23	30	19	72
13	Diya Binu	19	Female	Control	23	29	17	69
14	Kuvala Shetty R. L.	19	Female	Control	40	34	33	107
15	N. Diya	19	Female	Control	31	17	11	59
16	ParisaraH.I	19	Female	Control	29	37	31	97
17	Haric Raman	19	Female	Control	30	29	22	81
18	Monisha N	20	Female	Control	32	39	25	96
19	Amina Saher	19	Female	Control	27	19	17	63
20	Misba A	19	Female	Control	21	31	17	69

21	P. Aishwarya	19	Female	Control	26	24	15	65
22	Sanjana N.S.	19	Female	Control	19	30	17	66
23	Gagana C.S.	19	Female	Control	32	24	19	75
24	Chaithanya A	19	Female	Control	28	37	9	74
25	Bhoomika S	20	Female	Control	20	26	19	65
26	Bindu	19	Female	Control	25	28	14	67
27	Shashikala H.G.	19	Female	Control	32	28	24	84
28	Sona S.	19	Female	Control	29	21	25	75
29	Lathashree N	19	Female	Control	39	29	15	83
30	Chandana K.S.	19	Female	Control	29	22	11	62
31	Manjunath N	21	Male	Control	23	34	26	83
32	Sudarshan	19	Male	Control	25	23	31	79
33	Amit Sotathiya	19	Male	Control	35	29	28	92
34	Mohammad	19	Male	Control	30	25	33	88
35	Zakir Hussain	20	Male	Control	30	32	32	94
36	Patel Panth	20	Male	Control	26	26	27	79
37	Rajath D	19	Male	Control	37	32	26	95
38	Nitesh S	21	Male	Control	31	26	20	77
39	ChandrashekharaBabu	20	Male	Control	22	24	26	72
40	Girish Gowda	19	Male	Control	21	25	22	68
41	Hemanth Gowda R.L.	19	Male	Control	32	17	25	74
42	Kabir	20	Male	Control	36	34	30	100
43	M.D. Qurban Ali	20	Male	Control	28	25	19	72
44	Dandu Reddy	19	Male	Control	24	24	17	65
45	Ashok Sirvi	19	Male	Control	20	25	18	63
46	Mohd. Asif Khan	21	Male	Control	19	24	15	58
47	Rampal Bishnoi	21	Male	Control	26	34	19	79
48	Yash Sidpura	19	Male	Control	25	25	15	65
49	Koushik Aheer	19	Male	Control	35	35	21	91
50	Prasad M	20	Male	Control	24	25	23	72

51	Ashwin Sudhakaran	21	Male	Control	31	28	30	89
52	S. Rakesh	22	Male	Control	31	21	19	71
53	Nilesh Yadav	23	Male	Control	27	27	24	78
54	Shyam Maru	21	Male	Control	23	23	17	63
55	Jigar	20	Male	Control	32	25	20	77
56	S. Dileep	20	Male	Control	28	22	23	73
57	Revish	22	Male	Control	28	32	17	77
58	Babul Ahmed	20	Male	Control	29	14	16	59
59	Habib Sirajul Banid	21	Male	Control	32	36	28	96
60	Archan Singh Vashi	22	Male	Control	34	29	23	86
<b>Mean</b>					<b>28.02</b>	<b>26.70</b>	<b>21.47</b>	<b>76.18</b>
<b>SD</b>					<b>5.23</b>	<b>5.95</b>	<b>5.88</b>	<b>12.36</b>