Effect of Maha-Mrityunjay Mantra and Yogic Breathing on Mindfulness of University Students

A research project

For the Degree of Master of Science in YOGA

Dept Of Yogic Art and Science

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Apu Chakma

CERTIFICATE

This is to certify that the project of "EFFECT OF MAHAMRITYUNJAY MANTRA AND

YOGIC BREATHING ON MINDFULNESS OF UNIVERSITY STUDENTS" has been carried

out by the candidate under my direct supervision and the findings have been checked

thoroughly.

I am satisfied with the work of Mr. Apu Chakma and Reg. No: VB-0593 of 2018-19

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It is further certified that Mr. Apu Chakma has undergone the prescribed course of studies

leading to Masters of Science Degree Examinations in accordance with the university

regulations.

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CONTENTS

| S.N.O. | TITLE | PAGE NO. |
|--------|------------------------------------|----------|
| 1. | Chapter- 1:- Introduction: | 1-8 |
| 1. | 1.2. Mahamrityunjay Mantra: | 1-2 |
| | 1.3. Yogic Breathing: | 2-3 |
| | 1.4. Anatomy of Breathing: | 3-4 |
| | 1.5. Mindfulness: | 5-8 |
| | 1.5.1. According to Buddha: | 5 |
| | 1.5.2. According to Yoga: | 6 |
| | 1.5.3. According to Jainism: | 7 |
| | 1.5.4. Benefits of mindfulness: | 7-8 |
| | 1.6. Role in Life: | 8 |
| | 1.7. Yogic techniques: | 8 |
| | 1.8. benefits of mantra: | 8 |
| | 1.9. Prana: | 8 |
| | 1.10. Need for the Study: | 8 |
| | | |
| 2. | Chapter-2:- LITERATURE REVIEW: | 9-14 |
| | 2.1 Ancient Literature Review: | 9-12 |
| | 2.1.1. Mindfulness: | 9 |
| | 2.1.1.1. Bhagavad Gita: | 9 |
| | 2.1.1.2. Gherand Samhita: | 9-10 |
| | 2.1.1.3. Patanjali Yoga Sutras: | 10 |
| | 2.1.2. Dharana: | 10 |
| | 2.1.3. Dhyana: | 11 |
| | 2.1.4. Samadhi: | 11-12 |
| | 2.1.5. Samyama: | 12 |
| | 2.1.6.Concept of Prana: | 12 |
| | 2.1.7. How Prana effects the Mind? | 12 |
| | 2.1.8. Maha-Mrityunjay Mantra: | 12 |
| | 2.2 Modern Literature Review: | 12-14 |
| | | |
| 3. | Chapter-3:- AIM AND OBJECTIVE: | 15 |
| | 3.1.1. Aim: | 15 |
| | 3.1.2. Objectives: | 15 |
| | Research Question and Hypotheses: | 15 |
| | 3.2.1. Research Question: | 15 |
| | 3.2.2 Hypothesis: | 15 |
| | 3.2.2.1. Althernate Hypothesis: | 15 |
| | 3.2.2.2. Null Hypothesis: | 15 |
| 4. | Chapter-4:- MATERIALS AND METHODS: | 16-17 |
| | 4.1. Methodology: | 16 |
| | 4.1.1. Sample: | 16 |
| | 4.2. Sampleing technique: | 16 |
| | 4.3. Inclusion Criteria: | 16 |
| | 4.4. Exclusion Criteria: | 16 |
| | | 16 |

| | 4.5. Intervention: | 16 |
|-----|-------------------------------|-------|
| | 4.6. Duration: | 16 |
| | 4.7. Assessment tools: | 16 |
| | 4.8. Informed Consent: | 17 |
| | 4.9. Data Analysis: | 17 |
| 5. | Chapter-5:- RESULTS: | 18 |
| | | |
| 6. | Chapter-6:- DISCUSSION: | 19 |
| | | |
| 7. | Chapter-7:- CONCLUSSION: | 20 |
| | | |
| 8. | Chapter-8:- APPRAISALS: | 21-22 |
| | 8.1. Strength and Limitation: | 21 |
| | 8.2. Future Direction: | 22-22 |
| | VII. 2 1111112 | 22 |
| 9. | Chapter-9:- REFERENCES: | 23 |
| | | |
| 10. | Chapter-10:- ANNEXURE: | 24-28 |
| | | |
| 1 | | |

ABSTRACT

AIM: The study aimed to investigate the effect of Mahamrityunjay Mantra and Yogic breathing on mindfulness among university students in Bolpur. The objectives were to study the effect of each intervention separately on mindfulness based on the Five Facet Mindfulness Questionnaire (FFMQ).

METHODS: The study used a sample of 34 university students ranged between 18-24 years of age, who were physically healthy and did not have any psychological disorders. The sample was selected using a convenient sampling technique, and the study design was a single group pre-post design.

RESULTS: The results showed a significant positive change in mindfulness scores from before to after the intervention. The mean score for post-FFMQ was higher than the mean score for pre-FFMQ, indicating a positive change in mindfulness scores. The paired samples t-test showed a statistically significant difference between the pre-FFMQ and post-FFMQ scores, with a t-value of -4.032 and a p-value less than 0.001.

CONCLUSIONS: The results indicate that the 1 month intervention of Mahamrityunjay Mantra and Yogic breathing had a significant positive effect on the mindfulness of university students.

KEYWORDS: Mahamrityunjay mantra, Yogic breathing, Mindfulness, Five Facet Mindfulness Questionnaire (FFMQ)

Chapter-1:- Introduction

4 1. Introduction:

Mindfulness has two main ingredients: awareness and acceptance. Mindfulness is knowing and being able to direct attention to internal processes and experiences, such as the experience of the present moment. Acceptance is the ability to observe and accept rather than condemn or avoid these thought streams. (1)(Kabat-Zinn, 2013)The definition of attention that seems to resonate most in the movement - just typing the entire definition into Google yielded 64,50,00,000 hits - is introduced almost by accident by Kabat-Zinn in the first pages of his 1994 book. wherever you go, there you are: Mindfulness is "paying attention in a certain way on purpose, in the present moment and not" (2)(Creswell, 2017) Mindfulness is a state of active, open attention to the present moment. It involves being aware of thoughts, feelings, bodily sensations and the environment around you without judgment or distraction. Mindfulness involves paying attention to the present moment with curiosity, acceptance and openness, without dwelling on thoughts of the past or worrying about the future. It is the practice of paying attention to the present moment and developing a non-judgmental awareness of your experiences. Mindfulness has many benefits for physical and mental health, including reducing stress and anxiety, improving sleep quality, and improving overall well-being. Mindfulness has been widely studied and practiced for its many physical and mental health benefits. Research has shown that regular exercise practice can help people reduce stress, anxiety and depression and improve their overall well-being. It has also been found to increase attention and concentration, improve emotional regulation and improve immune function. One of the key elements of mindfulness is its non-judgmental approach to experience.(3)(Kwee, 1995) This means that practitioners learn to observe their thoughts, feelings and sensations without getting stuck or reacting to them. Instead, they learn to accept their experiences as they are without trying to change or control them. This accepting attitude can be especially helpful in managing difficult emotions and situations. Another important aspect of mindfulness is to focus on the present moment. By learning to be fully present and engaged in the present moment, practitioners can reduce the tendency to dwell on the past or worry about the future. This can lead to greater clarity, creativity and productivity, and a deeper connection with self and others. In general, mindfulness is a powerful tool for mental and physical health and can be practiced in many ways, including meditation, yoga, and conscious breathing. Through regular practice, people can learn to be more mindful in their daily lives, which leads to greater peace, happiness and fulfillment.(4)(Carlson, 2012)

4 1.2. Mahamrityunjay Mantra:

The Mahamrityunjay mantra first appears in Rigveda 7.59.12, which is a composite hymn of Vasiṣṭha Maitrāvaruṇ. The last four verses (which contain the Mahamrityunjay Mantra) are late additions to the hymn and refer to the Sākamedha, the final four-month ritual. The Sākamedha ends with an offer to Rudra Tryambaka, therefore the last stanza of four is addressed to Tryambaka. (5)(*Mantras Words of Power by Swami Sivananda Radha*, n.d.) The Mahamrityunjaya Mantra is a powerful

Sanskrit chant believed to offer divine protection and healing. Maha Mrityunjaya Mantra is also known as Triyambakam Mantra. Here is the Mahamrityunjaya Mantra in Sanskrit:

ॐ त्र्यम्बकं यजामहे सुगन्धिं पुष्टिवर्धनम् । उर्वारुकमिव बन्धनान्मृत्योर्म्क्षीय माऽमृतात् ॥

And here is the English translation of the mantra: "We worship the three-eyed (Lord Shiva) who perfumes and nourishes all beings; may He free us from death for immortality, as a cucumber is split without effort. The Mahamrityunjaya Mantra is believed to have the power to expel negative energies and promote physical, mental and emotional well-being. It is often chanted during meditation or during times of physical or mental stress. Mantra is also considered a powerful tool for spiritual transformation and awakening.

4 1.3. Yogic Breathing:

Sectional or yogic breathing is a type of breathing that involves focusing on specific parts of the body while breathing. It is an excellent way to develop greater awareness and control over the breath, as well as to bring more oxygen to specific parts of the body. This type of breathing is commonly used in yoga classes and meditation practices, and can be practiced on its own or as part of a larger yoga practice.

The practice of sectional or yogic breathing involves a series of deep inhales and exhales, with each inhale focusing on a specific area of the body. The areas commonly focused on in this practice include the abdomen, chest, and collarbones. As you breathe in, you focus on expanding each area of the body, and as you exhale, you focus on contracting each area. (6)(S-VYASA, 2000)

The first step in practicing sectional or yogic breathing is to find a comfortable seated position with your back straight and your feet on the ground. Once you're comfortable, begin by taking a few deep breaths, inhaling deeply through your nose and exhaling fully through your mouth. This helps to calm the mind and prepare the body for the practice of yogic breathing.

Next, you can begin to focus on the specific areas of the body. Start with the abdomen, inhaling deeply and feeling your belly expand outward as you inhale, and then contract inward as you exhale. This type of breathing is known as abdominal breathing or diaphragmatic breathing, and can help to increase lung capacity and improve digestion.

After focusing on the abdomen, move on to the chest. Inhale deeply and feel your chest expand outward as you inhale, and then contract inward as you exhale. This type of breathing can help to improve respiratory function and increase oxygen intake.

Finally, focus on the collarbones. Inhale deeply and feel your collarbones rise upward as you inhale, and then lower as you exhale. This type of breathing can help to improve posture and increase oxygenation to the upper chest.

Repeat this sequence a few times, focusing on each area of the body with each inhalation and exhalation. As you practice, you may find that you're able to breathe more deeply and fully, which can help to calm the mind and reduce stress. (7)(G & B. N., 2013)

In conclusion, sectional or yogic breathing is a powerful tool for developing greater

awareness and control over the breath. It can help to increase lung capacity, improve respiratory function, and reduce stress and anxiety. By incorporating this practice into your daily routine, you can experience the many benefits of yogic breathing and improve your overall health and wellbeing.

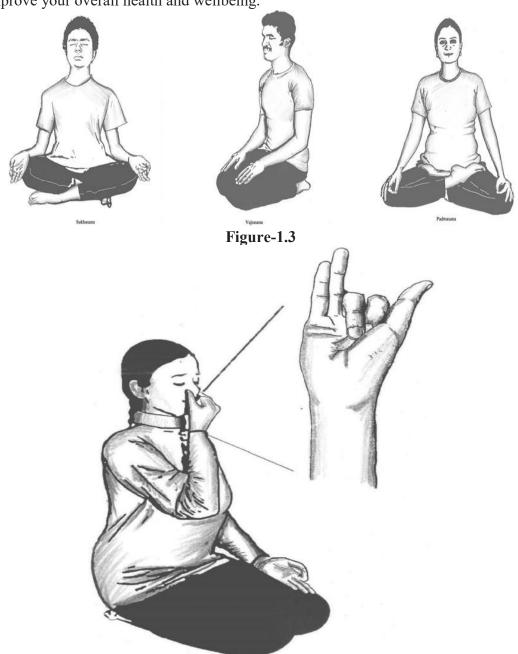


Figure-1.3.1

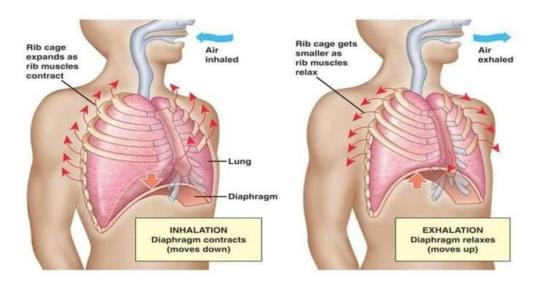
4 1.4. Anatomy of Breathing:

The anatomy of respiration involves the various respiratory structures that work together to facilitate gas exchange. These include the nasal cavity, pharynx, larynx, trachea, and bronchi. The pharynx is a tube-like structure that connects the nasal cavity and mouth to the larynx. The lungs are two cone-shaped organs located in the chest cavity and protected by the ribcage. The diaphragm is a dome-shaped muscle at the base of the lungs that plays a central role in breathing. As it contracts, it moves downward, increasing the volume of the chest cavity and drawing air into the lungs. When it relaxes, it moves upward, reducing the volume

of the chest cavity and forcing air out of the lungs. The muscles located between the ribs also participate in breathing by expanding and contracting the chest, which further increases or decreases the volume of the chest cavity. In summary, the anatomy of respiration includes the airways, lungs, diaphragm and intercostal muscles, which together facilitate gas exchange between the body and the environment. Breathing is a complex process that involves the coordination of various muscles, nerves and organs of the body. When the diaphragm contracts, it flattens, which increases the volume of the chest cavity and reduces the pressure in it. This creates a pressure gradient, allowing air to flow into the lungs. The intercostal muscles are located between the ribs and help expand and contract the chest cavity during breathing. The lungs themselves are flexible structures that expand and contract due to changes in pressure. When the muscles between the diaphragm and the ribs contract during inhalation, the volume of the chest cavity increases and the pressure in the lungs decreases, allowing air to flow into the lungs. As you exhale, the muscles between the diaphragm and the ribs relax, causing the volume of the chest cavity to decrease and the pressure in the lungs to increase, allowing air to flow out of the lungs. The breathing process is controlled by the respiratory center of the brain stem, which coordinates the action of the muscles between the diaphragm and the ribs. The respiratory center receives input from chemoreceptors in the blood vessels and airways, which control the levels of oxygen, carbon dioxide and pH in the body. (8)(Loukas et al., 2010)

In summary, the biomechanics of breathing involves the coordinated action of the diaphragm, intercostal muscles, lungs and brainstem respiratory center to create a pressure gradient that allows air to flow in and out of the lungs.

Mechanics of Breathing



Perception of breathing (inhale, exhale, retention) on outer wall (pericardial cavity and layers).

Figure-1.4

1.5. Mindfulness:

1.5.1. According to Buddha:

Mindfulness is a central aspect of Buddhist teachings and is an integral part of the Four Noble Truths and the Eightfold Path, which are considered the foundation of Buddhist practice. According to the Buddha, mindfulness involves being fully present and aware of one's thoughts, feelings, bodily sensations, and the surrounding environment in a non-judgmental and accepting way.

In Buddhist teachings, mindfulness is considered an essential tool for achieving liberation from suffering and attaining enlightenment. By cultivating awareness and acceptance of one's experiences, practitioners can develop insight into the impermanence and interconnectedness of all things, and ultimately come to understand the true nature of reality.

The Buddha taught that mindfulness can be practiced in a variety of ways, including through formal meditation, as well as through daily activities such as walking, eating, and working. He emphasized the importance of bringing mindfulness to all aspects of one's life, not just during formal practice.

Overall, the Buddha saw mindfulness as a key component of spiritual practice, and as a means of developing wisdom, compassion, and inner peace. His teachings on mindfulness continue to inspire and guide practitioners around the world today.(9)(Hart, 1987)

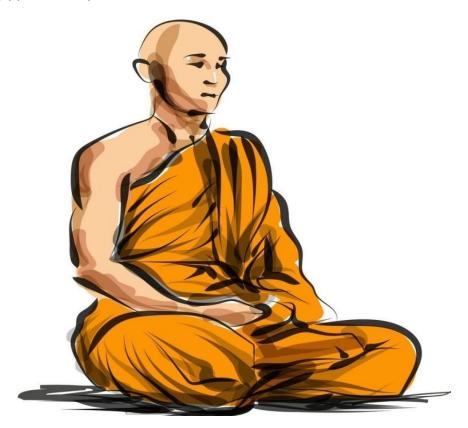


Figure-1.5

1.5.2. According to Yoga:

In the practice of yoga, mindfulness is known as "sati," which is derived from the Pali language and is often translated as "awareness" or "mindfulness." Similar to Buddhist teachings, yoga also emphasizes the importance of being fully present and aware of one's thoughts, feelings, bodily sensations, and surroundings. Which is a spiritual and physical practice that originated in ancient India. In yoga, mindfulness is referred to as "dharana," which is one of the eight limbs of yoga outlined in the Yoga Sutras of Patanjali.

Mindfulness is a fundamental aspect of yoga practice, and is often referred to as "mindful movement" or "mindful yoga". In yoga, mindfulness involves being fully present and aware of one's thoughts, feelings, bodily sensations, and breath, while moving through a series of physical postures (asanas) and practicing breathing exercises (pranayama).

Yoga teaches that mindfulness is a key to achieving a state of inner peace and balance, and is an essential part of the path towards self-realization and enlightenment. By cultivating awareness and presence in the present moment, practitioners can develop a deeper connection with themselves and their surroundings, and ultimately experience a greater sense of joy, contentment, and fulfillment.

In yoga, mindfulness is also seen as a means of promoting physical health and well-being. By paying close attention to the body and breath during practice, practitioners can improve their posture, flexibility, and strength, as well as reduce stress, anxiety, and other physical and mental ailments.

Overall, mindfulness is a core principle of yoga practice, and is seen as a powerful tool for achieving greater self-awareness, inner peace, and overall health and well-being.(10)(Vivekananda, 2021)



Figure-1.6

4 1.5.3. According to Jainism:

Mindfulness, or "samyak smriti," is an important aspect of Jainism, an ancient Indian religion that emphasizes non-violence, compassion, and spiritual purity. According to Jain teachings, mindfulness involves being fully present and aware of one's thoughts, feelings, and actions in the present moment, without attachment or aversion.

Jainism teaches that the ultimate goal of life is to achieve spiritual liberation, or "moksha," through the cultivation of right knowledge, right faith, and right conduct. Mindfulness is considered a key component of right conduct, as it helps individuals to live in accordance with Jain principles and to avoid actions that cause harm to themselves or others.

Jain mindfulness practice involves self-reflection, introspection, and meditation, and encourages practitioners to observe their thoughts and emotions without judgment or attachment. By cultivating mindfulness, practitioners can develop greater self-awareness and compassion, and can become more attuned to the interconnectedness of all living beings.

Jainism also emphasizes the importance of mindfulness in daily life, and encourages practitioners to cultivate mindfulness in all aspects of their lives, including work, social interactions, and personal relationships. By living mindfully, individuals can develop greater inner peace, happiness, and fulfillment, and can contribute to a more peaceful and harmonious world. (11)(Meditation_and_jainism_032325_hr6.Pdf, n.d.)



Figure-1.7

1.5.4. Benefits of mindfulness:

"Despite evidence linking trait mindfulness and mindfulness training with a broad range of effects, still little is known about its underlying active mechanisms. Mindfulness is commonly defined as (1) the ongoing monitoring of present-moment experience (2) with an orientation of acceptance. Building on conceptual, clinical, and empirical work, we describe a testable theoretical account to help explain mindfulness effects on cognition, affect, stress, and health outcomes. Specifically, Monitor and Acceptance Theory (MAT) posits that (1), by enhancing awareness of one's experiences, the skill of attention monitoring explains how mindfulness improves cognitive functioning outcomes, yet this same skill can increase affective reactivity. Second (2), by modifying one's relation to monitored experience, acceptance is necessary for reducing affective reactivity, such that attention monitoring and acceptance skills together explain how mindfulness improves negative affectivity, stress, and stress-related health outcomes. We discuss how MAT contributes to

mindfulness science, suggest plausible alternatives to the account, and offer specific predictions for future research." (12)(Lindsay & Creswell, 2017)

4 1.6. Role in Life:

Many studies indicate that training in mindfulness leads to an increase in the different aspects of empathic attitude. (13)(De la Fuente-Anuncibay et al., 2019) Thus, mindfulness practice implies a change at the cognitive level in the different dimensions (observe, describe, act consciously ...), and therefore in the cognitions of the mindfulness construct (14)(De la Fuente-Anuncibay et al., 2019). Research with therapists concluded that those who practiced meditation scored higher for empathy than those that did not.

4 1.7. Yogic techniques:

A mantra is a combination of sacred syllables which forms a nucleus of spiritual energy. Mantra is not prayer. prayer consist of words of supplication chosen by the spiritual aspirant, whereas mantra is a precise combination of words and soundstheembodiment of a particular form of consciousness or Sakti.

The root man in the word Mantra means in Sanskrit "to think", tra comes from trai, meaning "to protect or free from the bondage of samsara or the phenomenal world." Therefore Mantra means "the thought that liberates and protects." But there are many levels of meaning stood.(15)(Mantras Words of Power by Swami Sivananda Radha, n.d.)(Roy et al., 2018)

1.8. benefits of mantra:

The chanting or recitation of Mantras activates and accelerates the creative spiritual force, promoting harmony in allparts of the human being . the devotee is gradually converted into a living center of spiritual vibration which is attuned to some other center of vibration vastly more powerful. This energy can be appropriated and directed for the benefit of the one who uses it and for that of others.(16) (Mantras Words of Power by Swami Sivananda Radha, n.d.)

4 1.9. Prana:

Prana literally means "to breathe forth." It comes from the prefix pra, "to bring forth," and the verb an, "tobreathe" or simply "to live." Prana is a subtle energy that pervades every corner of the universe. While we can't see and touch it directly, at least not as beginning breathers, we can do so indirectly, through one of its most obvious physical manifestations and significant vehicles, our breathe. As Lama Govinda writes in foundations of Tibetan Mysticism, "As long as there is breathe, there is life. We can do without all conscious functions of the mind and the senses for a comparatively long time, stands first among the bodily functions of prana." (17) (Suparyanto dan Rosad (2015, 2020)

4 1.10. Need for the Study:

There are no related study found in anywhere that's why this study is needed to find the Effect of Maha-Mrityunjay Mantra and Yogic Breathing on Mindfulness of University students.

Chapter-2:-Literature Review

2.1. Ancient Literature:

4 2.1.1. Mindfulness:

Is awareness and acceptance. Awareness is the knowledge and ability to focus attention on one's inner processes and experiences, such as the experience of the present moment. Acceptance is the ability to observe and accept rather than judge or avoid those streams of thoughts. (18) (19)(*Hatha Yoga Pradipika: Chapter II. On Prâṇâyâma*, n.d.; Marga, n.d.; Sivananda, 1972; Swami, 1921; Vivekananda, 2021)

4 2.1.1.1. Bhagavad Gita:

The Bhagavad Gita discusses various philosophical concepts, including mindfulness. Mindfulness is referred to in the Bhagavad Gita as "sama" or "equanimity."

Chapter 2, verse 48: "Perform your duty equanimity, O Arjuna, abandoning all attachment to success or failure. Such evenness of mind is called yoga."

Chapter 6, verse 18: "When the yogi, by practice of yoga, disciplines his mental activities and becomes situated in transcendence, devoid of all material desires, he is said to have attained yoga."

Chapter 6, verse 26: "From whatever and wherever the mind wanders due to its flickering and unsteady nature, one must certainly withdraw it and bring it back under the control of the self."

Chapter 12, verse 13: "One who is not envious but who is a kind friend to all living entities, who does not think himself a proprietor and is free from false ego, who is equal in both happiness and distress, who is tolerant, always satisfied, self-controlled, and engaged in devotional service with determination, his mind and intelligence fixed on Me - such a devotee of Mine is very dear to Me." (20)(Sivananda, 1972)

The Bhagavad Gita emphasizes the importance of cultivating a calm, focused, and equanimous mind through the practice of yoga and meditation. This state of mind allows one to perform one's duties without becoming attached to the outcome, and to see all living beings with kindness and compassion.

4 2.1.1.2. Gherand Samhita:

The Gheranda Samhita is a traditional Sanskrit text on Hatha Yoga that describes various practices and techniques for physical and spiritual purification. Mindfulness is referred to in the Gheranda Samhita as "samyama" or "samyama yoga."

Chapter 1, verse 2: "Yoga is the control of the mind-stuff. It is of two kinds, abhyasa (practice) and vairagya (non-attachment)."

Chapter 3, verse 3: "When the mind becomes free from attachment to external objects, it becomes fit for concentration."

Chapter 4, verse 4: "Sit in a comfortable posture with the spine straight, close the eyes and withdraw the mind from external objects. Fix it on any object or idea, and keep it there without any distraction."

Chapter 7, verse 31: "The yogi should practice samyama on the elements, the senses, the mind, the ego, and the intellect. By this practice, he attains the state of supreme consciousness."

(21)(Gheraṇḍa & Niranjanananda Saraswati, 2012)

The Gheranda Samhita emphasizes the importance of controlling the mind through the practice of yoga, and cultivating a state of mindfulness through the withdrawal of the senses from external objects. The practice of samyama, or concentrated meditation, is seen as a means of attaining higher states of consciousness and spiritual realization.

4 2.1.1.3. Patanjali Yoga Sutras:

The Patanjali Yoga Sutras is a classical text on yoga and meditation, composed by the sage Patanjali. Mindfulness is referred to in the Yoga Sutras as "smriti" or "awareness."

Sutra 1/2: "Yogas citta-vritti-nirodhah" - "Yoga is the restraint of the modifications of the mind-stuff."

Sutra 1/12: "Abhyasa vairagyabhyam tannirodhah" - "These mental modifications are restrained by practice and non-attachment."

Sutra 2/53: "Dharanasu ca yogyata manasah" - "By practice of concentration, the mind becomes fit for the attainment of steadiness."

Sutra 3/2: "Tada drastuh svarupe avasthanam" - "Then the seer (the true self) abides in its own nature." (22)

The Yoga Sutras emphasize the importance of controlling the mind through the practice of yoga and meditation, and cultivating a state of mindfulness through concentration and non-attachment. The attainment of a steady, focused mind is seen as a means of realizing the true self and attaining spiritual liberation.

4 2.1.2. Dharana:

||देशबन्धश्चित्तस्यधारणा|| (PYS 3/1)

Concentration is binding the mind to one place.

4 2.1.3. Dhyana:

||तत्रप्रत्ययैकतानताध्यानम्|| (PYS 3/2)

Uninterrupted stream of the content of consciousness is dhyana.

||शुचौदेशेप्रतिष्ठाप्यस्थिरमासनमात्मनःनात्युच्छ्रितंनातिनीचंचैलाजिनकुशोत्तरम्।| (B.G. 6/11)

Having firmly set his seat in a spot which is free from dirt and otherimpurities with the sacred kusha grass, a deerskin and a cloth spread thereon, one upon the other, (kusha below, deerskin in the middle and cloth uppermost), neither very high nor very low;

\parallel तत्रैकाग्रंमनःकृत्वायतिचत्तेन्द्रियक्रियः उपविश्यासनेयुञ्ज्याद्योगमात्मविसुद्धये \parallel (B.G. 6/12)

And occupying that seat, concentrating the mind and controlling the functions of the mind and senses, he should practice Yoga for self-purification.

||समंकायसिरोग्रीवम्धारयन्नचालंस्थिरः| सम्प्रेक्ष्यनासिकाग्रंस्वंदिशश्चानवलोकयन्|| (B.G. 6/13)

Holding the trunk, head and neck straight and steady, remaining firm and fixing the gaze on the tip of his nose, without looking in other directions.

∥प्रशान्तात्माविगतभीर्ब्रहमचारिव्रतेस्थितःमनःसंयम्यमच्चित्तोयुक्तआसीतमत्परः∥ (B.G. 6/14)

Firm in the vow of complete chastity and fearless, keeping himself perfectly calm and with the mind held in restraint and fixed on Me, the vigilant Yogi should sit absorbed in Me.

4 2.1.4. Samadhi:

||तदेवार्थमात्रनिर्भासंस्वरूपशून्यमिवसमाधिः|| (PYS 3/3)

That state becomes Samadhi when there is only the object appearing without the consciousness of one's own self.

||सुषुम्नावाहिनिप्राणेसिद्ध्यत्येवमनोन्मनीअन्यथात्वितराभ्यासाःप्रयासायैवयोगिनाम्|| (HYP.4/20)

When the prana flows in the sushumna this state of manonmani (consciousness devoid of mind) is established. Therefore, other forced practices are just laborious to the yogi.

||पुरस्ताच्चैवपूर्येतनिशिचताखेचरीअभ्यस्ताखेचरीमुद्राप्युन्मनीसंप्रजायते|| (HYP.4/47)

Thesushumna being completely filled at the rear (upper palate) also is khechari. The practice of khechari mudra is fillowed by the state of unmani (consciousness devoid of mind).

4 2.1.5. Samyama:

||त्रयमेकत्रसंयमः|| (HYP. 3/4)

The three (dharana, dhyana, and samadhi) together constitute samyama.

4 2.1.6.Concept of Prana:

||आदित्योहवैप्राणोरयिरेवचन्द्रमारयिर्वाएतत्सर्वंयन्मूर्तंचतस्मान्मूर्तिरेवरयिः|| (P.U. 1/5)

The sun is prana (life) and the moon is food (matter). All that which possesses form (like earth, water and fire) or lacks form (like air and ether) is food. Therefore, all form is rayi, food, indeed.

||अथादित्यउदयन्यत्प्राचींदिशंप्रविशतितेनप्राच्यान्प्रानान्नश्मिषुसंनिधत्ते; यद्दक्षिणांयत्प्रतीचींयदुदीचींयदधोयदूर्ध्वयदन्तरादिशोयत्सर्वंप्रकाशयतितेनसर्वंप्राणांरश्मिषुसंनिधत्ते| | (P.U. 1/6)

When the sun rises in the east, he sends out life-giving rays to all creatures there. Similarly, in the northern, southern, western, upper and lower regions, he fills all creatures with his energy. Thus all creatures depend on him for life.

4 2.1.7. How Prana effects the Mind?

||चलेबातेचलंचित्तंनिशचलेनिशचलंभवेत्; योगीस्थाणुत्वमाप्नोतिततोवायुंनिरोधयेत्|| (H.Y.P.)

When prana moves, chitta(the mental force) moves. When prana is without movement, chitta is without movement. By this (steadiness of prana) the yogi attains steadiness and should thus restrain the vayu(air).

4 2.1.8. MahaMrityunjay Mantra:

॥ॐ त्र्यम्बकं यजामहे सुगन्धिं पुष्टिवर्धनम् उर्वारुकमिव बन्धनन्मृतोर्मुक्षिय मामृतात्॥ (Rigveda. 7/59)

We worship three eyed One, who is fragrant and who nourishes all. Like the fruit falls off the bondage of the stem, may we be liberated from death, from mortality.

3.2. Modern Literature:

Mindfulness has been the subject of numerous studies and literature reviews in recent years. Here are some highlights from a selection of modern literature reviews on mindfulness:

- 1. Mindfulness-based interventions for physical conditions: a narrative review evaluating levels of evidence: This 2019 review examined 50 studies on mindfulness interventions for physical conditions such as chronic pain, cardiovascular disease, and cancer. The review found that mindfulness interventions were generally effective in reducing symptoms and improving quality of life, and that the level of evidence supporting the use of these interventions was moderate to high.
- 2. Mindfulness-Based Stress Reduction and Mindfulness-Based Cognitive Therapy: A Review of the Evidence for Efficacy: This 2017 review examined the evidence for the effectiveness of two of the most well-known mindfulness-based interventions, Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT), for a range of mental health conditions. The review found that both MBSR and MBCT were effective in reducing symptoms of anxiety, depression, and stress, and that the evidence for their effectiveness was strong.
- 3. Mindfulness-based interventions for mental well-being among people with multiple sclerosis: a systematic review: This 2020 review examined the evidence for the effectiveness of mindfulness interventions for people with multiple sclerosis (MS), a chronic neurological condition. The review found that mindfulness interventions were effective in improving mental well-being, reducing symptoms of depression and anxiety, and improving quality of life for people with MS.
- 4. Mindfulness Meditation and the Experience of Positive Emotions: A Literature Review: This 2018 review examined the evidence for the effects of mindfulness meditation on positive emotions such as joy, gratitude, and compassion. The review found that mindfulness meditation was associated with increased positive emotions and that the effects were strongest when the meditation was practiced regularly over a period of time.
- 5. Mindfulness-Based Interventions: A Meta-Analysis of Effects on Psychological Outcomes, Physical Health, and Mindfulness - This 2017 meta-analysis of 206 studies found that mindfulness-based interventions were effective in reducing symptoms of depression and anxiety, and improving physical health outcomes such as blood pressure and pain.
- 6. The Potential of Mindfulness in Supporting Adolescents' Healthy Development: A Review This 2019 review examined the potential benefits of mindfulness interventions for adolescents, finding that mindfulness may improve emotional regulation, self-esteem, and social relationships.
- 7. Mindfulness interventions for chronic pain: a systematic review of the evidence This 2017 systematic review of 38 studies found that mindfulness-based interventions may be effective in reducing pain intensity and improving quality of life in individuals with chronic pain.
- 8. Mindfulness-Based Stress Reduction for Military Veterans: A Systematic Review This 2018 systematic review of 10 studies found that mindfulness-based interventions may be effective in reducing symptoms of post-traumatic stress disorder (PTSD) and depression in military veterans.
- 9. The construct validity of the Five Facet Mindfulness Questionnaire in meditating and non-meditating samples This 2012 study examined the construct validity of the

- FFMQ in a sample of meditators and non-meditators, finding that the FFMQ reliably measures five distinct facets of mindfulness.
- 10. Mindfulness-Based Interventions for Health: An Overview of Systematic Reviews and Meta-Analyses This 2016 systematic review of 68 studies found that mindfulness-based interventions, as measured by the FFMQ, were effective in reducing symptoms of anxiety and depression, improving emotional regulation, and improving physical health outcomes such as blood pressure.
- 11. Trait and State Mindfulness: Relationships with Neuroticism, Extraversion, and Openness This 2015 study examined the relationships between trait and state mindfulness, as measured by the FFMQ, and personality traits such as neuroticism, extraversion, and openness, finding that trait mindfulness was positively associated with extraversion and openness, and negatively associated with neuroticism.
- 12. Mindfulness and Cognitive Functioning: A Systematic Review This 2014 systematic review of 30 studies found that mindfulness, as measured by the FFMQ, was positively associated with cognitive functioning, including attention, working memory, and executive function.

Overall, these reviews and many others suggest that mindfulness is a promising intervention for improving physical and mental health outcomes, reducing symptoms of stress, anxiety, and depression, and promoting overall well-being.

Chapter-3:- Aim and Objective

3.1. Aim and Objective:

4 3.1.1. Aim:

To investigate the **Effect of Maha-mrityunjay Mantra and Yogic breathing on mindfulness of university students.**

4 3.1.2. Objectives:

- 1. To study the effect of Maha-mrityunjay Mantra on mindfulness of university students based on Five Facet Mindfuness Questionairre(FFMQ).
- 2. To study the effect of **Yogic breathing on mindfulness of university students** based on **Five Facet Mindfuness Questionairre**(FFMQ).

3.2. Research Question and Hypotheses:

4 3.2.1. Research Ouestion:

- 1. Does Maha-Mrityunjay mantra improves mindfulness among university students?
- 2. Does Yogic Breathing improves mindfulness among university students?

4 3.2.2 Hypothesis:

4 3.2.2.1. Althernate Hypothesis:

Maha-Mrityunjay mantra and Yogic Breathing improved mindfulness among the university students.

4 3.2.2.2. Null Hypothesis:

The null hypothesis is rejected and the results suggest that there is a real difference between the mean scores before and after practicing Maha-Mrityunjay mantra and Yogic Breathing among the university students.

Chapter-4:-Materials and Methods

4.1. Methodology:

4.1.1. Sample

- **4.1.1.1. Source of the subject**: Bolpur
- **4.1.1.2. Sample size**: 34
- 4.2. Sampleing technique: convenient Sampling technique
 - **4.2.1. Study Design**: convenient Sampling technique

4.3. Inclusion Criteria:

- 1. Age ranged from 18-24 years.
- 2. Both male and female.
- 3. Experience with mindfulness: Depending on the purpose of the study, participants may be required to have prior experience with mindfulness techniques, such as meditation or yoga.
- 4. Mental health status: The study may require participants to have a certain mental health status, such as being free of any psychiatric disorders or having a diagnosed mental health condition.
- 5. Physical health status: Participants may be required to be in good physical health and not have any chronic illnesses or disabilities that could interfere with their ability to practice mindfulness.

4.4. Exclusion Criteria:

- 1. History of severe mental illness: Participants with a history of severe mental illnesses such as schizophrenia, bipolar disorder, or borderline personality disorder may be excluded from the study.
- 2. Substance abuse: Participants with a history of substance abuse or dependence may be excluded from the study.
- 3. Trauma: Participants who have experienced recent traumatic events or who have a history of trauma may be excluded from the study.
- 4. Medical conditions: Participants with medical conditions that could affect their ability to participate in the study or that could affect their ability to practice mindfulness may be excluded.
- 5. Medications: Participants taking certain medications that could affect their ability to practice mindfulness may be excluded from the study.
- **4.5. Intervention**: Mahamrityunjay Mantra and Yogic breathing.
- **4.6. Duration**: 1 month.
- 4.7. Assessment tools: Five Facet Mindfulness Questionairre(FFMQ).

- **4.8. Informed Consent:** Informed consent has been collected from the participants and their anonymity and confidentiality has been maintained. They were free to withdraw themselves at any time from the study.
- **4.9. Data Analysis**: Data has been analyzed using JASP software and the p-value has been set to 0.05.

Chapter-5:- Result

Descriptive Statistics

| | Pre FFMQ | Post FFMQ |
|-------------------------|----------|-----------|
| Valid | 34 | 34 |
| Missing | 0 | 0 |
| Mean | 2.888 | 3.106 |
| Std. Deviation | 0.351 | 0.290 |
| Shapiro-Wilk | 0.952 | 0.988 |
| P-value of Shapiro-Wilk | 0.140 | 0.963 |
| Minimum | 2.200 | 2.460 |
| Maximum | 3.410 | 3.850 |

Figure: 5.1

Looking at the means and standard deviations, we can see that the post-FFMQ mean score (3.106) is higher than the pre-FFMQ mean score (2.888), indicating a positive change in mindfulness scores. The standard deviation of the post-FFMQ scores (0.290) is smaller than the pre-FFMQ scores (0.351), indicating less variability in post-FFMQ scores compared to pre-FFMQ scores.

Paired Samples T-Test

| Measure 1 | Measure 2 | t | df | P |
|-----------|-------------|--------|----|--------|
| Pre FFMQ | - Post FFMQ | -4.032 | 33 | < .001 |

Note. Student's t-test.

Figure: 5.2

The paired samples t-test in (Figure-4.2) shows a significant difference between the pre-FFMQ and post-FFMQ scores, with a t-value of (-4.032) and a p-value less than (0.001).

Chapter-6:- Discussion

Based on the table, we can see that there are 34 valid data points for both the pre-FFMQ and post-FFMQ measures, indicating that there are no missing data.

Looking at the means and standard deviations, we can see that the post-FFMQ mean score (3.106) is higher than the pre-FFMQ mean score (2.888), indicating a positive change in mindfulness scores. The standard deviation of the post-FFMQ scores (0.290) is smaller than the pre-FFMQ scores (0.351), indicating less variability in post-FFMQ scores compared to pre-FFMQ scores.

The Shapiro-Wilk test is a test for normality, and the p-value of the test indicates the probability of obtaining the observed result if the data were normally distributed. For both pre-FFMQ and post-FFMQ measures, the p-value of the Shapiro-Wilk test(Figure-4.1) is greater than (0.05), suggesting that we do not have sufficient evidence to reject the null hypothesis of normality. However, it is important to note that the sample size is relatively small, which may limit the power of the normality test.

The paired samples t-test in (Figure-4.2) shows a significant difference between the pre-FFMQ and post-FFMQ scores, with a t-value of (-4.032) and a p-value less than (0.001). This indicates that the difference between the means of pre-FFMQ and post-FFMQ scores is statistically significant. The negative sign of the t-value indicates that the mean score for post-FFMQ is higher than the mean score for pre-FFMQ, consistent with the results from the descriptive statistics table.

Overall, these results suggest that there was a significant positive change in mindfulness scores from before to after the **Maha-Mrityunjay Mantra and Yogic Breathing** intervention on mindfulness, as measured by the FFMQ.

Chapter-7:- Conclussion

Based on the table of descriptive statistics and the paired samples t-test provided, we can conclude that there was a significant positive change in mindfulness scores from before to after. After **Maha-Mrityunjay Mantra and Yogic Breathing** intervention, as measured by the FFMQ. The mean score for post-FFMQ (3.106) was higher than the mean score for pre-FFMQ (2.888), indicating a positive change in mindfulness scores. The paired samples t-test showed a statistically significant difference between the pre-FFMQ and post-FFMQ scores, with a t-value of -4.032 and a p-value less than 0.001. However, it is important to note that these results are based on a relatively small sample size and should be interpreted with caution. Further research with larger sample sizes would be needed to confirm these findings.

Chapter-8:- Appraisals

4 8.1. Strength and Limitation:

Strengths:

- The use of the FFMQ as a measure of mindfulness is a well-established and widely used instrument, which increases the reliability and validity of the results.
- The paired samples t-test used in the analysis is an appropriate statistical test to compare the means of two related groups.
- The Shapiro-Wilk test was used to assess normality of the data, which is an important assumption for the t-test.
- The results showed a statistically significant positive change in mindfulness scores, which suggests that the Maha-Mrityunjay Mantra and Yogic Breathing intervention was effective in improving mindfulness.

Limitations:

- The sample size was relatively small, which may limit the generalizability of the results to other populations.
- The study used a pre-post design without a control group, which limits the ability to draw causal conclusions about the effectiveness of the mindfulness intervention.
- The study relied on self-reported measures of mindfulness, which may be subject to bias and social desirability effects.
- The study did not account for potential confounding variables, such as prior experience with mindfulness practices or personality traits, which may have influenced the results.
- The study only measured short-term effects of Maha-Mrityunjay Mantra and Yogic Breathing intervention on mindfulness and did not assess the long-term sustainability of the improvements in mindfulness scores.

4 8.2. Future Direction:

Based on the strengths and limitations of the current study, there are several potential future directions for research:

- Larger Sample Size: Future studies could include a larger sample size to increase the generalizability of the results and to increase the power of the statistical analyses.
- Randomized Controlled Trials: Future studies could use randomized controlled trials
 with a control group to assess the effectiveness of Maha-Mrityunjay Mantra and
 Yogic Breathing intervention on mindfulness and to control for potential
 confounding variables.

- Long-Term Follow-Up: Future studies could assess the long-term effects of **Maha-Mrityunjay Mantra and Yogic Breathing** intervention by conducting follow-up assessments after several months or years.
- Objective Measures: Future studies could use objective measures of mindfulness, such as physiological measures or behavioral tasks, to supplement self-report measures and to reduce potential bias and social desirability effects.
- Subgroup Analysis: Future studies could conduct subgroup analysis to examine the
 effects of the Maha-Mrityunjay Mantra and Yogic Breathing intervention on
 mindfulness on different populations, such as individuals with specific mental health
 conditions or different demographic groups.
- Comparison of Maha-Mrityunjay Mantra and Yogic Breathing Interventions:
 Future studies could compare the effects of different types of interventions, such as mindfulness-based stress reduction (MBSR) or mindfulness-based cognitive therapy (MBCT), to determine which interventions are most effective for specific populations or outcomes.

Chapter-9

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Chapter-10:- Annexure

10.1. Consent Form:

Effect of Maha-Mrityunjay Mantra and Yogic Breathing on Mindfulness of University **Students**

- I am doing a study on the Effect of Maha-Mrityunjay Mantra and Yogic Breathing on Mindfulness of University Students for that study I prepare an intervention. For that intervention, need subjects. For that I am giving the approach to you sir.
- Exercising my free power of choice, hereby give my consent to be included as a subject in the study entitled "Effect of Maha-Mrityunjay Mantra and Yogic Breathing on Mindfulness of University Students" to help all teaching professionals to understand the current status of the mindfulness and to give the mindfulness related exercises Maha-mrityunjay Mantra and yogic breathing. I have been informed to my satisfaction by my attending researcher the purpose of my enrolment in the study.
- I have read the information sheet provided to me and I have also been given full explanation by the researcher about the nature and purpose of the investigative procedures being undertaken. I have been given the freedom to question the attending researcher on all aspects of the study.
- Hereby I give consent to the researcher of the study to release the information obtained as a result of my participation in this study to any scientific forum for the betterment of understanding about Body Composition and the associated metabolic profile of teaching professionals in Visva-Bharati University. However, privacy and confidentiality will be maintained. I will retain the right to abstain from further participation in the research at any time. I have been explained and have understood the necessity and the nature of all the investigative procedures.

Thus, having fully understood the procedure and implication of the above study, I agree to participate in the same.

| Signature of the patient/Subject: |
|--|
| I confirm that I have explained the nature and purpose of the above study to |
| Signature of InvestigatorDate |
| Witness: |

10.2. FFMQ Questionairre:

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Five Facet Mindfulness Questionnaire (FFMQ)

| with the | se rate each of the following statements the number that best describes your own on of what is generally true for you. | Never or very rarely true | Rarely true | Sometimes true | Often true | Very often or always true |
|------------|--|---------------------------|----------------|-------------------|---------------|------------------------------------|
| FFQM 1 | When I'm walking, I deliberately notice the sensations of my body moving. (OBS) | 1 | 2 | 3 | 4 | 5 |
| FFQM 2 | I'm good at finding words to describe my feelings. (D) | 1 | 2 | 3 | 4 | 5 |
| FFQM 3 | I criticize myself for having irrational or inappropriate emotions. (NJ-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 4 | I perceive my feelings and emotions without having to react to them. (NR) | 1 | 2 | 3 | 4 | 5 |
| FFQM 5 | When I do things, my mind wanders off and I'm easily distracted. (AA-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 6 | When I take a shower or bath, I stay alert to the sensations of water on my body. (OBS) | 1 | 2 | 3 | 4 | 5 |
| FFQM 7 | I can easily put my beliefs, opinions, and expectations into words. (D) | 1 | 2 | 3 | 4 | 5 |
| FFQM 8 | I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted. (AA-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 9 | I watch my feelings without getting lost in them. (NR) | 1 | 2 | 3 | 4 | 5 |
| FFQM 10 | I tell myself I shouldn't be feeling the way I'm feeling. (NJ-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 11 | I notice how foods and drinks affect my thoughts, bodily sensations, and emotions. (OBS) | 1 | 2 | 3 | 4 | 5 |
| FFQM 12 | It's hard for me to find the words to describe what I'm thinking. (D-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 13 | I am easily distracted. (AA-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 14 | I believe some of my thoughts are abnormal or bad and I shouldn't think that way. (NJ-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 15 | I pay attention to sensations, such as the wind in my hair or sun on my face. (OBS) | 1 | 2 | 3 | 4 | 5 |
| FFQM 16 | I have trouble thinking of the right words to express how I feel about things. (D-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 17 | I make judgments about whether my thoughts are good or bad. (NJ-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 18 | I find it difficult to stay focused on what's happening in the present. (AA-R) | 5 | 4 | 3 | 2 | 1 |

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| | | Never or very rarely true | Rarely true | Sometimes true | Often true | Very often or always true |
|------------|--|---------------------------|----------------|-------------------|---------------|------------------------------------|
| FFQM 19 | When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it. (NR) | 1 | 2 | 3 | 4 | 5 |
| FFQM 20 | I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing. (OBS) | 1 | 2 | 3 | 4 | 5 |
| FFQM 21 | In difficult situations, I can pause without immediately reacting. (NR) | 1 | 2 | 3 | 4 | 5 |
| FFQM 22 | When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words. (D-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 23 | It seems I am "running on automatic" without much awareness of what I'm doing. (AA-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 24 | When I have distressing thoughts or images, I feel calm soon after. (NR) | 1 | 2 | 3 | 4 | 5 |
| FFQM 25 | I tell myself that I shouldn't be thinking the way I'm thinking. (NJ-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 26 | I notice the smells and aromas of things. (OBS) | 1 | 2 | 3 | 4 | 5 |
| FFQM 27 | Even when I'm feeling terribly upset, I can find a way to put it into words. (D) | 1 | 2 | 3 | 4 | 5 |
| FFQM 28 | I rush through activities without being really attentive to them. (AA-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 29 | When I have distressing thoughts or images, I am able just to notice them without reacting. (NR) | 1 | 2 | 3 | 4 | 5 |
| FFQM 30 | I think some of my emotions are bad or inappropriate and I shouldn't feel them. (NJ-R) | 5 | 4 | 3 | 2 | |
| FFQM 31 | I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow. (OBS) | 1 | 2 | 3 | 4 | 5 |
| FFQM 32 | My natural tendency is to put my experiences into words. (D) | 1 | 2 | 3 | 4 | 5 |
| FFQM 33 | When I have distressing thoughts or images, I just notice them and let them go. (NR) | 7 | 2 | 3 | 4 | 5 |
| FFQM 34 | I do jobs or tasks automatically without being aware of what I'm doing. (AA-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 35 | When I have distressing thoughts or images, I judge myself as good or bad depending what the thought or image is about. (NJ-R) | 5 | 4 | 3 | 2 | _ 1 |
| FFQM 36 | I pay attention to how my emotions affect my thoughts and behavior. OBS) | 1 | 2 | 3 | 4 | 5 |

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| | | Never or very rarely true | Rarely true | Sometimes true | Often true | Very often or always true |
|------------|---|---------------------------------|----------------|-------------------|---------------|------------------------------------|
| FFQM 37 | I can usually describe how I feel at the moment in considerable detail. (D) | 1 | 2 | 3 | 4 | 5 |
| FFQM 38 | I find myself doing things without paying attention. (AA-R) | 5 | 4 | 3 | 2 | 1 |
| FFQM 39 | I disapprove of myself when I have irrational ideas. (NJ-R) | 5 | 4 | 3 | 2 | 1 |

Scoring: (Note: R = reverse-scored item)

| Subscale Directions | Your Score TOTAL | Your score item Avg. |
|---|------------------|----------------------|
| Observing: Sum items | | |
| 1+6+11+15+20+26+31+36 | | |
| Describing: Sum items | | |
| 2 + 7 + 12R + 16R + 22R + 27 + 32 + 37. | | |
| Acting with Awareness: Sum items | | |
| 5R + 8R + 13R + 18R + 23R + 28R + 34R + 38R. | | |
| Nonjudging of inner experience: | | |
| Sum items 3R + 10R + 14R + 17R + 25R + 30R + 35R + 39R. | | |
| Nonreactivity to inner experience: | | |
| Sum items 4 + 9 + 19 + 21 + 24 + | | |
| 29 + 33. | | |
| TOTAL FFMQ (add subscale scores) | | |

NOTE: Some researchers divide the total in each category by the number of items in that category to get an average category score. The Total FFMQ can be divided by 39 to get an average item score.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13(1), 27-45.

4 10.3. Transliteration:

STANDARD INTERNATIONAL TRANSLITERATION CODE USED TO TRANSLITERATE SAMSKRTA AND BENGALI WORDS

| अ | आ | इ | * | उ | <i>-</i> 3 | ऋ |
|----|----|------------|------------|------------|------------|----|
| a | ã | i | ī | u | ũ | r |
| অ | আ | * | ঈ | উ | উ | ঝ |
| 冧 | ए | à | ओ | ओ | अ | अः |
| ī | e | ai | o | au | am | aḥ |
| ঝ | બ | ऄ | 3 | 3 | ং | ಂ |
| | क | ख | ग | घ | ङ | |
| | ka | kha | ga | gha | 'nа | |
| | ক | খ | গ | ঘ | B | |
| | च | छ | ज | झ | ञ | |
| | ca | cha | ja | jha | ña | |
| | Б | ष्ट् | জ | ঝ | SP. | |
| | 5 | थ | ड | ढ | व | |
| | ţa | tha | da | dha | ņа | |
| | ট | 8 | ড | ঢ | ণ | |
| | त | થ | द | ঘ | न | |
| | ta | tha | da | dha | na | |
| | ত | থ | দ | ধ | ন | |
| | ч | ₹ | ৰ | ਮ | म | |
| | pa | pha | ba | bha | ma | |
| | প | ফ | ব | ভ | ম | |
| य | ₹ | ਲ | হা | ष | स | ह |
| ya | ra | la | śa | şa | sa | h |
| য | র | न | *1 | ষ | স | হ |
| | | क्ष kşa | त्र tra | ज्ञ jña | | |
| | | क्र | ন্ত | জ্ঞ | | |
| | | 4- | 9 | Co | | |